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Job-related wellbeing and organisational commitment among long-term care and (non-medical) health care employees

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PSSRU Discussion Paper 2950
December 2018
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Acknowledgements

The paper is based on independent research commissioned and funded by the NIHR Policy Research Programme (Economics of Social and Health Care; PRP Ref: 103 0001). The views expressed in the publication are those of the author and not necessarily those of the NHS, the NIHR, the Department of Health and Social Care, its arm's length bodies or other government departments. The Economics of Social and Health Care Research Unit (ESHCRU) is a joint collaboration between the University of York, London School of Economics and University of Kent.

I would like to thank for useful comments to participants to the ESHCRU advisory group meeting as well as participants to the 47th Annual Conference of the British Society of Gerontology (BSG) and the European Health Economics Association (EuHEA) Conference 2018.

Abstract

It is often argued that care workers are getting job satisfaction mostly from the *warm-glow* feeling of helping others. However, there are concerns that the low pay levels (often at minimum wage) and challenging working conditions in long-term care are strong determinants of job dissatisfaction, with negative secondary effects on recruitment and retention. There are also arguments that job dissatisfaction in long-term care is causing care workers to leave the industry altogether, to work for example in retail trade or hospitality.

This study analyses the determinants of job-related wellbeing and organisational commitment in the English (non-medical) health and long-term care industry, as compared to two low pay service industries often perceived as offering 'outside' job opportunities for care worker: retail trade and hospitality. Using individual data from the last two years of the British Skills and Employment Survey Series (2006 and 2012) and multivariate econometric analysis, the results show that the relatively good initial levels of job-related wellbeing among health and long-term care staff (as measured by either job satisfaction, the Depression-Enthusiasm or the Anxiety-Comfort scales) were significantly eroded over time in employment. Despite that, everything else equal, working in either health or long-term care was associated with a relatively higher likelihood to turn down a better paid job elsewhere. The findings show that while concerns about of care staff leaving the industry are probably not fully warranted, job quality in health and long-term care would still needs to improve in order to support staff wellbeing and motivation.

Introduction

As in most industrialised countries, the population of England is aging rapidly. The population aged 65 and over increased by 21 percent in the last decade, reaching 11.6 million in 2017, while the population 85 and over increased by 31 percent over the same period, reaching 1.5 million (NHS, Public Health England 2017). This trends are likely to continue: from one in twenty in 2014, by 2040 nearly one in seven people is projected to be 75 or over (Government Office for Science 2016). Due to this dramatic demographic shift, the number of frail and care dependent people in England is increasing. The number of people with dementia, for example, is predicted to increase from about 850,000 in 2016 to about 2 million by 2051 (Alzheimer's Society 2016). The demand for health and long-term care workers is, therefore, expected to continue to rise in the coming years. The supply of care workers, on the other hand, is lagging behind, putting a strain on the system. The high vacancy and turnover rates, in particular for front-line staff such as care workers/assistants, have been a reason for concern for some time (Hussein, Ismail et al. 2016, Skills for Care 2017b).

One of the main factors influencing workers behaviour, including job commitment and quits is job-related wellbeing. There is an increasing literature on the job satisfaction of both professional nurses' and non-professional personal care staff (i.e. care aides, nurse aids or nursing assistants in North America; care workers or care assistants in the UK), assessing both effects of individual and organisational factors; for an overview see (Squires, Hoben et al. 2015). Although it is often argued that health and long-term care staff are seeing their jobs rather as a vocation and are getting job satisfaction mostly from the *warm-glow* feeling of helping others (Heyes 2005, Hussein 2017), there are concerns that the low pay levels (often at minimum wage) and challenging working conditions in the industry are strong determinants of job dissatisfaction (Gardiner, Hussein 2015), with negative secondary effects on turnover and vacancies (Hussein, Moriarty et al. 2014, Coomber, Louise Barriball 2007, De Gieter, Hofmans et al. 2011, Donoghue 2010, Hayes, O'Brien-Pallas et al. 2012, Kuo, Lin et al. 2014, Lu et al. 2012b). There are arguments that job dissatisfaction in long-term care is causing care workers to leave the industry altogether, to work, for example, in retail trade or hospitality (Colombo, Llena-Nozal et al. 2011, Gershlick, Roberts et al. 2017, NHS, Public Health England 2017).

Despite the growing literature assessing the determinates and effects of job satisfaction among health and long-term care staff, rather little is known about how job-related wellbeing among health and long-term care workers compares to that of similar type of workers employed in jobs that are often perceived as 'outside alternatives'. The main aim of this this study is therefore to analyse the determinants of job-related wellbeing and commitment to the employer in the English (non-medical)

health and long-term care industry, as compared to other low pay services industries. Using individual data from the last two years of the British Skills and Employment Survey Series (2006 and 2012) and multivariate econometric analysis, we estimate the effects of observable factors on various measures of job-related wellbeing (i.e. job satisfaction, Depression-Enthusiasm, Anxiety-Comfort) and organisational commitment in a comparative analysis of four industries: long-term care, (non-medical) health care, retail trade and hospitality (Felstead, Gallie et al. 2014). The main research questions that we address are: Is job-related wellbeing and the attachment to employers comparatively lower among care workers? Shall we worry about a loss care staff to other industries? If yes, what are the main factors affecting that?

Background

Workforce, pay and conditions in long-term care and non-medical health care

The number of people working in long-term care in England in 2016/17 was about 1.45 million, filling about 1.58 million jobs. The majority of these jobs, or about 80 percent, were with independent sector employers (i.e. private and not-for profit) and mostly providing services in residential care (i.e. care homes with or without nursing; 42 percent) and domiciliary care (e.g. home care; 42 percent) (Skills for Care 2017a). Frontline staff account for about three quarters of the total staff and provide vital services for supporting the quality of life of the growing vulnerable older adult population (i.e. mobility in or outside the house, feeding, dressing, personal hygiene, housekeeping, etc.).

The evidence shows that the majority of workers entering the long-term care industry have low education and limited access to higher paid jobs and/or are looking for part-time or flexible working hours jobs that can be fitted around other (caring) responsibilities. The majority of care workers are female (over 80 percent), with mean age of about 43, having a low level of formal qualifications, and with a growing number of migrants (Gardiner, Hussein 2015, Skills for Care 2017b).

Despite an increase in employment over the years, care providers are reporting high turnover (28 percent) and vacancy rates (7 percent), providing an important challenge to the provision of quality services (Skills for Care 2017b). Pay and conditions in long-term care in England rank rather poorly, probably reflecting the reduced public funding (Gardiner, Hussein 2015). The average hourly wage for care workers was £7.76 in 2016/17, this being in the 10th percentile of the overall wage distribution and less than half the mean UK hourly earnings (Low Pay Commission 2016, Skills for Care 2017b). Moreover, job and pay security are often cited as an important challenges, with about 25 percent of staff employed on zero-hours contracts (Skills for Care 2016, Vadean, Allan 2017).

The total staff working in 2017 for NHS England Hospital and Community Health Services (HCHS) was 1.2 million, from which the vast majority (about 90 percent) was non-medical staff (i.e. nurses, health visitors, ambulance, scientific, technical, and support staff) (NHS Digital Workforce and Facilities 2018). As in long-term care, about 80 percent of non-medical care staff are women, compared to 43 percent of the wider workforce (HSCIC Workforce and Facilities 2015). Qualifications and earnings are rather heterogeneous among non-medical healthcare staff. For example, nurses, scientific and technical staff have a university qualification and median earning around £26,000 to £33,000 per year (or about £16.50 to £21.00 per hour, depending on the job role), while healthcare assistants have low qualifications level and median earnings of around £15,000 per year (or about £9 per hour) (Curtis, Burns 2017).

A recent Heath Education England consultation document shows that although the substantially employed workforce in the NHS grew by 7 percent between 2012 and 2017, vacancies are still high due to a faster increase in demand for healthcare services. Vacancy rates are particularly high for nurses (e.g. 16.3 percent for learning disability nursing, 14.3 percent for mental health nursing, 10.9 percent for children's nursing, and 10.1 percent for adult nursing) mainly because of the sharp rise in demand due to the drive for safer staffing and reduction in nurse commissions between 2009 and 20012 (NHS, Public Health England 2017). Retention is a further issue, with the percentage of nurses leaving the NHS for other reasons than retirement having increased from 7.1 to 8.7 percent between 2012 and 2017. This increase might be due to increased stress at work (i.e. a secondary effect of high vacancies), lack of flexibility, dissatisfaction with pay or career development (NHS, Public Health England 2017).

Workforce, pay and conditions in retail trade and hospitality

Retail trade and hospitality are two important sectors of the UK economy. Together they provide employment to about 5 million people or about 17 percent of total employment. In 2016 about 2.8 million people worked in retail and further 2.2 million in hospitality (ONS 2018a, Nomis ONS 2018). Despite their growth and the new job opportunities they create, the two industries have traditionally seen high rate of labour turnover. Both industries are highly competitive and characterised by business models that focus on cost minimisation, causing staff to face a combination of low wages, part-time and/or seasonal work contracts, and lack of opportunities for promotion (Mackay, Chipato et al. 2016). Majority of employees in the industries (about 57 percent) are employed on part-time contracts and the average weekly earnings as of December 2017 was £329 or about £8.90 per hour, with majority of frontline staff being paid at or just above minimum wage (ONS 2018a, ONS 2018b, Mackay, Chipato et al. 2016).

Theoretical framework

The traditional model of job wellbeing, frequently cited in empirical studies of nursing care providers, defines job satisfaction as the affective orientation of employees towards their work or, in other words, the degree to which employees like their jobs (Locke 1969, Locke 1976, Spector 1997). Furthermore, job satisfaction is arguably an evaluation against alternatives (i.e. other job opportunities or even leisure) (Lévy-Garboua, Montmarquette 2004, Lévy-Garboua, Montmarquette et al. 2007, Green 2010). In comparison, other job-related wellbeing indicators, as advanced within psychological research, are designed to capture a range of emotions or feelings along two orthogonal dimensions: pleasure-displeasure and arousal. Well-being indicators were proposed along two axes, one ranging from *Depression* (i.e. displeasure and low arousal) to *Enthusiasm* (i.e. pleasure and high arousal) and the second ranging from *Anxiety* (i.e. displeasure and high arousal) to *Comfort* (i.e. pleasure and low arousal) (Warr 1990, Warr 2007, Green 2010). As job satisfaction is defined along the pleasure dimension, it is expected to be positively correlated with both the Depression-Enthusiasm scale (further referred as *Enthusiasm*) and Anxiety-Comfort scale (further referred as *Contentment*).

The economic analysis of subjective well-being has build-up on the vast psychological literature on the topic. Following (Clark, Oswald 1996, Clark 1997) utility from working (u) can be considered as part of the overall utility function v:

$$v = v(u, \mu) \tag{1}$$

where μ is utility from other aspects of life.

Utility form working (i.e. job-related wellbeing) is usually considered to have the form:

$$u = u(y, h, i, j) \tag{2}$$

where y is the wage, h is hours of work, and i and j are a set of individual and job-specific characteristics. The empirical analysis of job-satisfaction generally adopted this basic framework, estimating multivariate econometric models to explain differences in self-reported job wellbeing measures. The analysis of these correlations has been generally motivated by the fact that job-related wellbeing is one of the three most important components of overall well-being (Clark 1997). Moreover, job satisfaction turns out to be correlated with worker behaviour and predicts future job quits (Akerlof, Rose et al. 1988, McEvoy, Cascio 1985, Freeman 1978) as well as unreliable work ethic and productivity (Clegg 1983, Mangione, Quinn 1975). In the case of the care industry, job

dissatisfaction has been found to negatively affect care outcomes (Chou, Boldy et al. 2002) and residents' quality of life (Pekkarinen, Sinervo et al. 2004).

As argued by (Green 2010) the *Enthusiasm* and *Contentment* scales might seem superior as indicators of job-related wellbeing than job satisfaction, as they include an additional dimension. But when it comes to predicting job mobility, job satisfaction rather represents evaluations against alternative job opportunities, which would be more relevant in the decision making. He indeed found job satisfaction to be unambiguously better at predicting quitting, but suggested that the *Enthusiasm* and *Contentment* scales can be useful additional measures, in particular where evaluation against alternatives outside the job are not that relevant.

Organisational commitment has been studied intensively in the human resource management and psychology literatures, with the three-component model being probably the most established (Meyer, Allen 1991, Meyer, Allen et al. 1993, Meyer, Allen 1997, Meyer, Stanley et al. 2002). According to this model organisational commitment consists of: a) *affective commitment*, which refers to the employee's emotional attachment and identification with the organisation; b) *normative commitment* that is based on perceived obligation towards the organisation; and c) *continuance commitment*, based on the perceived costs (both economic and social) of leaving the organisation. Affective commitment is probably the most studied of the three components, its economic significance deriving from its relation to organizational outcomes, similarly to job satisfaction (Bryson, Stokes et al. 2018, Fabi, Lacoursière et al. 2015, S. Brown, McHardy et al. 2011, Green 2008, Sagie 1998).

Data and descriptive statistics

The data used in this study is from the last two in a series of six nationally representative sample surveys in Britain: the Skills Survey 2006 (SS2006) and the Skills and Employment Survey 2012 (SES2012). The 2006 sample includes 7,787 individuals in employment and aged 20 to 65, while the 2012 sample consist of 3,200 similarly aged workers. The samples were drawn using random probability principles subject to stratification based on local unemployment rates and the percentage of household heads in non-manual occupations, and are nationally representative (Green, Gallie et al. 2008, Felstead, Gallie et al. 2014).

We restrict the analysed sample to respondents in wage employment (i.e. no self-employed workers) and working in long-term care, health care, retails trade or hospitality. As the focus of the study is rather on frontline staff as well as non-medical health care, we further exclude managers,

senior officials and professional occupations.[1] The analysed sample includes 1,483 employees, from which 370 working in long-term care, 449 in health care, 190 in hospitality, and 474 in retail trade. The analysis uses sampling weights provided, consistent over the two survey years.

Overall job satisfaction is obtained from the combined responses to questions on 14 separate domains of work: relationship with manager, manager's abilities, friendliness of co-workers, promotion prospects, job security, pay, fringe benefits, working hours, the work itself, the amount of work, variety in the work, opportunity to use abilities, ability to use initiative, and training. The responses were averaged, each with scores ranging from '1' ('completely dissatisfied') to '7' ('completely satisfied').

Measures of job-related affective psychological well-being are drawn from subscales proposed by (Warr 1990). A series of items were collected using questions like: 'Thinking of the past few weeks, how much of the time has your job made you feel each of the following…?', each followed by an adjective describing a different feeling. For the Depression–Enthusiasm scale (*Enthusiasm*), the adjectives were depressed, gloomy, miserable, cheerful, enthusiastic, and optimistic. For the Anxiety–Comfort scale (*Contentment*) the adjectives were tense, uneasy, worried, calm, contented, and relaxed (Warr 1990, Warr 1994). Responses could range over six points from 'never' to 'all of the time'. The scales ranged from '1' to '6', and were constructed by having reversed the negative items and averaging the responses. They have both been validated in earlier studies (Green 2010, Green, Felstead et al. 2013, Felstead, Gallie et al. 2015, Gallie, Zhou et al. 2017).

The organisational commitment measures used in this study are drawn from scales developed and validated by (Mowday, Steers et al. 1979) and capture *affective* organisational commitment. There are seven items, asking people how much they agreed or disagreed with the following statements: 1) I am willing to work harder than I have to in order to help this organisation to succeed; 2) I feel loyal to this organisation; 3) I find that my values and the organisation's values are very similar; 4) This organisation really inspires the very best in me in the way of job performance; 5) I am proud to be working for this organisation; 6) I would take almost any job to keep working for this organisation; and 7) I would turn down another job with more pay in order to stay with this organisation. The answers were on a four point scale, from 'strongly disagree' to 'strongly agree'.

[1] The SOC2000 occupation groups included are: 3) Associate Professional and Technical Occupations, 4) Administrative and Secretarial Occupations, 5) Skilled Trades Occupations, 6) Personal Service Occupations, 7) Sales and Customer Service Occupations, 8) Process, Plant and Machine Operatives, and 9) Elementary Occupations.

Descriptive statistics

When looking at the answers with respect to job-related wellbeing (see Figure 1), we note that overall job satisfaction is rather high: over 50 percent of employees in both long-term and (non-medical) health care stated being 'completely satisfied' or 'very satisfied'. In retail trade and hospitality the share is somewhat lower (about 40 percent), but still high for a low wage industry. Answers on the *Enthusiasm* and *Contentment* scales are, on the other hand, less positive: only 20 to 26 percent of employees in long-term and (non-medical) health care stated being either enthusiastic or content 'all of the time' or 'most of the time'. Again, by comparison, employees in the retail trade and hospitality industries experienced lower job-related wellbeing: 16 and 21 percent respectively feeling enthusiastic or content 'all of the time' or 'most of the time'. The differences between industries are statistically significant (see Table 1).

When looking at components of job satisfaction (Figure 2), we can see that the highest satisfaction levels in all four industries are with 'work itself' and 'opportunity to use initiative', while the highest levels of dissatisfaction are with 'pay' and 'promotion prospects'. When comparing the four industries (see Table 1), we can see that the main source of the higher job satisfaction among health and long-term care employees is from 'work itself', 'the ability to use initiative', and 'training provision', which would be consistent with arguments of staff in these sectors being often motivated by vocation (Heyes 2005, Hussein 2017). It is also worth noting that health care workers were relatively less satisfied with their managers' abilities, but relatively more satisfied with pay.

With respect to organisational commitment, the majority of employees in all four industries stated they 'strongly agree' or 'agree' to work harder to help their organisation succeed, to feel loyal to the organisation, to have shared values with the organisation, to feel inspired by the organisation in their work, and to be proud of working for the organisation (see Figure 2). However, only 20 to 30 percent expressed their willingness to do any job in order to continue working for the employer or to turn down a better paid job elsewhere. This is probably not surprising, as one would expect less positive answers when there is a cost involved. In terms of differences between industries, Table 1 indicates significantly stronger organisational commitment in health and long-term care compared to retail trade and hospitality. Differences in commitment seem to derive mostly from stronger feelings of loyalty, pride of working for the organisation, being inspired by the organisation, and perceptions of shared values with the organisation. Care staff in health and long-term care seem also to be more committed to the work they do, with about 30 percent stating 'strongly agree' or 'agree' to turn down a better paid job elsewhere. Nonetheless, only 22 percent of health care staff stated

they ‘strongly agree’ or ‘agree’ to do any job to stay with their employer, suggesting that care staff are committed rather to the work they are doing than the organisation itself.

Table 2 presents the set of individual and organisation specific characteristics used as covariates in the multivariate regression analysis. As expected, there was a substantially higher share of women among health and long-term care employees (about 83 percent) compared to retail trade (62 percent) and hospitality (67 percent), which might partly explain the relatively higher subjective job-related wellbeing in the two industries; see (Clark 1997, Lu et al. 2012a, Squires, Hoben et al. 2015). The average employee in each of the four industries differed in terms of other characteristic as well. Health and long-term care employees were on average older (42 and 40 years old respectively) compared to an average age of 38 years in retail trade and 35 years in hospitality. Health and long-term care employees were also better educated: 46 percent of non-medical health care employees and 29 percent of long-term care workers had tertiary education or equivalent (i.e. NVQ 4 or 5) compared to only 13 percent in retail trade and 20 percent in hospitality. However, employees in retail trade and hospitality were more overeducated (i.e. had a higher education than required by their job), which might explain the lower job-related wellbeing scores in these industries as well .

Employees in health and long-term care also had on average relatively higher wages (£12.22/hour and £9.14/hour respectively compared to £7.45 in retail trade and £6.91/hour in hospitality) and worked on average more hours (over 32 hours/week compared to under 29 hours/week in retail trade and hospitality); the difference in hours worked was most likely due to the relatively higher share of part-time workers in retail trade and hospitality (around 50 percent), compared to 32 percent in health and 37 percent in long-term care. Workers in health care are were also on average longer with their current employer (9.6 years), compared to 5.5 years in retail trade, 4.7 years in long-term care, and 3.5 years in hospitality.

In terms of organisational characteristics, while almost all retail trade workers worked for private companies of various sizes, over 50 percent of both hospitality and long-term care employees worked for either micro or small companies in the private sector, while over 80 percent of health care workers in the sample were employed by the public sector (i.e. NHS) in mostly large establishments.

Differences in job-related wellbeing and organisational commitment may result also from different work values. We note that quite a high share of employees (around 90 percent) felt that enjoying the work they do was essential or very important. Furthermore, a high importance across industries (over 80 percent) was given to ‘good relationship with the manager’, ‘having a secure job’ and ‘using

initiative'. On the other hand, having 'good promotion prospects' was less valued by all employees (only around 50 percent thought it is essential or very important), while good pay was relatively less valued by health and long-term care employees (65 and 72 percent stated it is essential or very important) compared to retail trade (77 percent) and hospitality employees (80 percent). Health and long-term care workers valued more training provision (83 and 75 percent of employees respectively), compared to about 67 percent of employees in retail trade and hospitality.

Empirical strategy

In this study we analyse the determinants and correlates of three measures of job-related wellbeing (i.e. job satisfaction, the Depression-Enthusiasm and the Anxiety-Comfort scales) as well as of various aspects of affective organisational commitment. Due to the ordinal nature of these variables, most previous studies analysing job-related wellbeing and organisational commitment used ordered probit (or logit) estimates. However, in the case of our estimates, the parallel regression assumption was violated in the majority of cases; see Annex A1 to A3. Maximum likelihood generalised ordered probit estimates also proved difficult, as some categories of the dependent variables had a very low number of observations. One solution to this issue was to merge categories. After some experimentation we ended up with running binary probit estimations with the job satisfaction dummies equalling 1 if the answer was 'very or completely satisfied', the *Enthusiasm* and *Contentment* dummies equalling 1 if the answer was 'much, most or all of the time', and the organisational commitment dummies equalling 1 if the answer was 'agree or strongly agree'.

The literature generally supports the idea that job-related wellbeing and organisational commitment are positively correlated, but with no consensus on causality; see (Saridakis, Lai et al. 2018, Rayton 2006) for a discussion. While most Human Resource Management literature assumes job satisfaction to be an exogenous predictor of organisational commitment, more recent studies controlling for endogeneity and/or employing simultaneous estimation models seem to confirm that job satisfaction and organisational commitment are reciprocally related (Saridakis, Lai et al. 2018). In this study, we are less concerned with the relation between job-related wellbeing and organisational commitment and rather focus on differences in job-related wellbeing and organisational commitment between industries. Due to the lack of consensus on causality and to avoid any potential endogeneity issues, we do not include job-related wellbeing measures as covariates in the occupational commitment models or vice versa.

Results

Job-related wellbeing

The industry effects on job-related wellbeing are summarised in Table 3. The first column presents marginal effects of probit estimates with no additional controls (i.e. only regional and year controls), the second column includes results from estimations with controls for individual characteristics (including individual work values), while in the third column presents results from estimations with individual and job/organisation characteristics. Without controlling for other factors, working in health and long-term care was significantly and positively correlated with all three job-related wellbeing indicators. Working in health and long-term care was associated with a higher job satisfaction (11 and 9 percent respectively), higher *Enthusiasm* (12 and 15 percent respectively), and higher *Contentment* (10 and 11 percent respectively). The industry effect, however, turns small and statistically insignificant when controlling for other factors. In fact, it is sufficient control for the heterogeneity in individual characteristics for the industry effect on job-related wellbeing to lose significance.

One main individual characteristic related to job-related wellbeing was gender, with women more likely to have higher levels of job satisfaction, consistent with findings of (Clark 1997, D. Brown, McIntosh 2003) (see Annex A1). As in previous studies, we also found that workers with degrees are more likely to report lower job satisfaction levels (D. Brown, McIntosh 2003). Nonetheless, we found the education level to be positively related to *Enthusiasm* and not significantly related to *Contentment*. We found, though, all three wellbeing measures to be negatively related to working in a job requiring less education than acquired (i.e. over-education), confirming that not being able to fully utilise abilities and skills at work would be an important a source of dissatisfaction (Tsang, Rumberger et al. 1991).

Some work values were consistently related to all job-related wellbeing measures: considering good pay to be 'essential' or 'very important' had a significant negative effect, while stating that a good relationship with the manager, the use of initiative or liking the work is 'essential' or 'very important' was positively related to job-related wellbeing . It seems, therefore, that from the individual's perspective quite important predispositions to achieving higher wellbeing at work is appreciating and seeking a friendly work environment, enjoying the type of work and having realistic expectations about the wage level in the industry.

In terms of organisation characteristics, it is well established that workers' satisfaction is lower in larger establishments (Idson 1990), and our results confirm that finding. Moreover, we find that workers in organisations committed to the Investors in People (IIP) principles were more likely to

score higher on the job satisfaction scale. Surprisingly though, workers who refused to answer or did not know if their organisation was IIP registered were likely to score even higher on all three wellbeing scales. This potentially shows that some organisations that are highly committed to workers' wellbeing implement such policies without seeking formal recognition.

We further assessed if there are any industry effects on job satisfaction components (see Table 4). The effects were again more likely to be significant when not controlling for individual or organisation characteristics. Without controlling for individual and organisation characteristics, health and long-term care employees were more likely to be satisfied with work itself, the ability to use initiative, and training provision compared to both retail trade and hospitality workers. However, all these effects turned small and insignificant after the inclusion of individual controls in the estimations, meaning that the observed differences between industries where likely due to the heterogeneity in employee characteristics. Health care employees were also less likely to be satisfied with manager's abilities compared to both retail trade and hospitality employees, and the effect was still significant after controlling for individual characteristics. This confirms results of other studies which show rather low (although improving) levels of health care staff satisfaction with management (Coomber, Louise Barriball 2007, NHS 2018).

Figure 4 illustrates the predicted job related wellbeing over time spent with the current employer by industry. It shows that, everything else equal, health and long-term care employees had higher job-related wellbeing compared to retail trade and hospitality employees at the start of their current job, but this significantly decreased over time. For example, the predicted share of long-term care workers that were completely or very satisfied with their jobs decreased in the first 10 years of their current employment from about 60 to about 35 percent (Wald test chi-sq=8.00, p-value=0.005), the share of health care workers satisfied with their job decreased from about 55 to 45 percent (Wald test chi-sq=0.48, p-value=0.487), the share of long-term care workers who were enthusiastic about their jobs all or most of the time dropped from about 50 at the start of their current employment to about 30 percent at 10 years of employment (Wald test chi-sq=6.53, p-value=0.011), the share of health care workers enthusiastic about their jobs decreased form about 45 percent to about 30 percent (Wald test chi-sq=2.40, p-value=0.121), the share of long-term care workers content about their job decreases during the first 10 years of their current employment from about 50 to 25 percent (Wald test chi-sq=8.04, p-value=0.005), and the share of health care workers content about their job decreased from about 55 to 35 percent (Wald test chi-sq=6.49, p-value=0.011). At the same time the share of satisfied, enthusiastic and content retail trade and hospitality employees either significantly increased or remained fairly constant.

It seems therefore that while care workers start their job quite strongly motivated (Heyes 2005, Hussein 2017), the challenging working conditions may cause their job related wellbeing to erode (in most cases) significantly over time (Rubery, Hebson et al. 2011, Hussein, Ismail et al. 2016, Hussein 2017, Hussein 2018b, Hussein 2018a). In the case of long-term care workers, the decrease in job satisfaction seems to be mainly related to a significant decrease in satisfaction with work itself (from about 65 to about 40 percent; Wald test chi-sq=7.83, p-value=0.005), while health care workers did experience a low and decreasing level of satisfaction (from 30 to 20 percent) with managers abilities (see Figure 5).

Organisational commitment

Table 5 summarises the industry effects on organisational commitment. Similarly to the industry effects on job-related wellbeing, when not controlling for individual and organisation characteristics, working in health and long-term care had a positive and significant relationship with most components of organisational commitment (e.g. loyalty, shared values, pride as well as willingness to turn down a better paid job). However, after including individual and organisation controls (i.e. everything else equal), the only significant effects left were that health care workers were less likely to 'agree' or 'strongly agree' to having shared values with the organisation compared to both retail trade and hospitality employees, while both health and long-term care workers were relatively more likely to 'agree' or 'strongly agree' to turn down a better paid job elsewhere.

The main individual characteristic related to organisational commitment was education (see Annex A3). Having a higher education level was positively related in particular to willingness to work harder to help the organisation succeed, shared values with the organisation and feeling proud to work for the organisation. However, having a higher education level than required for the job (i.e. over-education) was negatively related with all forms of organisational commitment, quite similar to our findings on job-related wellbeing.

In terms or organisation characteristics, voluntary sector employees were more likely to be loyal (+11 percent), share values with the organisation (+17 percent) and more likely to turn down a better paid job elsewhere (+23 percent), while being employed on a non-permanent contract was associated to lower loyalty (-15 percent) and feeling proud for working for the organisation (-16 percent). Working for a medium or large company was negatively associated with shared values (-13 percent), the willingness to do any job to stay with the organisation (-9 percent) as well as the willingness to turn down a better paid job elsewhere (-10 percent).

When looking at changes in organisational commitment over time with the current employer (Figure 6), we note that everything else equal the share of employees in all four industries willing to work harder to help the organisation succeed, feeling loyal towards the organisation and feeling proud for working for the organisation was high (about 70 to 80 percent), fairly constant over time and not significantly different between industries. On the other side the share of employees in all four industries willing to do any job to stay with the employer was rather low (20 to 40 percent), fairly constant over time and not significantly different between industries.

In terms of shared values with the organisation, the share of workers who considered having common values with the organisation was also fairly constant over time for each industry, but with significant differences between industries. The lowest share of workers having shared values with the organisation were in health and long-term care (about 65 percent at 10 years with the current employer), while the highest share was for hospitality employees (about 85 percent at 10 years with the employer); Wald test of difference: chi-sq=6.99, p-value=0.009. The share of employees feeling inspired by the organisation was quite similar between the four industries at the start of employment, but while for health and long-term care it slightly decreased with time to about 55 percent at 10 years of employment, for retail trade and hospitality it increased to 65 percent and over 80 percent, respectively. Finally, with a share of about 30 to 35 percent, health and long-term care workers were relatively more likely to turn down a better paid job elsewhere at the start of their employment; the share was only about 20 percent for employees in retail trade and 10 percent for hospitality staff. This seems to confirm that care workers are usually more motivated in their job form the start of their employment – potentially through vocation – and many of them are relatively less likely to switch jobs despite being relatively less likely to have shared values with or not feeling inspired by their employers.

Hourly wages

In terms of hourly wages the results (see Figure 7) seem to confirm previous findings that the health and long-term workers are not particularly motivated by pay (Heyes 2005, Hussein 2017). Job-related wellbeing in general as well as organisational commitment was rather unrelated to hourly wage. The only significant effect from wages was an increase in satisfaction with pay: in the case of long-term care workers from a share of about 5 percent at a wage £6/h (in 2012 £) to almost 30 percent at £12/hour (Wald test chi-sq=10.28, p-value=0.001), while for health care workers from a share of about 10 percent at £6/h (in 2012 £) to almost 30 percent at £12/hour (Wald test chi-sq=3.86, p-value=0.049). This increase in satisfaction with pay was however substantially lower than the one for hospitality employees, from a share of 10 percent at a wage of £6/hour to over 50 percent at £12/hour.

Discussion

The high turnover and vacancy rates among care workers/assistants have been argued to be due to dissatisfaction with challenging working conditions and low rewards (including pay), with concerns being expressed that some care staff is leaving the industry altogether to take up jobs in retail trade and hospitality. The aim of this study has been to analyse the determinants of job-related wellbeing and organisational commitment in the English (non-medical) health and long-term care industry as compared to retail trade and hospitality, in order to assess if such concerns are justified.

The study used a two years sample from the British Skills and Employment Survey (2006 and 2012). The findings show that in general subjective job-related wellbeing – as measured by job-satisfaction, the Depression-Enthusiasm scale, and the Anxiety-Comfort scale – was relatively higher among health and long-term care workers. However, the differences between industries became small and insignificant once controlled for heterogeneity in individual and organisational characteristics.

In terms of organisational commitment, everything else equal, there is a positive effect of working in either health or long-term care on attachment to the employer – as captures by the 'willingness to turn down a better paid job elsewhere' – showing that concerns about of care staff leaving the industry for jobs elsewhere are not fully warranted. These findings are consistent with Skills for Care reports showing that only about 3 percent of care workers leave the industry for jobs in retail trade (end even less for jobs in hospitality); the biggest staff losses in long-term care are to health care employers (about 14 percent) (Skills for Care 2017b), most probably because work still involves personal care, but wages are slightly higher.

Our findings also show that the relatively good initial level of wellbeing of health and long-term care staff significantly deteriorates over the time of employment. In the case of long-term care workers, this negative effect seems to come from the erosion of satisfaction with work itself, while for health care workers from a decrease in satisfaction with managers' abilities. The results are not entirely novel. It is well known, for example, 'flying home care visits' of 15 minutes often do not allow care workers to suitably address service users' care needs, resulting in increased frustration among frontline staff (Leonard Cheshire Disability 2013). Moreover, several studies showed that health care staff dissatisfaction with management is a cause for concern (Coomber, Louise Barriball 2007, NHS 2018). The confirmation of these findings should help, however, policymakers and care providers with a rather practical indication on the areas that may need attention to improve job quality for health and long term-care staff. This is important for achieving a thriving and sustainable care workforce, able to deliver high quality personal care services.

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Figure 1: Distribution of answers with respect to job-related wellbeing

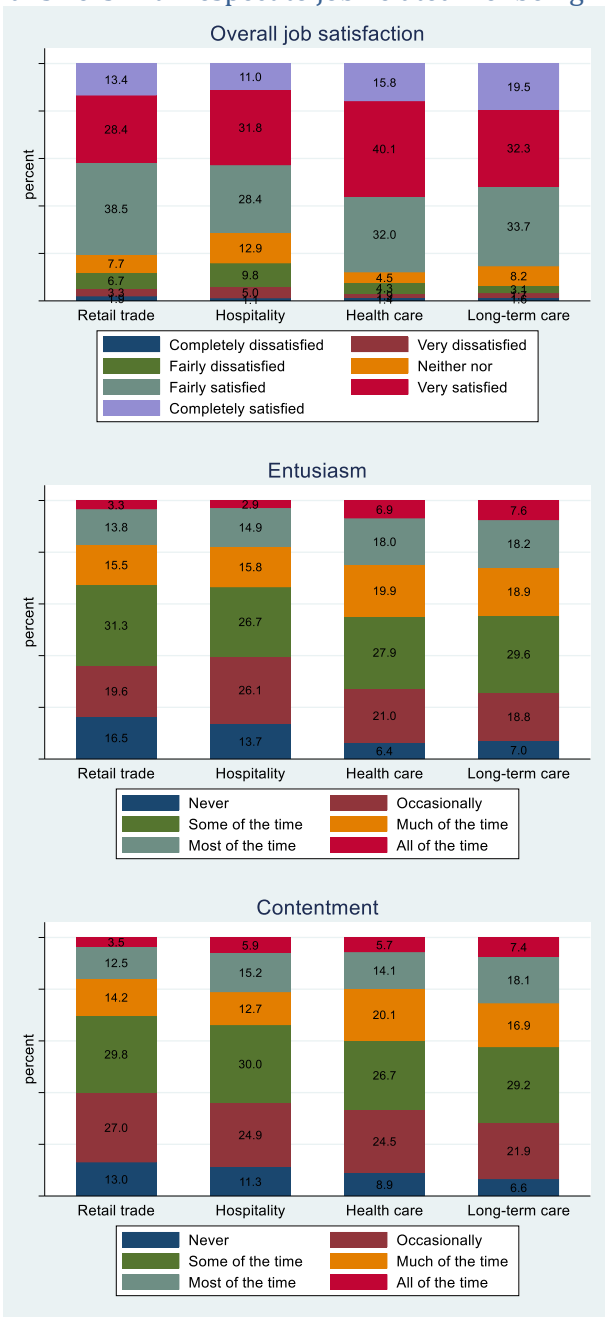
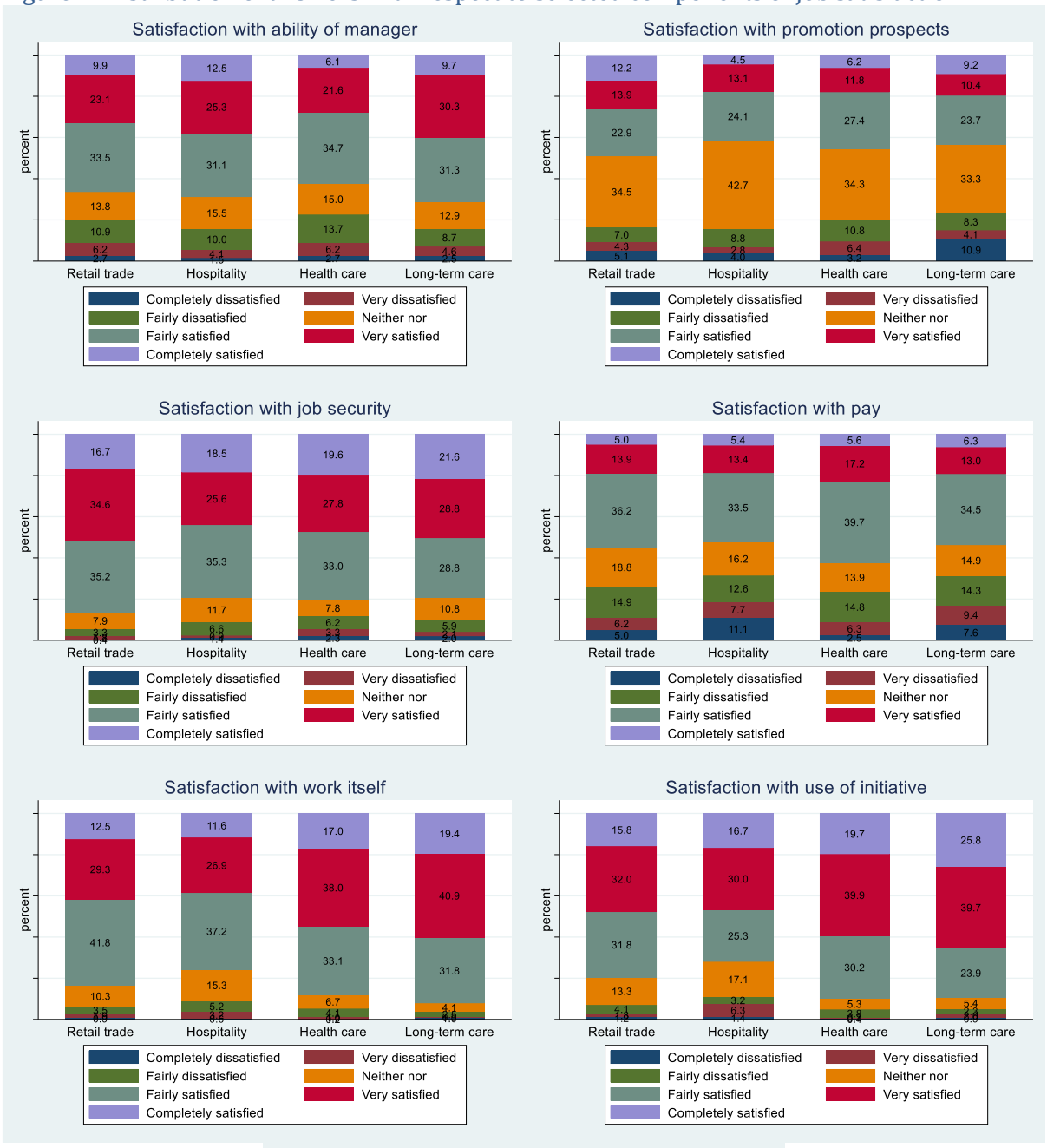


Figure 2: Distribution of answers with respect to selected components of job satisfaction



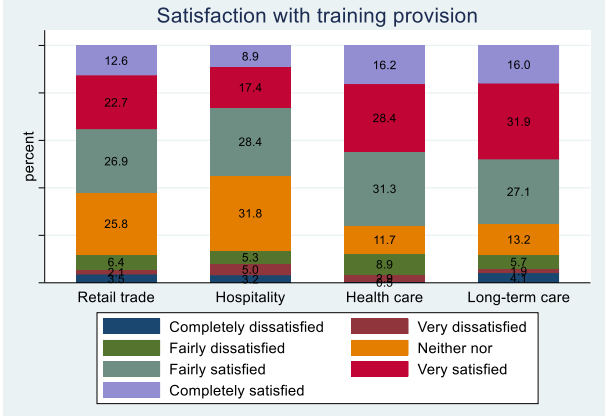


Figure 3: Distribution of answers with respect to measures of organisational commitment

Figure 4: Job-related wellbeing and time with current employer – predictive margins with 95% Cis

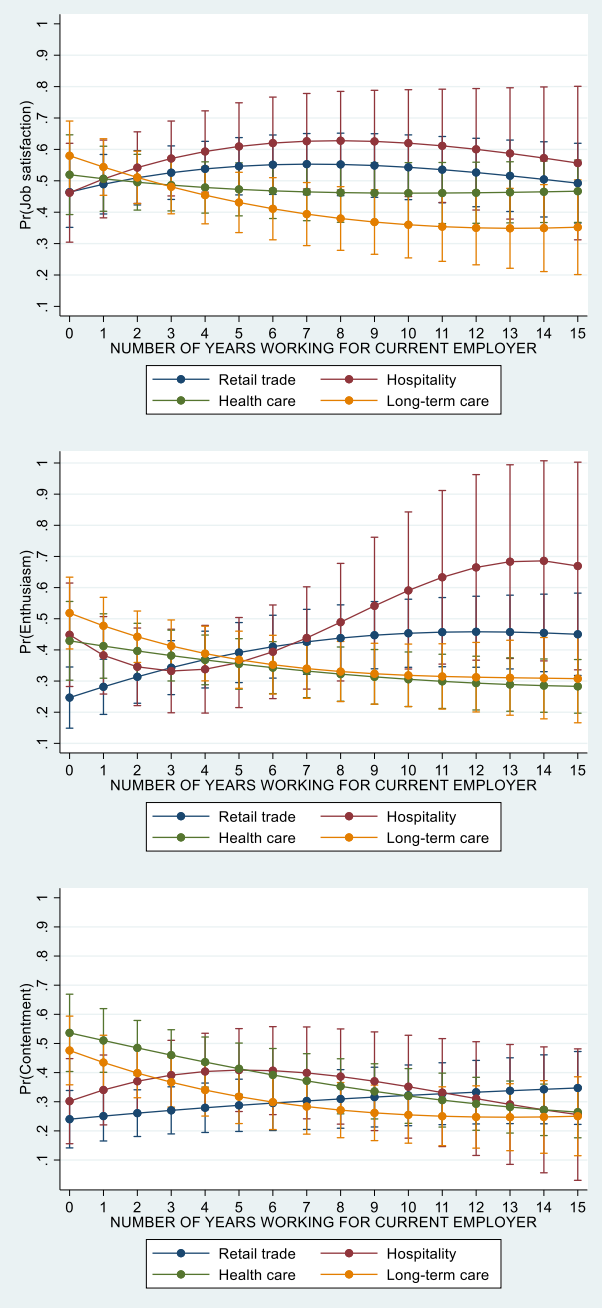


Figure 5: Components of job satisfaction and time with current employer – predictive margins with 95% Cis

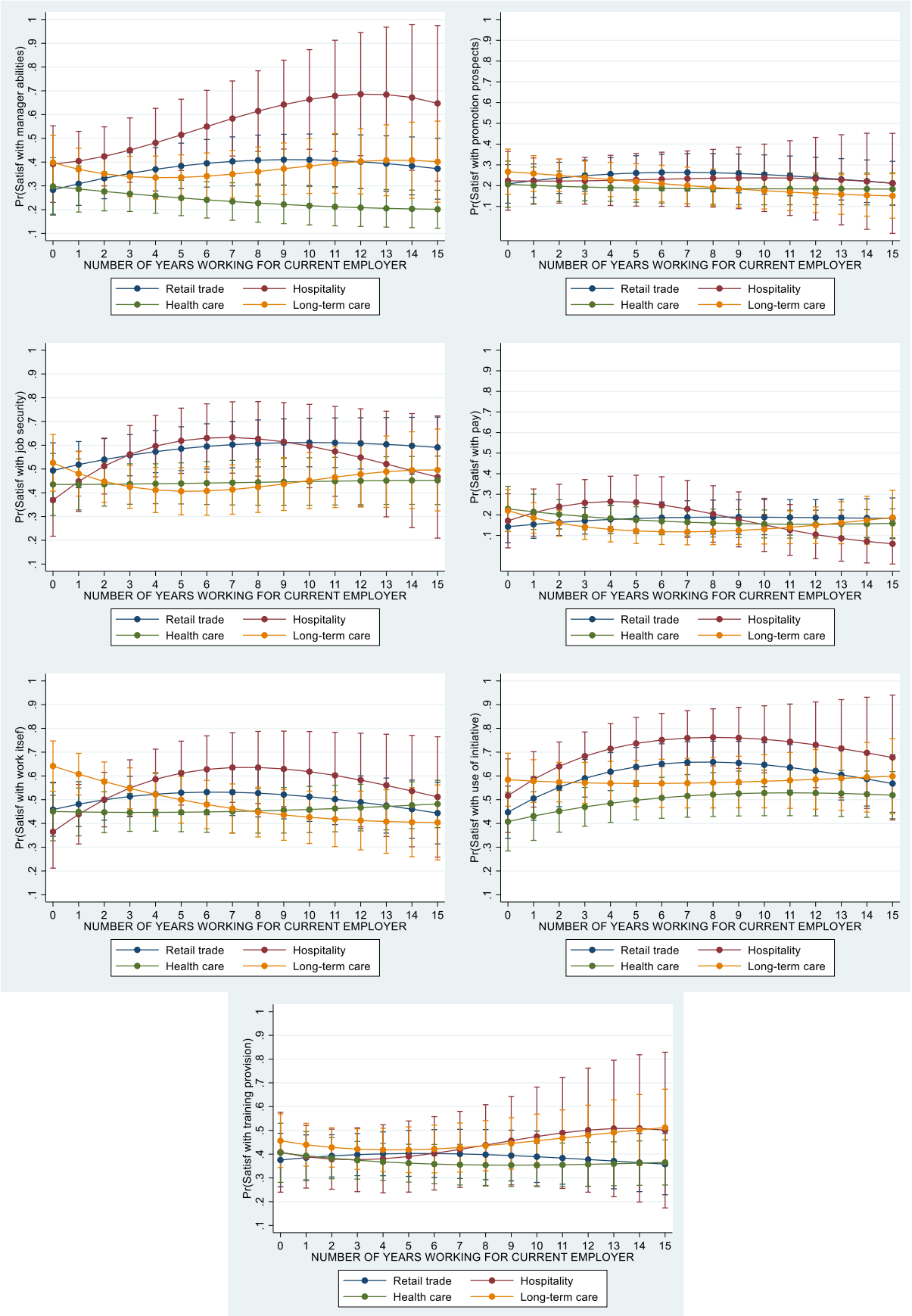


Figure 6: Organisational commitment and time with current employer – predictive margins with 95% CIs

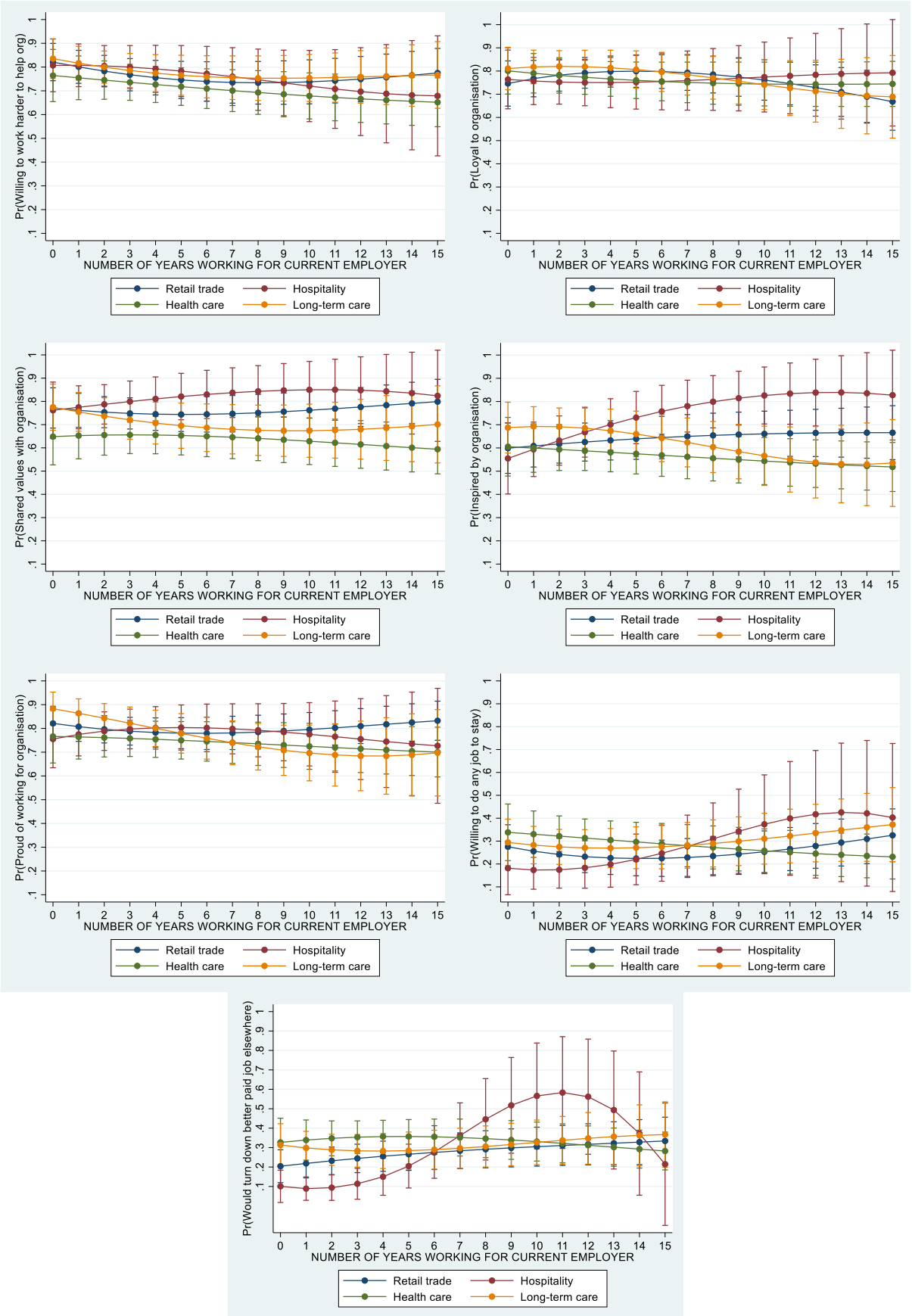


Figure 7: Job-related wellbeing, organisational commitment and hourly wage – predictive margins with 95% CIs

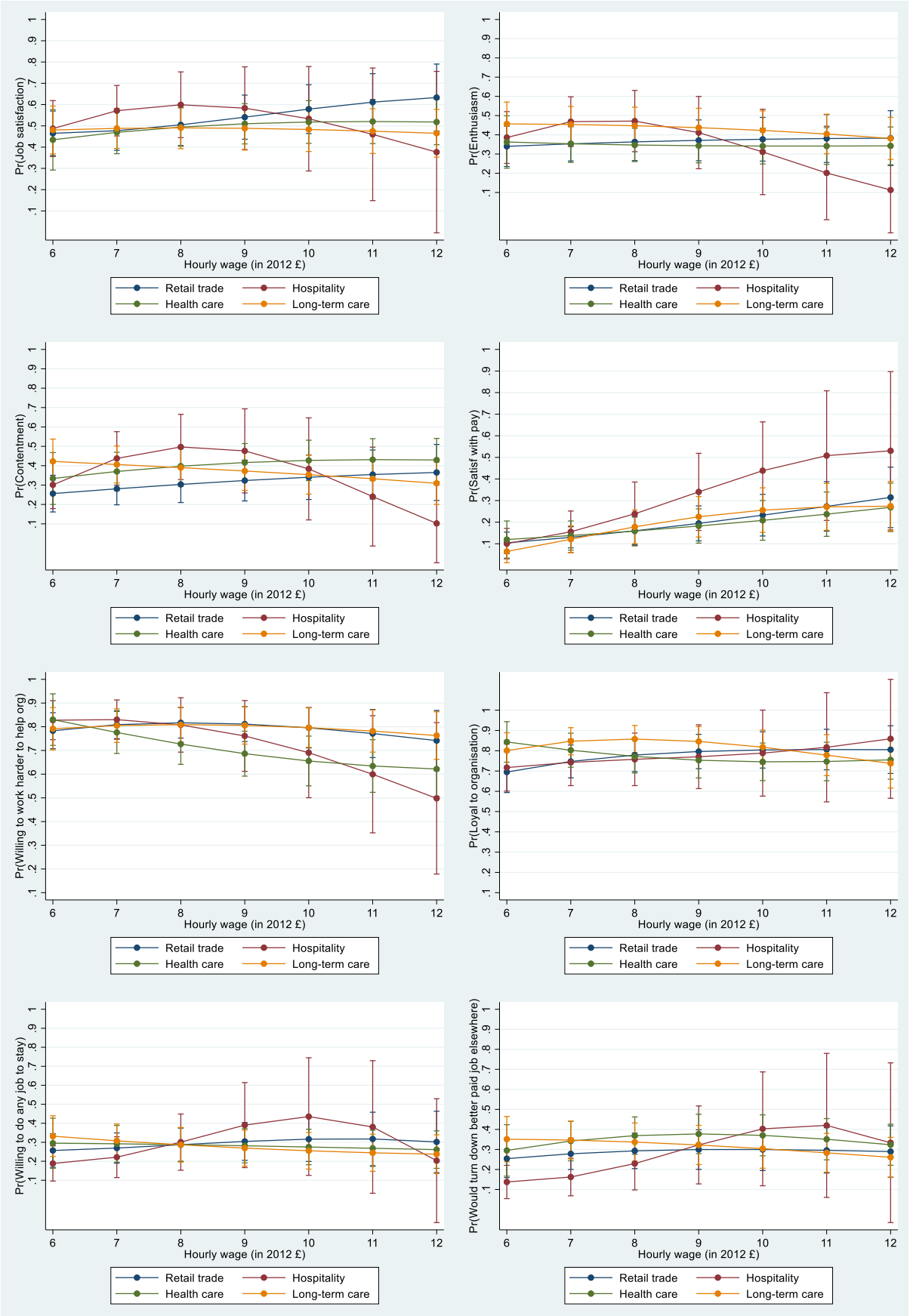


Table 1: Mean values and differences in job-related wellbeing and organisational commitment

	Mean value				Difference				
	Retail trade (1)	Hospi-tality (2)	Health Care (3)	LT care (4)	(4) – (1)	(4) – (2)	(4) – (3)	(3) – (1)	(3) – (2)
Job-related wellbeing									
Overall job satisfaction	5.166	5.020	5.475	5.452	0.286***	0.432***	-0.022	0.308***	0.455***
					(0.006)	(0.006)	(0.819)	(0.001)	(0.003)
Enthusiasm	3.005	3.007	3.428	3.451	0.446***	0.444***	0.022	0.424***	0.422***
					(0.000)	(0.003)	(0.841)	(0.000)	(0.003)
Contentment	2.967	3.135	3.229	3.402	0.435***	0.266*	0.173	0.262**	0.094
					(0.000)	(0.093)	(0.147)	(0.010)	(0.531)
Selected components of job satisfaction									
Satisfaction with manager abilities	4.779	4.963	4.620	4.956	0.177	-0.007	0.336***	-0.159	-0.344**
					(0.141)	(0.960)	(0.004)	(0.158)	(0.015)
Satisfaction with prom prospects	4.565	4.375	4.365	4.230	-0.335**	-0.144	-0.135	-0.200*	-0.010
					(0.010)	(0.331)	(0.266)	(0.072)	(0.942)
Satisfaction with job security	5.464	5.292	5.277	5.350	-0.114	0.058	0.073	-0.187*	-0.015
					(0.263)	(0.696)	(0.526)	(0.050)	0.917
Satisfaction with pay	4.369	4.152	4.558	4.232	-0.137	0.080	-0.327***	0.190*	0.407**
					(0.259)	(0.681)	(0.009)	(0.075)	(0.029)
Satisfaction with work itself	5.279	5.124	5.533	5.659	0.380***	0.534***	0.126	0.254***	0.408***
					(0.000)	(0.000)	(0.138)	(0.002)	(0.005)
Satisfaction with ability to use initiative	5.320	5.154	5.628	5.716	0.397***	0.562***	0.088	0.308***	0.474***
					(0.000)	(0.001)	(0.349)	(0.001)	(0.005)
Satisfaction with training provision	4.887	4.650	5.206	5.172	0.284**	0.522***	-0.034	0.318***	0.556***
					(0.014)	(0.001)	(0.764)	(0.003)	(0.000)
Organisational commitment									
Willing to work harder to help org	2.921	2.858	2.888	2.984	0.064	0.127	0.096	-0.032	0.031
					(0.282)	(0.105)	(0.123)	(0.561)	(0.683)
Loyalty to organisation	2.942	2.736	3.066	2.990	0.048	0.254***	-0.076	0.124**	0.330***
					(0.493)	(0.009)	(0.288)	(0.037)	(0.000)
Shared values with organisation	2.758	2.647	2.760	2.906	0.148**	0.258***	0.146**	0.001	0.112
					(0.010)	(0.001)	(0.010)	(0.979)	(0.112)
Inspired by organisation	2.590	2.518	2.699	2.767	0.177**	0.249***	0.068	0.109*	0.181**
					(0.018)	(0.009)	(0.318)	(0.086)	(0.036)
Proud of working for organisation	2.832	2.681	3.073	3.025	0.193***	0.344***	-0.048	0.241***	0.392***
					(0.002)	(0.000)	(0.408)	(0.000)	(0.000)
Willing to do any job to stay	2.104	2.065	2.033	2.199	0.095	0.135	0.166**	-0.071	-0.032
					(0.162)	(0.123)	(0.011)	(0.269)	(0.708)
Would turn down better paid job	1.977	1.989	2.131	2.103	0.126*	0.113	-0.029	0.155**	0.142
					(0.079)	(0.290)	(0.680)	(0.018)	(0.169)

*** p<0.01, ** p<0.05, * p<0.1

Note: Overall job satisfaction is measured on a scale from 1 'Completely dissatisfied' to 7 'Completely satisfied'; Enthusiasm, Content, and Job stress are measured on a scale from 1 'Never' to 6 'All of the time'; while Organisational commitment and its subcomponents are measured on a scale from 1 'Strongly disagree' to 4 'Strongly agree'.

Table 2: Covariates - mean values of by industry

Variable	Retail trade		Hospitality		Health care		Long-term care	
	Mean	St Dev	Mean	St Dev	Mean	St Dev	Mean	St Dev
Individual characteristics								
Gender: female	0.623	0.485	0.668	0.472	0.834	0.372	0.827	0.378
Ethnicity: White	0.896	0.306	0.855	0.353	0.836	0.370	0.862	0.345
Age	38.47	13.20	35.46	12.33	42.27	11.16	39.86	11.79
Education level: no education	(base category)							
Education level: equiv. NVQ1	0.205	0.404	0.142	0.350	0.076	0.265	0.079	0.270
Education level: equiv. NVQ2	0.267	0.443	0.283	0.451	0.193	0.395	0.300	0.459
Education level: equiv. NVQ3	0.274	0.446	0.206	0.406	0.223	0.417	0.259	0.439
Education level: equiv. NVQ4 or 5	0.129	0.335	0.198	0.400	0.460	0.499	0.290	0.454
Education mismatch (actual level - required)	1.213	1.322	1.396	1.469	0.107	1.109	0.632	1.287
Married	0.466	0.499	0.281	0.451	0.576	0.495	0.505	0.501
Children (age <16): none	(base category)							
Children (age <16): one	0.189	0.392	0.158	0.366	0.201	0.401	0.154	0.362
Children(age <16): two or more	0.157	0.364	0.137	0.344	0.204	0.404	0.265	0.442
Wok values (essential/very important=1)								
Good prom prospects	0.503	0.501	0.543	0.499	0.521	0.500	0.482	0.500
Good pay	0.771	0.420	0.796	0.404	0.650	0.477	0.718	0.451
Good relationship with manager	0.849	0.359	0.850	0.358	0.876	0.329	0.859	0.348
Secure job	0.878	0.328	0.847	0.361	0.876	0.330	0.851	0.357
Ability to use initiative	0.768	0.423	0.783	0.413	0.847	0.360	0.798	0.402
Like doing it	0.876	0.330	0.899	0.303	0.942	0.234	0.952	0.214
Good training provision	0.679	0.467	0.667	0.473	0.826	0.379	0.745	0.436
Occupation								
Associate Professional and Technical	(base category)							
Administrative and Secretarial	0.080	0.271	0.054	0.228	0.197	0.398	0.075	0.263
Skilled Trades	0.064	0.244	0.161	0.368	0.019	0.136	0.021	0.145
Personal Service	0.001	0.038	0.021	0.142	0.180	0.385	0.656	0.476
Sales and Customer Service	0.607	0.489	0.056	0.230	0.004	0.065	0.004	0.066
Process, Plant and Machine Operatives	0.037	0.189	0.013	0.114	0.007	0.085	0.002	0.048
Elementary	0.145	0.353	0.680	0.468	0.047	0.212	0.047	0.212
Job and organisation characteristics								
Hourly wage (in 2012 prices)	7.45	2.16	6.91	1.55	12.22	4.49	9.14	3.39
Weekly hours	28.74	11.60	28.67	13.88	32.09	9.43	32.18	11.67
Contract type: permanent	(base category)							
Contract type: non-permanent	0.044	0.205	0.099	0.299	0.070	0.255	0.064	0.245
Job type: full-time	(base category)							
Job type: part-time	0.494	0.500	0.501	0.501	0.324	0.468	0.374	0.485
Years with employer	5.492	6.599	3.538	4.983	9.553	8.947	4.704	5.587
IIP registration: No	(base category)							
IIP registration: Refused/Don't Know	0.221	0.415	0.114	0.319	0.143	0.351	0.132	0.339
IIP registration: Yes	0.452	0.498	0.280	0.450	0.718	0.450	0.597	0.491
Sector: Private	(base category)							
Sector: Public	0.033	0.178	0.103	0.305	0.821	0.384	0.316	0.465
Sector: Not for profit	0.003	0.052	0.006	0.077	0.031	0.173	0.194	0.396
Company size: Micro – 1 to 9 employees	(base category)							
Company size: Small – 10 to 49 employees	0.267	0.443	0.529	0.501	0.308	0.462	0.526	0.500
Company size: Medium – 50 to 249 employees	0.246	0.431	0.141	0.349	0.230	0.422	0.193	0.395
Company size: Large – 250 and more employees	0.232	0.423	0.054	0.227	0.383	0.487	0.024	0.154
Regional and year controls								
Region: North East	(base category)							
Region: North West	0.160	0.367	0.128	0.336	0.128	0.334	0.156	0.364
Region: Yorkshire and the Humber	0.136	0.343	0.133	0.341	0.140	0.347	0.141	0.349
Region: East Midlands	0.095	0.294	0.080	0.272	0.088	0.283	0.087	0.282
Region: West Midlands	0.083	0.276	0.112	0.316	0.115	0.319	0.088	0.283
Region: East of England	0.090	0.286	0.093	0.292	0.111	0.315	0.125	0.331
Region: London	0.108	0.311	0.246	0.432	0.127	0.333	0.058	0.235
Region: South East	0.125	0.331	0.096	0.296	0.148	0.356	0.136	0.343
Region: South West	0.122	0.327	0.073	0.261	0.107	0.309	0.160	0.367
Survey year: 2006	(base category)							
Survey year: 2012	0.341	0.475	0.412	0.493	0.297	0.457	0.397	0.490
Observations	474		190		449		370	

Table 3: Marginal effects of probit estimates of job-related wellbeing – industry effects

VARIABLES	No controls	Individual controls incl. work values	Indiv. controls, work values and org. controls
		Job satisfaction	
Industry: hospitality	0.023	0.039	0.029
	(0.043)	(0.054)	(0.061)
Industry: health care	0.114***	0.001	-0.019
	(0.033)	(0.051)	(0.066)
Industry: long-term care	0.090***	0.009	-0.035
	(0.035)	(0.055)	(0.067)
		Enthusiasm	
Industry: hospitality	0.003	0.024	0.045
	(0.040)	(0.052)	(0.060)
Industry: health care	0.120***	0.023	0.005
	(0.032)	(0.050)	(0.067)
Industry: long-term care	0.145***	0.089	0.053
	(0.034)	(0.055)	(0.067)
		Contentment	
Industry: hospitality	0.049	0.041	0.058
	(0.041)	(0.051)	(0.058)
Industry: health care	0.097***	0.078	0.105
	(0.031)	(0.052)	(0.066)
Industry: long-term care	0.107***	0.058	0.059
	(0.033)	(0.055)	(0.066)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4: Marginal effects of probit estimates of job satisfaction components – industry effects

VARIABLES	No controls	Individual controls incl. work values	Indiv. controls, work values and org. controls
	Satisfaction with manager's abilities		
Industry: hospitality	0.070*	0.112**	0.117*
	(0.042)	(0.055)	(0.062)
Industry: health care	-0.072**	-0.097**	-0.086
	(0.030)	(0.049)	(0.063)
Industry: long-term care	0.059*	0.017	0.021
	(0.033)	(0.056)	(0.067)
	Satisfaction with promotion prospects		
Industry: hospitality	-0.091***	-0.070	-0.017
	(0.034)	(0.047)	(0.054)
Industry: health care	-0.076***	-0.084*	-0.040
	(0.027)	(0.043)	(0.054)
Industry: long-term care	-0.049	-0.029	-0.006
	(0.030)	(0.050)	(0.058)
	Satisfaction with job security		
Industry: hospitality	-0.041	-0.065	-0.040
	(0.043)	(0.054)	(0.061)
Industry: health care	-0.060*	-0.172***	-0.109
	(0.033)	(0.050)	(0.067)
Industry: long-term care	-0.032	-0.149***	-0.094
	(0.035)	(0.054)	(0.068)
	Satisfaction with pay		
Industry: hospitality	-0.038	0.000	0.033
	(0.032)	(0.049)	(0.052)
Industry: health care	0.009	-0.023	-0.003
	(0.026)	(0.043)	(0.053)
Industry: long-term care	-0.016	-0.035	-0.026
	(0.027)	(0.046)	(0.052)
	Satisfaction with work itself		
Industry: hospitality	0.022	-0.007	0.010
	(0.043)	(0.054)	(0.062)
Industry: health care	0.088***	-0.049	0.001
	(0.033)	(0.050)	(0.066)
Industry: long-term care	0.141***	0.037	0.063
	(0.034)	(0.055)	(0.068)
	Satisfaction with using initiative		
Industry: hospitality	0.001	0.040	0.078
	(0.043)	(0.051)	(0.055)
Industry: health care	0.095***	-0.094*	-0.095
	(0.033)	(0.049)	(0.062)
Industry: long-term care	0.137***	0.016	0.015
	(0.034)	(0.053)	(0.064)
	Satisfaction with training provision		
Industry: hospitality	-0.097**	-0.063	0.004
	(0.039)	(0.055)	(0.064)
Industry: health care	0.082**	-0.025	-0.015
	(0.032)	(0.052)	(0.067)
Industry: long-term care	0.114***	0.046	0.053
	(0.034)	(0.057)	(0.069)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Marginal effects of probit estimates of organisational commitment – industry effects

VARIABLES	No controls	Individual controls incl. work values	Indiv. controls, work values and org. controls
	Willing to work harder to help organisation		
Industry: retail trade	0.022	0.011	-0.005
	(0.037)	(0.043)	(0.049)
Industry: health care	-0.023	-0.103**	-0.074
	(0.038)	(0.050)	(0.061)
Industry: long-term care	0.028	-0.020	-0.006
	(0.038)	(0.049)	(0.056)
	Loyalty to organisation		
Industry: retail trade	0.097**	0.050	0.007
	(0.040)	(0.048)	(0.053)
Industry: health care	0.140***	0.042	0.024
	(0.039)	(0.055)	(0.065)
Industry: long-term care	0.140***	0.092*	0.048
	(0.040)	(0.055)	(0.063)
	Shared values with organisation		
Industry: retail trade	0.048	0.014	-0.022
	(0.040)	(0.046)	(0.049)
Industry: health care	0.015	-0.100*	-0.143**
	(0.040)	(0.054)	(0.061)
Industry: long-term care	0.109***	0.021	-0.060
	(0.040)	(0.053)	(0.059)
	Inspired by organisation		
Industry: retail trade	0.055	0.047	-0.025
	(0.043)	(0.050)	(0.055)
Industry: health care	0.051	-0.093	-0.089
	(0.043)	(0.058)	(0.068)
Industry: long-term care	0.147***	0.032	0.006
	(0.043)	(0.059)	(0.066)
	Proud of working for organisation		
Industry: retail trade	0.047	0.034	0.022
	(0.039)	(0.045)	(0.047)
Industry: health care	0.131***	0.036	-0.024
	(0.038)	(0.050)	(0.059)
Industry: long-term care	0.119***	0.075	0.034
	(0.039)	(0.049)	(0.053)
	Willing to do any job to stay		
Industry: retail trade	0.029	0.097**	0.051
	(0.038)	(0.047)	(0.050)
Industry: health care	-0.069*	-0.013	0.070
	(0.037)	(0.049)	(0.061)
Industry: long-term care	0.037	0.079	0.076
	(0.040)	(0.054)	(0.060)
	Would turn down better paid job		
Industry: retail trade	0.050	0.092**	0.108**
	(0.036)	(0.046)	(0.049)
Industry: health care	0.091**	0.094*	0.147**
	(0.037)	(0.051)	(0.060)
Industry: long-term care	0.126***	0.143***	0.129**
	(0.039)	(0.054)	(0.058)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Annex A1: Marginal effects of probit estimates of job-related wellbeing

VARIABLES	(1) Job satisfaction	(2) Job satisfaction	(3) Enthusiasm	(4) Enthusiasm	(5) Contentment	(6) Contentment
Individual characteristics						
Gender (female==1)	0.102***	0.057	0.057*	0.044	0.048	0.034
	(0.034)	(0.039)	(0.033)	(0.037)	(0.033)	(0.037)
Ethnic white	-0.015	-0.000	0.066	0.119**	-0.042	0.027
	(0.044)	(0.052)	(0.042)	(0.050)	(0.042)	(0.050)
Age	-0.011	-0.007	0.001	0.003	0.006	0.008
	(0.008)	(0.009)	(0.008)	(0.009)	(0.008)	(0.009)
Age square	0.000	0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education level: NVQ1	-0.109**	-0.081	0.068	0.082	0.061	0.070
	(0.055)	(0.062)	(0.052)	(0.056)	(0.054)	(0.060)
Education level: NVQ2	-0.095*	-0.073	0.073	0.101**	-0.055	-0.028
	(0.050)	(0.057)	(0.046)	(0.049)	(0.049)	(0.054)
Education level: NVQ3	-0.125**	-0.106	0.120**	0.138**	-0.025	-0.011
	(0.056)	(0.065)	(0.053)	(0.057)	(0.055)	(0.061)
Education level: NVQ4/5	-0.165***	-0.164**	0.140**	0.159**	0.028	0.045
	(0.061)	(0.074)	(0.058)	(0.066)	(0.062)	(0.072)
Education mismatch	-0.018	-0.022	-0.022*	-0.029**	-0.005	-0.020
	(0.013)	(0.015)	(0.013)	(0.015)	(0.013)	(0.015)
Married	-0.020	-0.018	0.055**	0.063**	0.034	0.047
	(0.028)	(0.031)	(0.028)	(0.030)	(0.027)	(0.030)
Children: one	0.055	0.031	0.010	0.014	0.042	0.037
	(0.036)	(0.040)	(0.035)	(0.039)	(0.036)	(0.040)
Children: two or more	0.003	0.003	-0.084**	-0.084**	-0.046	-0.047
	(0.036)	(0.041)	(0.034)	(0.038)	(0.035)	(0.039)
Work values						
Good prom prospects	-0.050*	-0.041	0.042	0.067**	-0.024	-0.006
	(0.030)	(0.033)	(0.029)	(0.032)	(0.029)	(0.032)
Good pay	-0.126***	-0.112***	-0.101***	-0.101***	-0.094***	-0.085**
	(0.031)	(0.035)	(0.031)	(0.034)	(0.031)	(0.034)
Good rel with management	0.094**	0.100**	0.126***	0.111***	0.099**	0.110***
	(0.038)	(0.042)	(0.038)	(0.041)	(0.039)	(0.042)
Secure job	0.088**	0.101**	0.001	0.014	0.043	0.034
	(0.042)	(0.047)	(0.042)	(0.046)	(0.042)	(0.046)
Use initiative	0.119***	0.078**	0.123***	0.090**	0.090***	0.057
	(0.034)	(0.038)	(0.035)	(0.038)	(0.035)	(0.037)
Like doing it	0.158***	0.184***	0.137***	0.077	0.126**	0.120**
	(0.050)	(0.058)	(0.051)	(0.058)	(0.051)	(0.058)
Good training provision	0.057*	0.076**	0.039	0.062*	-0.024	-0.000
	(0.033)	(0.036)	(0.033)	(0.036)	(0.032)	(0.035)
Job and organisation characteristics						
Hourly wage (log)		0.039		-0.051		-0.042
		(0.067)		(0.064)		(0.064)
Job type: full-time		-0.013		0.022		0.040
		(0.033)		(0.031)		(0.031)
Contract type: non-permanent		-0.125*		0.056		-0.067
		(0.065)		(0.068)		(0.065)
Years with employer (log)		-0.022		-0.010		-0.031*
		(0.017)		(0.016)		(0.016)
IIP registered estab: REF/DK		0.112**		0.131***		0.081*
		(0.046)		(0.045)		(0.045)
IIP registered estab: Yes		0.073**		0.045		0.004
		(0.037)		(0.035)		(0.035)
Sector: Private		0.022		0.040		-0.037
		(0.046)		(0.047)		(0.045)
Sector: Voluntary		0.107		0.067		0.026
		(0.067)		(0.068)		(0.066)
Comp size: small (15-49)		-0.045		-0.055		-0.045
		(0.040)		(0.040)		(0.040)
Comp size: medium (50-249)		-0.138***		-0.112**		-0.089*
		(0.047)		(0.045)		(0.046)
Comp size: large (>=249)		-0.122**		-0.053		-0.024
		(0.051)		(0.050)		(0.050)
Industry						
Hospitality	0.039	0.029	0.024	0.045	0.041	0.058
	(0.054)	(0.061)	(0.052)	(0.060)	(0.051)	(0.058)
Health care	0.001	-0.019	0.023	0.005	0.078	0.105
	(0.051)	(0.066)	(0.050)	(0.067)	(0.052)	(0.066)

Long-term care	0.009	-0.035	0.089	0.053	0.058	0.059
	(0.055)	(0.067)	(0.055)	(0.067)	(0.055)	(0.066)
Occupation dummies	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,440	1,176	1,440	1,176	1,440	1,176
Pseudo R-squared	0.0731	0.0865	0.0720	0.0858	0.0487	0.0610
Parallel reg. asm. oprobit (chi2)		304.81		225.75		211.43
P-value		0.003		0.039		0.160

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Annex A2: Marginal effects of probit estimates of job satisfaction components

VARIABLES	(1) Managabilities	(2) Promotion	(3) Job security	(4) Pay	(5) Work	(6) Use initiative	(7) Training
Individual characteristics							
Gender (female==1)	0.039	0.066**	0.069*	0.010	0.092**	-0.001	0.095***
	(0.036)	(0.029)	(0.039)	(0.031)	(0.038)	(0.037)	(0.037)
Ethnic white	-0.002	0.032	0.036	0.039	0.098*	0.007	0.038
	(0.048)	(0.043)	(0.051)	(0.041)	(0.051)	(0.049)	(0.049)
Age	-0.001	-0.002	-0.016*	-0.004	-0.015	0.007	-0.000
	(0.009)	(0.008)	(0.009)	(0.007)	(0.009)	(0.009)	(0.009)
Age square	0.000	0.000	0.000*	0.000	0.000**	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education level: NVQ1	-0.061	0.042	-0.026	0.025	-0.065	0.047	-0.020
	(0.057)	(0.050)	(0.062)	(0.051)	(0.061)	(0.061)	(0.060)
Education level: NVQ2	-0.015	0.059	-0.031	0.018	0.041	0.115**	0.025
	(0.053)	(0.045)	(0.058)	(0.047)	(0.057)	(0.056)	(0.057)
Education level: NVQ3	-0.016	0.037	-0.018	-0.007	-0.014	0.076	-0.025
	(0.062)	(0.053)	(0.066)	(0.053)	(0.064)	(0.064)	(0.065)
Education level: NVQ4/5	-0.012	-0.019	-0.009	-0.089*	-0.046	0.078	-0.018
	(0.071)	(0.056)	(0.076)	(0.054)	(0.074)	(0.073)	(0.073)
Education mismatch	-0.007	-0.011	-0.036**	0.003	-0.030**	-0.058***	-0.017
	(0.014)	(0.013)	(0.015)	(0.012)	(0.015)	(0.015)	(0.015)
Married	0.022	-0.006	0.052	0.003	0.010	0.051*	0.046
	(0.030)	(0.027)	(0.032)	(0.025)	(0.031)	(0.031)	(0.031)
Children: one	0.020	0.017	0.028	0.021	0.058	0.006	0.036
	(0.039)	(0.034)	(0.041)	(0.031)	(0.040)	(0.039)	(0.040)
Children: two or more	-0.046	-0.024	0.035	-0.026	0.011	-0.072*	-0.002
	(0.038)	(0.034)	(0.042)	(0.030)	(0.041)	(0.041)	(0.040)
Work values							
Good prom prospects	0.016	0.027	0.028	-0.051**	0.030	0.003	-0.001
	(0.031)	(0.027)	(0.033)	(0.025)	(0.033)	(0.032)	(0.032)
Good pay	-0.049	-0.011	-0.090**	0.013	-0.147***	-0.078**	-0.034
	(0.034)	(0.029)	(0.036)	(0.027)	(0.035)	(0.034)	(0.034)
Good rel with management	0.158***	0.058	0.078*	0.054	0.070*	0.109***	0.049
	(0.043)	(0.037)	(0.043)	(0.034)	(0.042)	(0.041)	(0.042)
Secure job	0.141***	0.042	0.130***	0.054	0.113**	0.084*	0.097**
	(0.047)	(0.039)	(0.048)	(0.037)	(0.047)	(0.046)	(0.048)
Use initiative	0.068*	0.080**	-0.013	0.017	0.061	0.139***	-0.004
	(0.036)	(0.033)	(0.038)	(0.030)	(0.037)	(0.036)	(0.037)
Like doing it	0.064	-0.057	0.088	0.042	0.194***	0.108**	0.055
	(0.055)	(0.046)	(0.058)	(0.047)	(0.058)	(0.055)	(0.056)
Good training provision	0.069**	0.058*	-0.000	0.063**	0.079**	0.062*	0.164***
	(0.035)	(0.030)	(0.037)	(0.029)	(0.036)	(0.036)	(0.035)
Job and organisation characteristics							
Hourly wage (log)	-0.057	0.058	-0.024	0.322***	-0.006	0.138**	-0.061
	(0.065)	(0.057)	(0.068)	(0.053)	(0.065)	(0.066)	(0.065)
Job type: full-time	-0.091***	0.029	0.003	-0.039	0.065**	0.009	0.002
	(0.031)	(0.027)	(0.033)	(0.024)	(0.032)	(0.032)	(0.031)
Contract type: non-permanent	-0.096	-0.086*	-0.189***	0.024	-0.031	-0.209***	-0.034
	(0.059)	(0.047)	(0.068)	(0.054)	(0.069)	(0.065)	(0.067)
Years with employer (log)	-0.005	-0.018	0.006	0.002	-0.008	0.037**	-0.007
	(0.016)	(0.014)	(0.017)	(0.013)	(0.017)	(0.016)	(0.016)
IIP registered estab: REF/DK	-0.005	0.016	0.054	0.099***	0.017	-0.051	0.144***
	(0.043)	(0.038)	(0.048)	(0.037)	(0.046)	(0.044)	(0.045)
IIP registered estab: Yes	0.003	0.025	0.010	0.034	-0.014	0.005	0.153***
	(0.035)	(0.030)	(0.037)	(0.026)	(0.036)	(0.036)	(0.035)
Sector: Private	0.015	-0.044	-0.068	-0.024	-0.021	0.004	-0.003
	(0.044)	(0.037)	(0.046)	(0.036)	(0.045)	(0.045)	(0.044)
Sector: Voluntary	0.108	0.064	0.025	0.056	0.108	0.171***	0.099
	(0.068)	(0.063)	(0.069)	(0.059)	(0.068)	(0.063)	(0.068)
Comp size: small (15-49)	0.038	0.030	0.058	-0.086**	-0.055	-0.066*	0.031
	(0.038)	(0.032)	(0.042)	(0.035)	(0.040)	(0.039)	(0.040)
Comp size: medium (50-249)	-0.048	0.017	-0.030	-0.096**	-0.131***	-0.040	0.006
	(0.044)	(0.038)	(0.048)	(0.039)	(0.047)	(0.046)	(0.046)
Comp size: large (>=249)	-0.024	0.049	0.014	-0.127***	-0.070	-0.033	-0.003
	(0.048)	(0.042)	(0.052)	(0.040)	(0.051)	(0.049)	(0.049)
Industry							
Hospitality	0.117*	-0.017	-0.040	0.033	0.010	0.078	0.004
	(0.062)	(0.054)	(0.061)	(0.052)	(0.062)	(0.055)	(0.064)
Health care	-0.086	-0.040	-0.109	-0.003	0.001	-0.095	-0.015

	(0.063)	(0.054)	(0.067)	(0.053)	(0.066)	(0.062)	(0.067)
Long-term care	0.021	-0.006	-0.094	-0.026	0.063	0.015	0.053
	(0.067)	(0.058)	(0.068)	(0.052)	(0.068)	(0.064)	(0.069)
Occupation dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,176	1,176	1,176	1,176	1,176	1,176	1,176
Pseudo R-squared	0.0802	0.0634	0.0583	0.0931	0.0953	0.112	0.0945
Parallel reg. assump. oprobit (chi2)	327.21	457.98	332.88	270.25	338.64	326.81	347.22
P-value	0.000	0.000	0.000	0.087	0.000	0.000	0.000

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Annex A3: Marginal effects of probit estimates of organisational commitment

VARIABLES	(1) Work harder	(2) Loyal	(3) Shared values	(4) Inspired by org	(5) Proud	(6) Do any job to stay	(7) Turn down other job
Individual characteristics							
Gender (female==1)	-0.018	0.068**	-0.024	0.059	0.019	0.017	-0.022
	(0.032)	(0.035)	(0.034)	(0.039)	(0.032)	(0.033)	(0.035)
Ethnic white	-0.074	0.005	-0.020	-0.125**	-0.048	-0.108**	-0.048
	(0.047)	(0.042)	(0.046)	(0.052)	(0.043)	(0.044)	(0.046)
Age	-0.001	-0.002	0.003	-0.004	-0.006	0.005	-0.009
	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)
Age square	-0.000	0.000	-0.000	0.000	0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education level: NVQ1	0.045	0.039	0.142**	0.033	0.109*	-0.028	-0.030
	(0.060)	(0.056)	(0.062)	(0.060)	(0.057)	(0.056)	(0.052)
Education level: NVQ2	0.146***	0.071	0.150**	0.060	0.169***	0.028	-0.000
	(0.056)	(0.053)	(0.059)	(0.056)	(0.055)	(0.053)	(0.049)
Education level: NVQ3	0.164***	0.103*	0.133**	0.006	0.150**	-0.067	0.021
	(0.063)	(0.059)	(0.067)	(0.063)	(0.061)	(0.061)	(0.058)
Education level: NVQ4/5	0.122*	0.085	0.172**	0.016	0.159**	-0.121*	0.004
	(0.072)	(0.066)	(0.074)	(0.073)	(0.068)	(0.066)	(0.066)
Education mismatch	-0.032**	-0.025**	-0.033**	-0.046***	-0.039***	-0.028**	-0.021
	(0.013)	(0.012)	(0.014)	(0.015)	(0.012)	(0.013)	(0.014)
Married	0.102***	0.030	0.028	0.015	0.014	0.046*	-0.038
	(0.027)	(0.027)	(0.029)	(0.031)	(0.026)	(0.027)	(0.028)
Children: one	-0.011	0.015	-0.024	-0.034	-0.054	0.040	0.058
	(0.034)	(0.034)	(0.037)	(0.040)	(0.034)	(0.036)	(0.037)
Children: two or more	-0.062	-0.016	-0.042	-0.029	-0.072**	-0.026	0.042
	(0.039)	(0.036)	(0.039)	(0.041)	(0.036)	(0.035)	(0.039)
Work values							
Good prom prospects	0.000	-0.016	-0.018	0.012	-0.010	-0.009	-0.018
	(0.029)	(0.028)	(0.030)	(0.032)	(0.027)	(0.029)	(0.031)
Good pay	-0.079***	-0.060**	-0.096***	-0.148***	-0.088***	-0.088***	-0.155***
	(0.031)	(0.030)	(0.033)	(0.035)	(0.030)	(0.031)	(0.031)
Good rel with management	0.059*	0.104***	0.099***	0.116***	0.092***	0.047	0.082**
	(0.036)	(0.034)	(0.037)	(0.040)	(0.033)	(0.039)	(0.040)
Secure job	0.052	-0.007	0.049	0.146***	0.087**	0.148***	0.048
	(0.039)	(0.040)	(0.044)	(0.045)	(0.039)	(0.047)	(0.044)
Use initiative	0.036	0.002	0.061*	0.107***	0.028	0.088***	0.022
	(0.032)	(0.033)	(0.034)	(0.036)	(0.030)	(0.034)	(0.035)
Like doing it	0.067	-0.049	-0.008	0.112**	0.088**	0.008	0.081
	(0.048)	(0.050)	(0.052)	(0.054)	(0.043)	(0.049)	(0.055)
Good training provision	0.048	0.046	0.029	0.019	0.034	0.038	0.016
	(0.031)	(0.031)	(0.033)	(0.035)	(0.030)	(0.032)	(0.033)
Job and organisation characteristics							
Hourly wage (log)	-0.093	0.067	-0.047	-0.063	-0.074	-0.049	-0.079
	(0.059)	(0.056)	(0.060)	(0.065)	(0.056)	(0.061)	(0.060)
Job type: full-time	-0.016	-0.040	-0.029	-0.048	-0.038	0.034	0.004
	(0.029)	(0.028)	(0.030)	(0.032)	(0.027)	(0.027)	(0.029)
Contract type: non-permanent	-0.116*	-0.154**	-0.019	-0.094	-0.160**	0.008	-0.023
	(0.071)	(0.069)	(0.064)	(0.071)	(0.068)	(0.063)	(0.063)
Years with employer (log)	-0.030**	-0.021	-0.012	-0.003	-0.025*	0.002	0.024
	(0.015)	(0.015)	(0.015)	(0.017)	(0.014)	(0.015)	(0.015)
IIP registered estab: REF/DK	0.024	0.013	0.079*	0.073*	0.051	0.038	-0.088**
	(0.040)	(0.039)	(0.043)	(0.044)	(0.037)	(0.038)	(0.039)
IIP registered estab: Yes	0.010	0.009	0.079**	0.060*	0.027	0.054*	-0.013
	(0.032)	(0.032)	(0.035)	(0.036)	(0.030)	(0.031)	(0.033)
Sector: Private	0.005	-0.039	0.019	-0.052	0.109***	-0.102***	-0.029
	(0.039)	(0.040)	(0.041)	(0.045)	(0.034)	(0.039)	(0.041)
Sector: Voluntary	0.058	0.111**	0.170***	0.119*	0.090*	0.113	0.233***
	(0.056)	(0.046)	(0.050)	(0.062)	(0.054)	(0.069)	(0.070)
Comp size: small (15-49)	0.018	0.033	-0.058*	-0.052	-0.021	-0.034	-0.062
	(0.035)	(0.036)	(0.034)	(0.039)	(0.032)	(0.037)	(0.038)
Comp size: medium (50-249)	-0.067	0.045	-0.130***	-0.055	-0.028	-0.086**	-0.071
	(0.043)	(0.041)	(0.042)	(0.046)	(0.039)	(0.042)	(0.044)
Comp size: large (>=249)	-0.018	0.032	-0.125***	-0.056	-0.010	-0.088**	-0.103**
	(0.045)	(0.044)	(0.045)	(0.050)	(0.041)	(0.045)	(0.046)
Industry							
Retail trade	-0.005	0.007	-0.022	-0.025	0.022	0.051	0.108**
	(0.049)	(0.053)	(0.049)	(0.055)	(0.047)	(0.050)	(0.049)
Health care	-0.074	0.024	-0.143**	-0.089	-0.024	0.070	0.147**

	(0.061)	(0.065)	(0.061)	(0.068)	(0.059)	(0.061)	(0.060)
Long-term care	-0.006	0.048	-0.060	0.006	0.034	0.076	0.129**
	(0.056)	(0.063)	(0.059)	(0.066)	(0.053)	(0.060)	(0.058)
Occupation dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,165	1,168	1,143	1,157	1,157	1,158	1,138
Pseudo R-squared	0.077	0.071	0.067	0.089	0.088	0.104	0.088
Parallel reg. assump. oprobit (chi2)	135.10	128.41	99.65	138.31	134.59	128.71	123.14
P-value	0.005	0.015	0.379	0.003	0.006	0.015	0.028

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1