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"... Do it with joy!" - Subjective well-being outcomes of working in non-profit organizations

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1503

**“ . . . Do it with joy!” – Subjective well-being outcomes of
working in non-profit organizations
by**

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“. . . Do it with joy!” – Subjective well-being outcomes of working in non-profit organizations

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Abstract

Working in non-profit organizations has been shown to be good for individuals' satisfaction with their jobs despite lower incomes. This paper explores the impact of non-profit work on life satisfaction more general for the British Household Panel Survey (BHPS) and finds a significant positive impact the size about more than a fourth of that of getting widowed. This effect is quite uniform across the subjective well-being distribution, and thus exists also for those who are already happy. Shadow prices peg this effect at around 22.000 GBP p.a., nearly the average amount of equivalent net household income in the sample analyzed (which is roughly 27.000 GBP p.a.). The positive effect can be explained by third sector workers enjoying their day-to-day activities more, being more happy (affectively) and feeling that they are playing a useful role in their lives.

Keywords: subjective well-being, non-profit organization, life satisfaction, BHPS, job satisfaction

JEL classification: I31

PsycInfo classification: 3650

1. Introduction

More and more people harness their entrepreneurial spirit to solve important social problems and bring about social change instead of maximizing profits with their companies (e.g., [Bornstein and Davis, 2010](#)). These instances of “social entrepreneurship” show that individuals care deeply not only about their own outcomes but show altruistic motivations. They show that a job is not only something for which one becomes remunerated for the disutility of having to work, but something that—at best—fills individuals’ lives with meaning. And it would be mistaken to think about social entrepreneurship and work in non-profit organizations as an altruistic sacrifice, since workers and social entrepreneurs find their work “fulfilling and enjoyable” ([Bornstein and Davis, 2010](#), p. 128) and those who promote these kinds of work in the third sector rightly suggest that doing good should be something one does with joy (hence the title of the present paper, which quotes the 7th principle of “social business”, see [Yunus, 2010](#), Ch. 1).

Altruistic behavior has been shown in many cases to be associated with good outcomes not only for the recipients but also for those who do good ([Post, 2005](#); [Brooks, 2006](#); [Meier and Stutzer, 2008](#)). Giving to charities or volunteering one’s time are associated with better health and well-being of the altruist, giving credence to the idea of there being a “warm glow” ([Andreoni, 1989, 1990](#)) that provides the altruist with utility.¹ This also extends to those who do good by forsaking their higher paid jobs as entrepreneurs or workers in private firms to rather work as social entrepreneurs or, more generally, be employed in non-profit organizations. Research here has shown that non-profit employees derive much higher job satisfaction from doing their work than their peers in private firms, even though they often are paid considerably less ([Frank, 1996](#); [Handy and Katz, 1998](#); [Benz, 2005](#))²

This paper contributes to our understanding of the outcome of non-profit work in terms of the satisfaction of individuals who work for such firms. While studies such as [Donegani et al. \(2012\)](#) or [Benz \(2005\)](#) found positive effects on average job satisfaction of non-profit workers, the present study extends this to life satisfaction more generally, finding that those who work in non-profit organizations (as opposed to private firms) report higher satisfaction when it comes to their global life evaluation. The paper also unpacks these satisfaction measures by exploring to what extent the type of firm one works in impacts on different (life)

domain satisfactions (e.g., satisfaction with leisure time use) as well as specific aspects of one's job satisfaction (such as satisfaction with work itself or job security). It also relates these types of work to mental health more general, namely to feelings of playing a useful role or enjoying one's day-to-day activities, all of which are positively influenced by working in non-profit organizations. The paper explores the potential heterogeneity in the relationship between type of firm one works in and satisfaction by disaggregating the analysis by gender and taking into account heterogeneity depending on a person's initial subjective well-being level. Opposed to many determinants of life satisfaction (e.g., unemployment, health, the social domain, see [Binder and Coad, 2011, 2015](#); [Binder, 2015](#); [Graham and Nikolova, 2015](#)), the positive impact of non-profit work is much more uniform along the subjective well-being distribution, meaning that working for a good cause is beneficial to one's well-being no matter how happy or unhappy one already is. Finally, shadow prices are computed to allow us to "put a price tag" on the effect of working in non-profit organizations on satisfaction ([Powdthavee, 2008](#); [Clark and Oswald, 2002](#)).

The paper is structured as follows: Section 2 provides background on extant research and develops research hypotheses. Section 3 introduces the data set and provides a descriptive overview over the development of non-profit workers and their wages and satisfaction in the data set. Results of the main model as well as a number of alternative models are presented in Section 4. To put the results into context, shadow prices are computed depending on a number of different income measures in Section 5. Section 6 concludes.

2. Background

The third sector has grown in the recent past in many countries, contributing significantly to these countries' economies (for the UK, see e.g., [Hopkins, 2010](#)). This growth comes in part from governments' inability to provide a range of social services that society deems valuable but it is also due to individuals' demand for meaningful work that can address social change ([Hansmann, 1980](#); [Mirvis and Hackett, 1983](#)). It is thus not surprising that there is a large literature on the third sector and its development (see, e.g., [Hansmann, 1980](#); [Rose-Ackerman, 1996](#), for useful introductions). While early contributions focussed on the functional explanations for the existence of (voluntary) work in non-profit organizations, the

literature then turned to examining the motivations of non-profit workers (e.g. [Mirvis and Hackett, 1983](#); [Frank, 1996](#); [Glaeser and Shleifer, 2001](#); [Tidwell, 2005](#); [Hayden and Madsen, 2008](#)). As large parts of the third sector work force are volunteer workers, this literature overlaps with the literature on volunteering and altruism more generally (compare [Wilson, 2000, 2012](#)).³

A different strain of literature on non-profit work deals with the outcome assessment of such firms and enterprises. The present paper broadly falls into this category when asking about the outcomes of non-profit work, not for society, but rather on the individual level, in terms of the well-being outcomes of workers in such organizations. A straightforward measurement of these outcomes from an economic point of view are the wages being paid to non-profit workers and managers (at least to those who do not exclusively donate their time). This has been analyzed very broadly under the organizing question of whether there exist compensating wage differentials between non-profit workers and those in for profit companies (e.g., [Preston, 1989](#); [Frank, 1996](#); [Rutherford, 2009](#)).

A rather simple way to model a worker's utility function assumes that a worker derives disutility from work (which is considered a nuisance as opposed to leisure). A wage is therefore being paid to compensate for this disutility. Apart from this wage, non-pecuniary factors of the job also contribute to utility, so that

$$u = u(w, h, z_i), \tag{1}$$

where utility positively depends on wage ($u_w > 0$), negatively on hours worked ($u_h < 0$) as well as differently on a range of other factors (z_i). If non-profit firms can satisfy individuals' volunteer motivations ($z_{altruism} > 0$) or provide them with meaning that a normal job in a for profit company is not able to do, then according to this simple model, wage in non-profit organizations should be lower in order to compensate for the non-pecuniary benefits of working in the third sector ([Andreoni, 1990](#); [Besley and Ghatak, 2005](#)). The literature testing this hypothesis with respect to wage differentials is large and evidence for or against this hypothesis is mixed ([Benz, 2005](#); [Rutherford, 2009](#)). As [Benz \(2005\)](#) rightly argues, there are a number of countervailing drivers for these wage differentials to be expected: the positive non-

pecuniary value that non-profit workers derive might depend on a number of psychological factors such as mission alignment with personal values, it might be gender-specific and driven by self-selection (only altruistic individuals might experience this satisfaction, see [Borzaga and Tortia, 2006](#)). And since non-profits do not face the same market pressures and evaluation of for profit firms, there might actually occur rent-seeking of managers or shirking by the work force that would lead to the payment of higher wages than in the for-profit sector (see also [Preston, 1989](#), on this issue).⁴

Subjective well-being research offers a more direct approach of testing whether there are non-pecuniary benefits of working in non-profit organizations. It can do so by measuring life and work satisfaction directly and the controlling for a range of covariates that also impact on these life and work evaluations. Research has shown that subjective measurements of satisfaction with work or life are valid and reliable ([Krueger and Schkade, 2008](#); [Helliwell and Wang, 2012](#)). Measures of job satisfaction have a long tradition in economics ([Freeman, 1978](#); [Spector, 1985](#); [Clark, 1996](#)) and these are influenced by a range of personal, job and organizational characteristics ([Donegani et al., 2012](#)): Among personal characteristics are age ([Clark et al., 1996](#)), gender ([Clark, 1997](#)), education ([Clark, 1996](#)) but also marital status ([Benz, 2005](#)) or one's expectations about the job ([Poggi, 2010](#)). Job characteristics aside from wage and working hours include comparison income ([Clark and Oswald, 1996](#)), full-time vs. part-time or atypical employment ([Bardasi and Francesconi, 2004](#)). Organizational characteristics include firm size ([Idson, 1990](#)) and working conditions offered by the firm (controlling for working conditions, firm size no longer negatively influences job satisfaction [Garcia-Serrano, 2011](#)), the sector a firm is in and so on. Holding these factors constant, the literature here finds a consistent and positive effect of third sector work on job satisfaction ([Benz, 2005](#); [Donegani et al., 2012](#)).⁵

So far, these results have not been extended to life satisfaction proper (of which job satisfaction can be considered but one constituent part). When doing so, a number of additional covariates need to be taken into account ([Dolan et al., 2008](#)). Life satisfaction has been shown to be reliably influenced by social relations ([Becchetti et al., 2008](#)), health ([Easterlin, 2003](#)), marital status ([Lucas, 2005](#); [Stutzer and Frey, 2006](#)), unemployment ([Clark and Oswald, 1994](#); [Lucas et al., 2004](#)), to some extent income ([Easterlin, 1974](#); [Stevenson and Wolfers,](#)

2008; Ahuvia, 2008), as well as other demographic factors, which will need to be controlled for (see more extensively Dolan et al., 2008; Helliwell and Wang, 2012). Important for the purpose at hand are findings that not only employment per se plays a positive role for life satisfaction but also the type of work (Wulfgramm, 2011; Binder and Coad, 2013), hours worked and working conditions (Meier and Stutzer, 2008; Bardasi and Francesconi, 2004).

While these effects all pertain to the average individual, recent studies have shown that there is considerable heterogeneity with respect to these effects: for example with regard to unemployment, the typical robust negative effect only pertains to a subset of those who get unemployed (Gielen and van Ours, 2014)⁶ and unhappy individuals suffer more from the effect than those who are higher in the subjective well-being distribution (Binder and Coad, 2015). A similar effect was found for volunteering, where the beneficial effect on life satisfaction was more pronounced for unhappy individuals (Binder, 2015). It is thus necessary to see to what extent an effect of non-profit work on life satisfaction would generalize when going beyond the average case.

Based on these stylized facts, the following research hypotheses can be put forward:

1. Working in a non-profit organization will positively influence job satisfaction. It can be conjectured that this influence will be due to higher satisfaction with the work itself, fulfilling individuals' need for meaningful work, not so much due to wages or working conditions.
2. Working in a non-profit organization will positively influence life satisfaction.
3. The positive effect of working in a non-profit organization on subjective well-being will be more pronounced for those who are placed lower in the subjective well-being distribution, with happy people profiting less from third sector work.

Apart from these hypotheses, I will further explore the relationship between third sector work and subjective well-being by examining its impact on life and work domain satisfaction as well as some more specific measures of well-being.

3. Data and descriptive analysis

3.1. Data set

To explore the hypotheses derived in the previous section, I will analyze individuals' satisfaction using the British Household Panel Survey (BHPS) data set (which has recently been merged into the Understanding Society Household Panel Survey). I will focus on the original sample through the years 1996 to 2008 (which comprises the initial BHPS data from all waves that contain life satisfaction questions). The BHPS is a well-known and widely used data set that informs researchers on a wide variety of factors from respondents' lives, giving information on subjective well-being, incomes, personal, job and organizations characteristics as well as socio-demographic variables (BHPS, 2009; Taylor, 2010). Life (and domain) satisfaction data is available from 1996 onwards, with a gap in 2001. Missing variables are deleted list-wise.⁷ This leaves us with an unbalanced panel with 138,128 observations of 25,068 distinct individuals. Sample size will be reduced further due to the fact that most analyses below will focus on the working part of the population (and even further when focussing only on full-time employees).

Main dependent variables of interest are respondents' life satisfaction, job satisfaction, domain satisfactions as well as a range of other psychological measures (in particular relevant sub-scales from the GHQ-12 measure of mental health). The main independent variable is being employed in a non-profit organization (as opposed to a private firm or other types of employment, such as civil service or work in the NHS). A range of typical control variables help with identification. These are depicted in Table 1, where column (1) shows the full sample and columns (2) and (3) disaggregate by employment in private firm and non-profit organization respectively.

For the dependent variables, these satisfaction questions are all measured via a standard 7-point Likert scale that records the response to the question "How dissatisfied or satisfied are you with...?" on a scale from "not satisfied at all" (1) to "completely satisfied" (7). These measures can be usefully treated as cardinal in regression analysis (Ferrer-i-Carbonell and Frijters, 2004). Apart from overall life and job satisfaction, these variables include the following (life) domain satisfactions: health, income, housing, spouse, social life, and amount and use of leisure time. Job domain satisfactions include satisfaction with total pay, job

	full sample			employed, privat firm			employed, non-profit org.		
	mean	sd	count	mean	sd	count	mean	sd	count
life satisfaction	5.22	1.28	138128	5.23	1.11	47616	5.24	1.07	2540
GHQ-12	24.80	5.48	138128	25.41	4.95	47616	24.92	5.44	2540
GHQ12									
playing a useful role	0.88	0.33	138128	0.92	0.28	47616	0.90	0.30	2540
enjoy day-to-day activities	0.81	0.39	138128	0.85	0.36	47616	0.82	0.38	2540
believe in self-worth	0.92	0.27	138128	0.94	0.23	47616	0.93	0.25	2540
general happiness	0.87	0.34	138128	0.88	0.33	47616	0.86	0.35	2540
usual hourly wage	9.90	7.41	75076	9.64	7.31	46951	10.06	5.62	2488
usual monthly gross pay	1457.45	1188.82	76434	1501.18	1209.22	47616	1391.74	963.44	2540
hours usually worked per week	33.34	11.19	75076	35.44	10.31	46951	31.11	10.95	2488
type of work: Part-time	0.24	0.43	85689	0.18	0.39	47314	0.32	0.47	2518
company size									
1-25	0.36	0.48	75257	0.39	0.49	47019	0.58	0.49	2518
25-49	0.14	0.34	75257	0.13	0.33	47019	0.14	0.34	2518
50-99	0.12	0.32	75257	0.11	0.32	47019	0.11	0.32	2518
100-199	0.10	0.30	75257	0.10	0.30	47019	0.07	0.26	2518
200-499	0.12	0.32	75257	0.13	0.34	47019	0.05	0.23	2518
500-999	0.06	0.24	75257	0.07	0.25	47019	0.02	0.14	2518
1000+	0.10	0.31	75257	0.07	0.26	47019	0.03	0.16	2518
managerial duties									
manager	0.21	0.41	76380	0.22	0.42	47594	0.36	0.48	2538
foreman/supervisor	0.14	0.35	76380	0.14	0.35	47594	0.14	0.34	2538
neither	0.65	0.48	76380	0.64	0.48	47594	0.51	0.50	2538
work location									
at home	0.01	0.12	76427	0.02	0.13	47614	0.04	0.19	2540
employer premises	0.82	0.38	76427	0.81	0.39	47614	0.79	0.41	2540
driving/travel	0.09	0.28	76427	0.10	0.29	47614	0.07	0.25	2540
at home and other places	0.07	0.26	76427	0.07	0.26	47614	0.09	0.29	2540
other	0.01	0.08	76427	0.01	0.08	47614	0.01	0.08	2540
accidents									
1	0.09	0.29	138128	0.10	0.30	47616	0.08	0.27	2540
2	0.01	0.09	138128	0.01	0.10	47616	0.00	0.07	2540
3+	0.00	0.06	138128	0.00	0.05	47616	0.00	0.04	2540
log(hosp. days) disabled	0.17	0.59	138128	0.09	0.40	47616	0.11	0.44	2540
disabled	0.08	0.28	138128	0.02	0.13	47616	0.03	0.18	2540
marriage status									
married	0.54	0.50	138128	0.54	0.50	47616	0.55	0.50	2540
never married	0.29	0.45	138128	0.34	0.47	47616	0.28	0.45	2540
separated	0.02	0.14	138128	0.02	0.15	47616	0.02	0.15	2540
divorced	0.08	0.28	138128	0.08	0.27	47616	0.11	0.31	2540
widowed	0.07	0.26	138128	0.01	0.10	47616	0.03	0.17	2540
social life: talk to neighbours									
never	0.03	0.16	138128	0.03	0.17	47616	0.02	0.13	2540
less than once a month	0.06	0.24	138128	0.07	0.26	47616	0.06	0.24	2540
once or twice a month	0.14	0.35	138128	0.17	0.38	47616	0.18	0.38	2540
once or twice a week	0.38	0.49	138128	0.42	0.49	47616	0.43	0.50	2540
on most days	0.38	0.49	138128	0.30	0.46	47616	0.31	0.46	2540
social life: meeting friends									
never	0.00	0.04	138128	0.00	0.03	47616	0.00	0.03	2540
less than once a month	0.02	0.15	138128	0.02	0.14	47616	0.02	0.16	2540
once or twice a month	0.11	0.31	138128	0.12	0.32	47616	0.14	0.35	2540
once or twice a week	0.41	0.49	138128	0.43	0.49	47616	0.43	0.49	2540
on most days	0.46	0.50	138128	0.43	0.50	47616	0.41	0.49	2540
education									
1a none	0.21	0.41	138128	0.13	0.33	47616	0.06	0.23	2540
1b elementary	0.04	0.19	138128	0.05	0.23	47616	0.02	0.15	2540
1c basic voc.	0.09	0.28	138128	0.09	0.28	47616	0.05	0.21	2540
2b middle gen.	0.17	0.37	138128	0.20	0.40	47616	0.11	0.32	2540
2a middle voc.	0.05	0.23	138128	0.07	0.25	47616	0.08	0.26	2540
2c_gen: hi gen.	0.08	0.27	138128	0.08	0.26	47616	0.06	0.23	2540
2c_voc: hi voc.	0.05	0.23	138128	0.08	0.27	47616	0.05	0.21	2540
3a low tert.	0.18	0.38	138128	0.18	0.38	47616	0.22	0.41	2540
3b high tert.	0.13	0.34	138128	0.13	0.33	47616	0.36	0.48	2540
gender	0.54	0.50	138128	0.44	0.50	47616	0.71	0.45	2540
age	45.20	18.17	138128	37.86	12.48	47616	42.13	12.02	2540
no. kids									
1	0.16	0.36	138128	0.19	0.39	47616	0.18	0.39	2540
2	0.13	0.34	138128	0.16	0.36	47616	0.15	0.36	2540
3+	0.05	0.23	138128	0.05	0.22	47616	0.05	0.21	2540
Lives in London area	0.05	0.23	138128	0.05	0.22	47616	0.10	0.30	2540
Observations	138128			47616			2540		

Table 1: Summary statistics

security, work itself as well as satisfaction with hours worked.

I also use a number of sub-scales from the GHQ-12 measure of “mental well-being” that more broadly captures an individual’s mental health (e.g., [Goldberg et al., 1997](#)), namely the individual’s assessment of overall “happiness”, the extent they “enjoy day-to-day activities”,

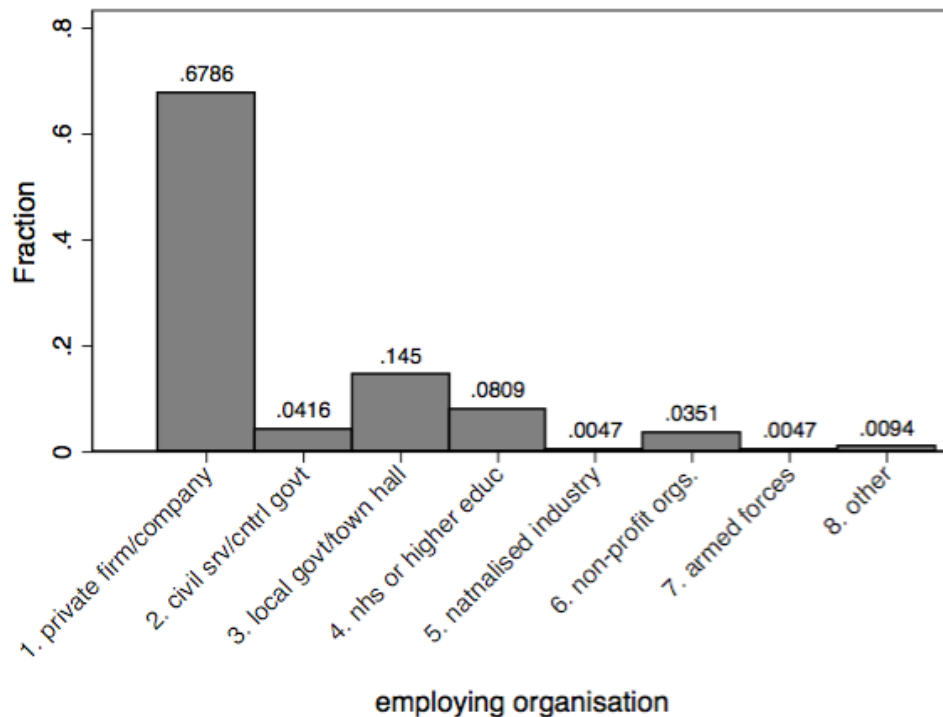


Figure 1: Employing organization for individual’s current job

“believe in self-worth” as well as whether individuals feel that they “play a useful role”. The latter are measured on four-point scales (ranging from “much worse”, “worse”, “same” and “better than most days”). I recode them into binary “caseness” indicators as is often done in the literature (with same and better coded as positive outcome). By having these measures as binary dependent variables, I can use a conditional fixed-effects logit regression approach and exploit the panel structure of the data set.

The main independent variable is the type of employing organization a person works in (meaning this data exists mostly only for individuals that are employed, on which the following analysis will focus). Most individuals are employed by private firms. The BHPS contains information on 76,423 cases, with 67.86% in private companies, 3.51% in non-profit organizations and the rest in civil service, NHS, higher education, nationalized industries, the armed forces, or other, unspecified, employment types (see Figure 1). The percentage of observations for individuals in non-profits organizations stays largely stable over the sample horizon (see Figure 2). Limiting treatment group to non-profit and control group to private firms reduces the sample to 54,543 observations with 95.08% in private firms and 4.92%

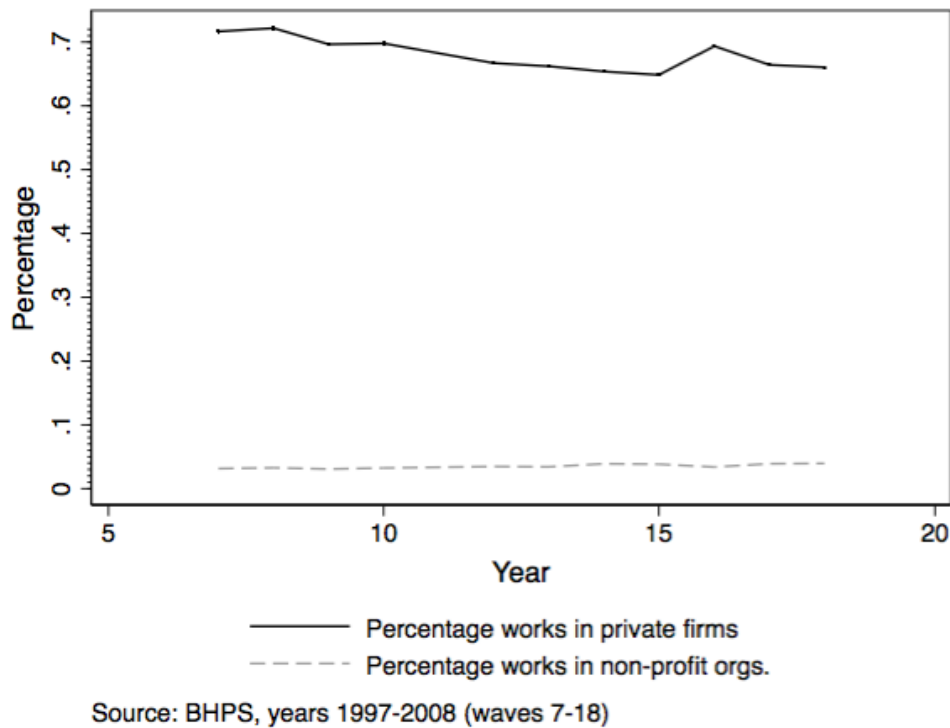


Figure 2: Percentage working in private firms/non-profit organizations over sample horizon in non-profits (focussing only on full-time workers leads to an even smaller sample size of 41,464).

Control variables are largely selected with reference to existing research as well as theory discussed above. In line with [Donegani et al. \(2012\)](#), they can be distinguished into three broad groups, namely personal and sociodemographic factors (e.g., gender, education, marital status), job related influences (e.g., wage or hours worked) as well as organizational determinants of well-being (e.g., firm size). As to the first category, I use information on gender (54% of the sample are female), age (respondent’s mean age is 45 years with a standard deviation of 18 years), information on whether respondents live in the London area, information on individuals’ marital status (with being married being reference category and other categories never married, separated, divorced and widowed), on number of children (coded as categorical variables for no children, 1, 2, and 3+ children), on educational status (coded as CASMIN educational classification dummies from “no education” to “high tertiary”), as well as information on social life (talking to neighbors and meeting friends; both measured on 5 point Likert scales, from “never” to “on most days”). Finally, I include some objective

health indicators into this category, viz. the (log) number of days spent in hospital, dummies for the number of accidents and information whether the individual is registered as disabled.

Job related categories are work location (with categorical responses, the most important of which are “working at home” or at the “employer premises”), hours usually worked per week (mean 33.34 hours with s.d. 11.19 hours), the usual monthly gross pay (in GBP), derived from this the usual hourly wage (for robustness analyses), whether the respondent has managerial duties in their present job (coded as baseline is “no managerial duties”, and the two other categories are either “manager” or “foreman/supervisor”). Finally, information on whether the respondent works full-time (30+ hours per week) or part-time (less than 30 hours) also falls into this category. For the computation of shadow prices later on, I also use information on respondents’ overall net household income (equivalized and deflated to 2008 prices, from [Levy and Jenkins, 2008](#)).

In line with the literature, the third category of organizational characteristics includes the size of the company (divided into a number of categories with reference category being companies with up to 25 employees). In further analyses, it would be interesting to add other organizational variables relating to occupational prestige, sector and so on. Table 13 in the Appendix depicts bivariate correlations between the main variables of interest, showing no signs of multicollinearity.

3.2. Descriptive analysis

As discussed above, most working individuals in our sample work in private firms (67.86%), with only 3.51% of the observations referring to being employed in “non-profit organizations” (this translates into 12,786 distinct individuals in private firms and 966 distinct individuals in non-profit organizations).

These percentages are significantly different for both genders ($\chi^2(1) = 697.78$, $p < 0.001$), with more females being in nonprofit organizations than males (7.55% vs. 2.64%, see Table 2). This is in line with the literature observing more females in non-profit jobs than males ([Benz, 2005](#)).

It is also instructive to examine potential differences in monthly wage disaggregated by type of firm, gender and full-time employee status (Table 3). Looking at full-time/part-time workers’ monthly wage by gender/type of firm, we can see that males obtain higher monthly

	private firm	non-profit org.	total
male	28422	771	29193
%	97.36	2.64	100.00
female	23437	1913	25350
%	92.45	7.55	100.00
total	51859	2684	54543
%	95.08	4.92	100.00
χ^2	697.8		
p-value	0.0000		

Table 2: Percentage males/females by company type

gender	full-time			part-time		
	firm	NPO	Total	firm	NPO	Total
male	1912.03	1884.96	1911.36	944.37	877.99	940.82
female	1309.50	1661.99	1335.39	538.57	622.57	546.30
total	1703.86	1746.18	1705.64	599.55	645.45	603.52
χ^2	697.8					
p-value	0.0000					

Table 3: Wage by gender, type of work and type of company

salaries than females in private firms and non-profit organizations (which is in line with the literature). This is irrespective of whether they work full-time or part-time. However, the gender-wage-gap is less pronounced in non-profit organizations. While males work on average about 4 hours more per week than females in private firms (Table 4), it is doubtful whether this can explain the wage gap (this is especially less likely in part-time positions, where the differences are small for private firms and females actually work more hours in non-profit organizations).

We can also have a look at life satisfaction and job satisfaction per firm type and gender (see Tables 5 and 6). It is striking that job satisfaction is higher in non-profit organizations

gender	full-time		part-time	
	firm	NPO	firm	NPO
male	40.39	38.73	18.01	16.38
female	36.92	36.12	17.80	18.21

Table 4: Hours worked by gender, type of work and type of company

gender	full-time		part-time	
	firm	NPO	firm	NPO
male	5.22	5.45	5.47	5.92
female	5.36	5.47	5.62	5.75

Table 5: Job satisfaction by gender, type of work and type of company

gender	full-time		part-time	
	firm	NPO	firm	NPO
male	5.23	5.25	5.35	5.52
female	5.21	5.15	5.27	5.34

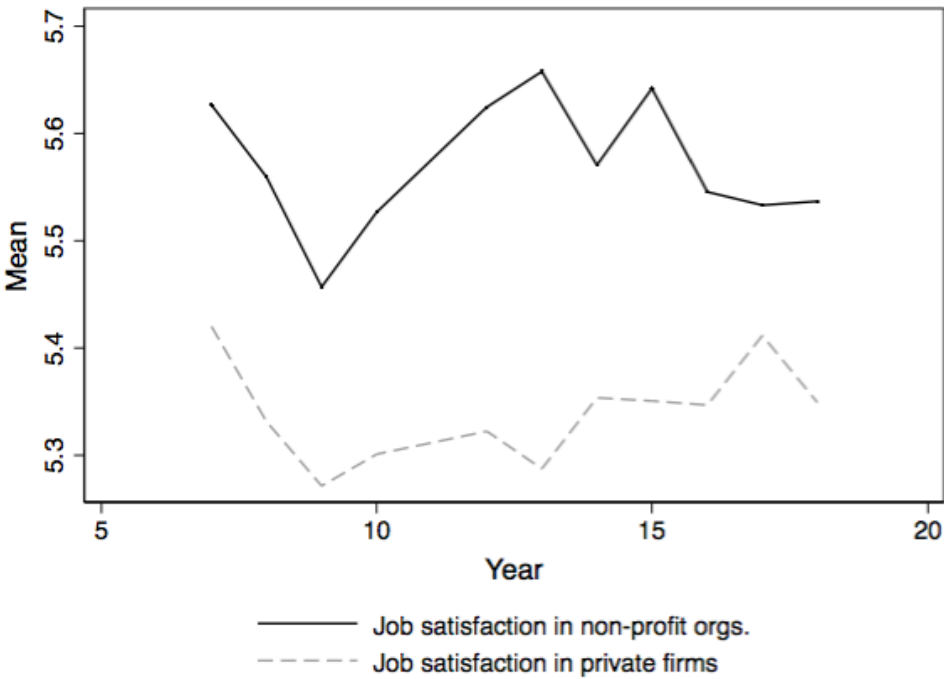
Table 6: Life satisfaction by gender, type of work and type of company

irrespective of work type and gender. The picture for life satisfaction is similar, however, with female full-time workers' life satisfaction being lower than that of males in non-profit organizations (note that these are overall averages without controlling for other factors).

We can also see that these figures hold over time (Figures 3 and 4), again with the exception being life satisfaction, where in the first few sample years, life satisfaction of workers in private firms is higher, a trend that reverses itself for the larger part of our sample horizon.

Disaggregating by type of company and education also confirms observations from the literature (Huang et al., 2009; Putnam, 2000, Ch. 7), viz. that higher educated individuals are more likely to volunteer (Table 7). Whereas no education or primary education makes it unlikely for a person to work in a non-profit organization (2.36% to 2.58%), participation increases to 3.34% for individuals with secondary education and reaches 9.22% for those with tertiary education.

Finally, Table 8 shows how stable the employment situation in private firms and non-profit organizations in our sample is. Transitions from private firms to non-profits happen rarely (0.82% or 307 out of 37,442 cases) whereas a somewhat higher percentages transitions from non-profits to private firms (14.47%, or 265 out of 1,831 cases) during the sample horizon. This could mean that there are self-selection forces at work when it comes to working in non-profit organizations (e.g., more altruistic individuals self-selecting into such work). Based on the descriptive analysis, one can only speculate why there is an asymmetry, and comparatively



Source: BHPS, years 1997-2008 (waves 7-18)

Figure 3: Job satisfaction (private firms vs. non-profit organizations)



Source: BHPS, years 1997-2008 (waves 7-18)

Figure 4: Life satisfaction (private firms vs. non-profit organizations)

	private firm	non-profit org.	total
none	6289	152	6441
%	97.64	2.36	100.00
primary	7064	187	7251
%	97.42	2.58	100.00
secondary	23361	806	24167
%	96.66	3.34	100.00
tertiary	15145	1539	16684
%	90.78	9.22	100.00
total	51859	2684	54543
%	95.08	4.92	100.00
χ^2	965.6		
p-value	0.0000		

Table 7: Count and percentage working in firms/non-profit orgs. by level of education

	to firm	to NPO
from firm	99.18	0.82
from NPO	14.47	85.53

Table 8: Transition matrix: Changes from private firm to NPO and vice versa

more individuals leave non-profit organizations. Maybe the financial situation of the non-profit sector and its dependence on charitable donations makes work less predictable and permanent.

4. Regression analysis

4.1. Main results

Having gotten a first glimpse at the data set and worker's characteristics with regard to wage, satisfaction and employment type, the present section now present results from a multivariate regression analysis using panel data techniques to see how robust the positive effect of non-profit work on satisfaction is to the inclusion of a number of personal, job-related and organizational control variables. Table 9 presents the main findings of this analysis. In summary, I find that working for a non-profit organization leads to increased job and life satisfaction. As found in previous work (Donegani et al., 2012; Benz, 2005), job satisfaction is robustly and significantly higher than in private firms: for our sample the coefficient is

.30*** (column 4; the effect is smaller when focussing on full-time workers: .27***, not shown in the table). This is comparable to both previous studies, using the same data set (with different time horizons, though). The positive effect of non-profit work is smaller for life satisfaction but still highly significant (.08***; column 1). To put its economic significance into perspective, consider that in the same model, widowhood leads to a decrease in life satisfaction of the order of $-.30^{***}$ (similar to losing a job). Having over one-fourth of this effect size for the non-profit dummy constitutes a sizable effect. Both the effect on job and life satisfaction are *ceteris paribus* effects, controlling for a number of other relevant characteristics such as income, education, working hours as well as for unobservable individual time-invariant heterogeneity.⁸

Table 9 also presents both analyses computed separately for male and females. For job satisfaction, the gender disaggregation shows that the effect for males is larger than for females (.33*** vs. 0.29***, with somewhat smaller coefficients for the subsample of full-time workers), a result similar to the one found by Benz (2005), but this does not extend to life satisfaction, where it *prima facie* seems that the positive effect is also driven mostly by males (males: 0.12*, females: 0.07⁺). However, it turns out that this effect reverses itself when looking exclusively at full-time employment. Once we restrict our analysis only to full-time employment, the positive impact is larger for females than for males (with the coefficient on life satisfaction being .13* for females and .10⁺ for males; not shown in the table). The overall effect on life satisfaction for full-time workers irrespective of gender is .12**, showing that the positive impact on life satisfaction is more fully realized for those who commit their full-time job to working in a non-profit organization.⁹

	(1) life satisfaction	(2) female	(3) male	(4) job satisfaction	(5) female	(6) male
type of company						
civil srv/ctrl govt	0.0026 (0.08)	0.0099 (0.22)	-0.0066 (-0.15)	0.1435** (2.66)	0.1830** (2.59)	0.1203 (1.47)
local govt/town hall	0.0204 (0.80)	0.0241 (0.75)	0.0026 (0.06)	0.2581*** (6.89)	0.2465*** (5.49)	0.2865*** (4.17)
nhs or higher educ.	0.0523 (1.76)	0.0523 (1.76)	0.0230 (0.73)	0.3033*** (8.28)	0.2730*** (7.46)	0.3907*** (4.42)
nat. nalsed industry	0.0431 (0.71)	0.1709 (1.28)	-0.0095 (-0.14)	0.1832 (2.05)	0.3370 (1.87)	0.1229 (1.18)
non-profit orgs.	0.0829* (2.52)	0.0672 (1.69)	0.1213* (2.10)	0.2951*** (6.34)	0.2859*** (5.09)	0.3254*** (3.90)
armed forces	0.2186* (2.03)	0.2252 (1.07)	0.2150 (1.72)	0.4038*** (7.73)	0.3902 (1.56)	0.4138* (2.27)
others	0.0648 (1.42)	0.0610 (1.06)	0.0570 (0.75)	0.3015*** (4.79)	0.2606*** (3.10)	0.3555*** (3.86)
log(wage)	0.0910*** (5.96)	0.0626** (2.99)	0.1374*** (5.83)	0.1901*** (9.16)	0.1150*** (4.27)	0.3057*** (9.08)
hours usually worked per week	-0.0024*** (-2.71)	-0.0033** (-2.27)	-0.0014 (-1.23)	-0.0089*** (-6.98)	-0.0084*** (-4.60)	-0.0080*** (-4.48)
type of work: Part-time	0.0361 (1.69)	0.0112 (0.45)	0.0935* (1.99)	0.0900** (3.14)	0.0508 (1.54)	0.2185*** (3.32)
managerial duties						
manager	0.0371* (2.56)	0.0010 (0.05)	0.0738*** (3.64)	0.0158 (0.77)	-0.0052 (-0.19)	0.0356 (1.18)
foreman/supervisor	-0.0001 (-0.01)	-0.0179 (-0.93)	0.0165 (0.86)	-0.0038 (-0.21)	-0.0080 (-0.33)	0.0008 (0.03)
company size						
25-49	-0.0149 (-0.99)	0.0082 (0.40)	-0.0445* (-2.05)	-0.0222 (-1.06)	-0.0313 (-1.08)	-0.0148 (-0.49)
50-99	-0.0126 (-0.73)	-0.0058 (-0.23)	-0.0226 (-0.93)	-0.0292 (-1.20)	-0.0065 (-0.29)	-0.0564 (-1.62)
100-199	-0.0196 (-1.10)	-0.0067 (-0.26)	-0.0362 (-1.47)	-0.0629* (-2.35)	-0.0468 (-1.20)	-0.0804* (-2.19)
200-499	-0.0179 (-0.97)	0.0035 (0.13)	-0.0397 (-1.62)	-0.0822** (-3.12)	-0.1032** (-2.67)	-0.0687 (-1.90)
500-999	0.0263 (1.20)	0.0447 (1.36)	0.0064 (0.22)	-0.0934** (-2.96)	-0.0475 (-1.03)	-0.1326** (-3.07)
1000+	0.0204 (0.99)	-0.0042 (-0.14)	0.0404 (1.46)	-0.0452 (-1.47)	-0.0519 (-1.15)	-0.0383 (-0.92)
work location						
at home	0.0602 (1.35)	0.0446 (0.67)	0.0786 (1.32)	0.2674*** (4.16)	0.1723 (1.79)	0.3543*** (4.18)
driving/travel	0.0205 (1.00)	0.0207 (0.58)	0.0266 (1.06)	0.0415 (1.48)	-0.0039 (-0.08)	0.0675* (1.98)
at home and other places	0.0291 (1.57)	0.0011 (0.04)	0.0465* (1.99)	0.0919*** (3.70)	0.0777 (1.85)	0.1025*** (3.34)
other	-0.0348 (-0.81)	-0.0236 (-0.35)	-0.0448 (-0.81)	0.0190 (0.30)	-0.0338 (-0.34)	0.0546 (0.67)
accidents						
1	-0.0164 (-1.28)	-0.0401 (-1.95)	0.0043 (0.26)	-0.0154 (-0.91)	-0.0081 (-0.31)	-0.0182 (-0.82)
2	0.0135 (0.33)	0.0101 (0.13)	0.0155 (0.32)	0.0415 (2.52)	-0.0921 (-0.96)	-0.1538* (-2.32)
3+	-0.0256 (-0.28)	-0.1172 (-0.61)	0.0011 (0.01)	-0.0558 (-0.49)	0.0145 (0.07)	-0.0783 (-0.58)
log(hosp. days)	-0.0442*** (-4.06)	-0.0315* (-2.37)	-0.0617*** (-3.57)	-0.0082 (-0.64)	-0.0116 (-0.73)	-0.0019 (-0.09)
disabled	-0.1115*** (-3.20)	-0.1072* (-2.18)	-0.1103* (-3.27)	-0.0079 (-0.18)	0.0222 (0.35)	-0.0363 (-0.69)
education						
1b elementary	-0.0202 (-0.12)	-0.2184 (-0.90)	0.1254 (0.54)	0.1030 (0.48)	-0.4581 (-1.54)	0.5804 (1.88)
1c basic voc.	0.0286 (0.33)	0.0166 (0.15)	0.0462 (0.34)	0.027 (0.27)	-0.0201 (-0.11)	0.1784 (0.63)
2b middle gen.	0.0634 (0.52)	0.1030 (0.41)	0.0642 (0.35)	0.0694 (0.41)	-0.1412 (-0.53)	0.3124 (1.34)
2a middle voc.	0.0812 (0.46)	0.0080 (0.03)	0.2945 (1.11)	-0.2099 (-1.03)	-0.2326 (-0.81)	-0.2108 (-0.64)
2c-gen: hi gen.	0.1557 (1.17)	0.1270 (0.64)	0.2482 (1.34)	0.1172 (0.67)	-0.0035 (-0.01)	0.2949 (1.21)
2c-voc: hi voc.	0.0763 (0.60)	0.1983 (1.00)	0.0016 (0.01)	0.0646 (0.38)	0.0376 (0.23)	0.0982 (0.40)
3a low tert.	0.1777 (1.45)	0.2138 (1.13)	0.1704 (1.07)	0.0808 (0.46)	0.0779 (0.32)	0.0934 (0.36)
3b high tert.	0.1865 (1.42)	0.1786 (0.91)	0.2616 (1.47)	0.1536 (0.87)	0.1702 (0.72)	0.1598 (0.63)
marriage status						
never married	-0.0984*** (-4.26)	-0.0870** (-2.63)	-0.1046** (-3.23)	-0.0690* (-2.16)	-0.1239** (-2.69)	-0.0085 (-0.19)
separated	-0.2048*** (-5.16)	-0.1578** (-2.98)	-0.2569*** (-4.30)	0.0635 (1.41)	0.0303 (0.51)	0.1116 (1.61)
divorced	0.0115 (0.35)	0.0463 (1.01)	-0.0240 (-0.52)	-0.0183 (-0.44)	-0.0450 (-0.86)	0.0152 (0.23)
widowed	-0.2976** (-3.16)	-0.2004 (-1.72)	-0.5003** (-3.26)	-0.0227 (-0.29)	-0.0881 (-0.91)	0.1090 (0.82)
no. kids						
1	0.0019 (0.12)	-0.0355 (-1.54)	0.0276 (1.30)	0.0490* (2.50)	0.0142 (0.51)	0.0805** (2.88)
2	-0.0161 (-0.70)	-0.0660* (-2.11)	0.0144 (0.53)	0.0860*** (3.37)	0.0377 (1.00)	0.1223*** (3.46)
3+	-0.0227 (-0.70)	-0.0645 (-1.33)	-0.0047 (-0.11)	0.1413*** (3.44)	0.1603** (2.67)	0.1137* (2.01)
social life: talk to neighbours						
less than once a month	-0.0026 (-0.08)	-0.0252 (-0.54)	0.0214 (0.46)	-0.0506 (-1.09)	-0.0596 (-0.90)	-0.0431 (-0.66)
once or twice a month	0.0355 (1.14)	0.0369 (0.85)	0.0347 (0.79)	-0.0011 (-0.02)	0.0340 (0.54)	-0.0328 (-0.53)
once or twice a week	0.0562 (1.81)	0.0555 (1.28)	0.0584 (1.33)	0.0154 (0.31)	0.0639 (1.03)	-0.0304 (-0.50)
on most days	0.0774* (2.42)	0.0641 (1.43)	0.0933* (2.06)	0.0136 (0.31)	0.0339 (0.54)	-0.0047 (-0.08)
social life: meeting friends						
less than once a month	0.0352 (-0.27)	-0.0453 (-0.19)	0.0365 (-0.24)	0.2607 (1.07)	0.5164 (1.07)	0.1811 (0.66)
once or twice a month	-0.0075 (-0.06)	-0.0224 (-0.10)	-0.0037 (-0.02)	0.2982 (1.23)	0.5832 (1.21)	0.1999 (0.73)
once or twice a week	0.0342 (0.29)	0.0516 (0.22)	0.0144 (0.10)	0.3240 (1.34)	0.5870 (1.22)	0.2464 (0.91)
on most days	0.0367 (0.27)	0.0636 (0.27)	0.0042 (0.03)	0.3345 (1.38)	0.6014 (1.25)	0.2518 (0.92)
age	-0.0003 (-0.15)	0.0010 (0.31)	-0.0026 (-0.86)	-0.0049 (-1.72)	-0.0056 (-1.36)	-0.0056 (-1.38)
(age-mean age) ²	0.0004*** (6.33)	0.0003** (2.66)	0.0006*** (6.50)	0.0004*** (4.99)	0.0003* (2.30)	0.0006*** (4.98)
Lives in London area	-0.0633 (-1.02)	-0.0164 (-0.18)	-0.1156 (-1.37)	-0.2638** (-3.14)	-0.1885* (-1.54)	-0.3399** (-2.97)
Constant	4.4244*** (22.22)	4.6923*** (14.57)	4.6603*** (14.81)	3.9766*** (12.20)	4.4193*** (7.76)	2.9818*** (6.87)
Observations	69037	35574	33463	69076	35558	33449
R ²	0.009	0.008	0.014	0.011	0.011	0.016
F	6.4051	3.1456	6.8095	3.6084	3.6084	4.9691
df-r	14807.0000	7720.0000	7086.0000	14806.0000	7720.0000	7085.0000

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Table 9: Regression analysis: Dependent variables are life satisfaction (column 1; disaggregated by gender, columns 2 and 3)

Otherwise, I find that wage has a positive effect on life satisfaction (while monthly wage has an extremely small impact on job satisfaction (.00006**, model not shown), the log specification fits better (.09***)), whereas hours worked contribute negatively. Being a manager (and hence having autonomy at work) influences life satisfaction positively (a bit more so for full-time workers), whereas work place and company size do not have an impact on life satisfaction (they do influence job satisfaction, though, see below). From the non-work related factors, there are the usual effects known from the literature, such as negative impacts of sickness or loss of spouse (be it through separation or widowhood).

As to job satisfaction, individuals working in non-profit organizations report significantly higher job satisfaction in general (.29***). Their log monthly wage has a somewhat smaller impact on general job satisfaction, as well as working full-time, whereas the number of hours worked decreases job satisfaction. As opposed to life satisfaction, the company size significantly negatively influences job satisfaction, at least for larger company sizes (with 200+ employees). Location of work also impacts on job satisfaction, with working at home massively increasing one's satisfaction as opposed to working at the company office (working at home part-time also has a beneficial impact).

4.2. Further analyses

Both analyses can be unpacked further. Examining the effects of working in the non-profit sector on different domain satisfaction does not yield many further insights, with only satisfaction with the amount of leisure time being significantly positively affected by third sector work (this effect holds for full-time and part-time workers; full-time third sector workers are also more satisfied with their use of leisure time). Given that the average worker in non-profit organizations works less than their peers in private firms (see Table 4), such a finding is not surprising.¹⁰

In the same way that life satisfaction is a summary judgement of different domains of one's life, job satisfaction also has different components, such as satisfaction with total pay, job security, work itself, hours worked and so on. The BHPS offers information on the aforementioned sub-domains of overall job satisfaction and these are reported in Table 9. Looking at the different job domain satisfactions (for full-timers) we can see that working in the third sector has positive effects on all of them, with satisfaction with work itself showing

by far the highest coefficient (.38***), followed by satisfaction with hours worked (.30***), job security (.17**). There is no significantly positive effect with pay satisfaction, which seems plausible considering that third sector employees tend to earn less than their private sector counterparts. In sum, apart from their pay, individuals are more satisfied with all other dimensions of their job when working in non-profit organizations.¹¹

Other factors also influence the different domains of job satisfaction, for example is working at home positively associated with all domains except job security. Hours worked negatively influences satisfaction with hours worked, no surprises here, but the hours worked do not affect satisfaction with the work itself. Being a manager has positive effects on satisfaction with the work itself (maybe due to higher degrees of autonomy managers possess over their work) and on job security (this might be an overoptimistic assessment considering that many managerial contracts offer less protection against being let go on short notice. On the other hand, managers might be more confident that their skill set will lead to future jobs easily hence giving them an overall sense of having a secure job, even if not with the same employer). In addition to that, managers report less satisfaction with hours worked but we do not know whether they would prefer more or less working hours. Company size, after controlling for all the factors mentioned above, impacts negatively only on satisfaction with work itself, a robust effect for firms larger than 100 employees. Finally, one's level of education only impacts on satisfaction with type of work, a not very uniform finding across education levels (but education is not a variable that performs well in FE regressions, since most respondents in big household panel surveys are of an age where their education level does not vary much, if at all. Within-estimators have problems with lack of variation in a variable, in the limit being of no use if no variation exists at all).

The above estimates already give us a sense that the satisfaction of non-profit employees comes from the way they get to spend their work-time, not so much their pay, career prospects or job security. We can explore this hypothesis a little bit further by having a look at a number of sub-scales from the GHQ-12 measure of mental health, namely the scales on whether individuals feel they play a useful role in their lives, whether they can enjoy their daily activities, whether they believe in their self-worth and whether they would consider themselves (affectively) happy. In the following, I use conditional fixed-effects logit regressions

	(1)		(2)		(3)		(4)		(5)	
	job satisfaction		total pay		security		work itself		hours worked	
type of company										
civil srv/cntrl govt	0.1911**	(3.20)	0.0349	(0.60)	0.2164**	(3.19)	0.1122	(1.80)	0.2273***	(4.14)
local govt/town hall	0.2798***	(5.78)	0.0832	(1.70)	0.3090***	(5.87)	0.2070***	(4.25)	0.2216***	(4.48)
nhs or higher educ.	0.3673***	(6.53)	0.0410	(0.68)	0.3287***	(5.35)	0.3216***	(5.85)	0.2658***	(5.44)
nat.nalised industry	0.1897*	(2.04)	0.2306*	(2.33)	0.2612*	(2.17)	0.1467	(1.62)	0.0608	(0.68)
non-profit orgs.	0.2780***	(4.75)	0.1029	(1.61)	0.1736**	(2.72)	0.3756***	(6.33)	0.3047***	(5.02)
armed forces	0.3264*	(2.14)	0.4650**	(2.86)	0.4571*	(2.08)	0.3269*	(2.52)	0.3489*	(2.48)
others	0.3381***	(4.41)	0.1960*	(2.37)	0.2687**	(3.14)	0.3345***	(4.75)	0.1585*	(2.09)
log(wage)	0.2870***	(9.75)	1.0751***	(26.02)	0.1148***	(3.51)	0.1373***	(4.65)	0.0434	(1.41)
hours worked/week	-0.0085***	(-5.63)	-0.0118***	(-6.79)	-0.0008	(-0.49)	-0.0011	(-0.78)	-0.0316***	(-16.44)
managerial duties										
manager	0.0219	(0.98)	0.0370	(1.45)	0.0782**	(3.07)	0.0743**	(3.29)	-0.1119***	(-4.84)
foreman/supervisor	0.0051	(0.25)	-0.0216	(-0.98)	0.0940***	(4.22)	0.0282	(1.34)	-0.0932***	(-4.37)
company size										
25-49	-0.0097	(-0.40)	-0.0151	(-0.55)	-0.0123	(-0.45)	-0.0356	(-1.48)	-0.0312	(-1.21)
50-99	-0.0061	(-0.22)	-0.0168	(-0.57)	0.0203	(0.66)	-0.0513	(-1.84)	-0.0292	(-1.01)
100-199	-0.0343	(-1.14)	-0.0177	(-0.55)	0.0399	(1.20)	-0.1171***	(-3.87)	-0.0394	(-1.29)
200-499	-0.0502	(-1.68)	-0.0147	(-0.46)	0.0420	(1.27)	-0.1419***	(-4.56)	-0.0323	(-1.05)
500-999	-0.0621	(-1.79)	-0.0193	(-0.50)	0.0024	(0.06)	-0.1276***	(-3.50)	-0.0310	(-0.87)
1000+	-0.0126	(-0.38)	0.0146	(0.40)	0.0345	(0.90)	-0.1055**	(-3.05)	0.0059	(0.17)
work location										
at home	0.2549***	(3.56)	0.2050*	(2.46)	0.0216	(0.25)	0.1922**	(2.70)	0.2864***	(3.59)
driving/travel	0.0577	(1.89)	-0.0119	(-0.36)	0.0045	(0.13)	0.0949**	(3.14)	-0.0176	(-0.55)
at home and other places	0.0974***	(3.57)	0.0548	(1.76)	-0.0168	(-0.53)	0.1298***	(4.54)	0.0313	(1.02)
other	0.0077	(0.10)	0.0465	(0.63)	-0.0658	(-0.82)	0.0207	(0.31)	-0.0988	(-1.30)
accidents										
1	-0.0240	(-1.31)	-0.0110	(-0.54)	-0.0267	(-1.27)	-0.0246	(-1.31)	-0.0190	(-0.99)
2	-0.1310*	(-2.23)	-0.1173	(-1.84)	-0.0795	(-1.29)	-0.0710	(-1.15)	-0.0324	(-0.52)
3+	-0.0749	(-0.63)	-0.2550	(-1.92)	-0.0900	(-0.57)	-0.1457	(-1.14)	0.0340	(0.26)
log(hosp. days)	-0.0097	(-0.64)	0.0065	(0.41)	-0.0119	(-0.72)	0.0022	(0.15)	0.0130	(0.82)
disabled	-0.0341	(-0.67)	-0.0094	(-0.17)	-0.0644	(-1.09)	-0.1021*	(-2.06)	-0.0772	(-1.45)
education										
1b elementary	0.4972*	(2.04)	0.5275	(1.76)	0.1532	(0.41)	0.6039**	(2.81)	-0.1865	(-0.63)
1c basic voc.	0.0985	(0.52)	-0.1015	(-0.48)	-0.2830	(-1.25)	0.4193**	(2.22)	-0.0410	(-0.22)
2b middle gen.	0.2032	(0.94)	0.2601	(0.92)	-0.3833	(-1.63)	0.3208	(1.61)	0.0881	(0.41)
2a middle voc.	0.0261	(0.11)	-0.3059	(-0.88)	-0.4795	(-1.52)	0.5532*	(2.36)	0.6494	(1.94)
2c.gen: hi gen.	0.1867	(0.93)	0.0298	(0.10)	-0.3214	(-1.36)	0.4596*	(2.15)	0.1927	(0.88)
2c.voc: hi voc.	0.1139	(0.57)	0.0157	(0.06)	-0.3589	(-1.57)	0.2504	(1.31)	-0.0522	(-0.24)
3a low tert.	0.1945	(0.95)	0.0099	(0.03)	-0.2230	(-0.92)	0.2692	(1.43)	0.1312	(0.63)
3b high tert.	0.1671	(0.79)	-0.0557	(-0.19)	-0.3190	(-1.32)	0.2583	(1.25)	0.1377	(0.62)
marriage status										
never married	-0.0625	(-1.82)	-0.1892***	(-4.84)	-0.0484	(-1.19)	0.0004	(0.01)	0.0083	(0.23)
separated	0.0798	(1.56)	-0.0622	(-1.04)	0.0067	(0.12)	-0.0092	(-0.17)	0.0915	(1.74)
divorced	0.0246	(0.51)	-0.0871	(-1.69)	-0.0403	(-0.79)	-0.0101	(-0.21)	0.0624	(1.23)
widowed	0.0672	(0.73)	0.0854	(0.63)	0.2087	(1.27)	-0.0867	(-0.68)	-0.0413	(-0.45)
age	-0.0128***	(-3.83)	-0.0200***	(-5.18)	-0.0045	(-1.12)	-0.0055	(-1.65)	0.0077*	(2.16)
(age-mean age) ²	0.0004***	(4.06)	0.0010***	(8.31)	0.0007***	(5.84)	0.0000	(0.14)	0.0002	(1.45)
Lives in London area	-0.2903**	(-3.21)	-0.1627	(-1.53)	-0.1726	(-1.87)	-0.2087*	(-2.22)	-0.1915*	(-2.05)
Constant	3.7409***	(13.82)	-1.9367***	(-5.25)	4.8060***	(15.63)	4.3096***	(16.01)	5.5618***	(19.42)
Observations	55428		55396		55258		55419		55425	
R ²	0.010		0.051		0.007		0.008		0.019	
F	6.0958		23.2435		4.1747		4.6433		8.9931	
df.r	12718.0000		12712.0000		12683.0000		12717.0000		12717.0000	

t statistics in parentheses
 * p < 0.05, ** p < 0.01, *** p < 0.001

Table 10: Regression analysis: Dependent variables are different job domain satisfactions. Main variables are dummies for type of company the individual works in and a range of control variables. Individual fixed effects; with standard errors clustered on the individual. Time dummies omitted.

to estimate the increase in the likelihood that individuals would report that any of the above pertains to them as compared to their peers in private firms. For this I use the same set of control variables as in the main models (full regression output available on request) and find that with the exception of their belief in their self-worth, non-profit workers are much more likely to fall into the positive categories of the dependent variables: working in the third sector increases the likelihood of being happy (by 47%; Odds Ratio (OR) = 1.47***), feeling one plays a useful role (by 36%, OR = 1.36*) and enjoying one's daily activities (by 30%,

OR = 1.30*).¹²

This lends independent support to the robustness of the positive effect that meaningful non-profit work has on an individual (see also [Light, 2003](#), who finds similar positive self-evaluations of individuals in the human services workforce). Based on these findings, we can also reestimate the initial life and work satisfaction fixed effects OLS models including the GHQ-12 measures of self-worth, playing a useful role and enjoying one's day-to-day activities as additional control variables. All three of them are highly statistically significant and positively impacting on job and life satisfaction and they reduce the positive coefficient for working in the non-profit sector: the coefficient for life satisfaction is now 0.04, *n.s.*, which suggests that the above factors fully account for the positive impact on life satisfaction. For job satisfaction, the coefficient in the extended model is .26***, which means that the above variables cannot explain much of the positive impact on work satisfaction (there might be other workplace factors unaccounted for that are present in the non-profit sector, something which should be explored in further research).

A final check on the robustness of our main findings is provided by assessing how the positive effect of working in non-profit organizations varies beyond the average case. Quantile regressions offer a convenient way of looking at the impact of different determinants of subjective well-being depending on where an individual stands in the subjective well-being distribution (for more details on this methodology see [Binder and Coad, 2011, 2015](#); [Binder, 2015](#); [Graham and Nikolova, 2015](#)). This means they answer the question whether working in the non-profit sector has a different impact on happy or unhappy individuals. Table 11 provides these estimates for the deciles of the life and job satisfaction distributions. Models are estimated using the fixed-effects quantile regression methodology pioneered by [Canay \(2011\)](#), removing a fixed effect and then applying the Koenker-Basset quantile regression estimator ([Koenker and Bassett, 1978](#)) to the transformed variables (fixed effects are here treated as pure location shifters, meaning that the fixed effects itself are uniform along the distribution; standard errors are bootstrapped). While the models estimated contain all variables of the previous (average) fixed-effects model, only a few coefficients (that are of main interest) are depicted in the table. A graphical representation of the effects along the deciles is provided in Figure 5, with the horizontal line showing the coefficient of the average FE regression (95%

	life satisfaction		job satisfaction	
q10				
non-profit orgs.	0.109***	(3.66)	0.409***	(7.37)
log(wage)	0.171***	(14.04)	0.323***	(14.39)
hours usually worked per week	-0.00472***	(-4.52)	-0.0144***	(-9.07)
q20				
non-profit orgs.	0.0612**	(2.71)	0.337***	(12.26)
log(wage)	0.133***	(13.43)	0.221***	(16.01)
hours usually worked per week	-0.00307***	(-3.61)	-0.0116***	(-11.59)
q30				
non-profit orgs.	0.0701***	(3.40)	0.300***	(14.09)
log(wage)	0.108***	(11.04)	0.199***	(18.78)
hours usually worked per week	-0.00236***	(-3.52)	-0.00991***	(-14.24)
q40				
non-profit orgs.	0.0706***	(5.65)	0.276***	(24.68)
log(wage)	0.0844***	(19.65)	0.172***	(49.89)
hours usually worked per week	-0.00220***	(-6.15)	-0.00871***	(-35.94)
q50				
non-profit orgs.	0.0781***	(14.00)	0.271***	(33.88)
log(wage)	0.0863***	(40.61)	0.170***	(42.79)
hours usually worked per week	-0.00241***	(-14.98)	-0.00860***	(-25.06)
q60				
non-profit orgs.	0.0851***	(4.52)	0.235***	(14.06)
log(wage)	0.0810***	(11.42)	0.151***	(19.20)
hours usually worked per week	-0.00301***	(-5.99)	-0.00813***	(-13.35)
q70				
non-profit orgs.	0.0903***	(5.14)	0.275***	(13.15)
log(wage)	0.0607***	(7.35)	0.137***	(16.13)
hours usually worked per week	-0.00247***	(-3.95)	-0.00723***	(-11.68)
q80				
non-profit orgs.	0.0857***	(5.20)	0.292***	(16.90)
log(wage)	0.0557***	(7.48)	0.119***	(11.46)
hours usually worked per week	-0.00209**	(-3.11)	-0.00633***	(-8.50)
q90				
non-profit orgs.	0.0994***	(4.88)	0.288***	(10.11)
log(wage)	0.0207	(1.75)	0.0849***	(5.89)
hours usually worked per week	0.000511	(0.54)	-0.00580***	(-5.56)
Observations	69037		69007	
0.10 Pseudo R2	.0312		.0309	
0.20 Pseudo R2	.029		.0357	
0.30 Pseudo R2	.0278		.0427	
0.40 Pseudo R2	.0357		.0557	
0.50 Pseudo R2	.0381		.0548	
0.60 Pseudo R2	.0241		.044	
0.70 Pseudo R2	.018		.0367	
0.80 Pseudo R2	.0157		.0333	
0.90 Pseudo R2	.0128		.029	

t statistics in parentheses

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

Table 11: Quantile analysis: Dependent variables are life satisfaction (columns 1) and job satisfaction (column 2). Main variable is a dummy for working in a non-profit organization. FE quantile estimator following [Canay \(2011\)](#) is used, taking into account individual fixed-effects; with bootstrapped standard errors (100 replications). Time dummies and other control variables as in previous models but output omitted here.

confidence bands are provided for both average and quantile regressions). It is striking to see that the effects are rather uniform over the quantiles. For job satisfaction, the least satisfied 10% experience a ceteris paribus satisfaction boost of .41*** and this effect decreases some-

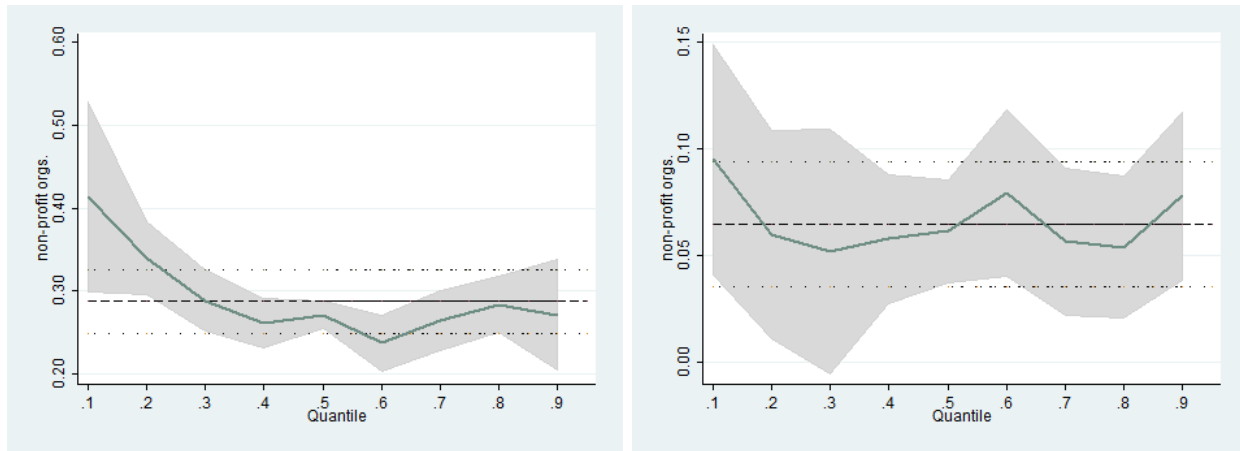


Figure 5: Quantile coefficients depicting coefficients based on the analysis in Table 11 for job satisfaction (left) and life satisfaction (right) as dependent variable. Horizontal lines give (average) regression coefficients. Error bars for regression and quantile coefficients correspond to the 95 percent confidence intervals (with quantile regression error bars depicting bootstrapped 95 percent confidence intervals, with 100 replications).

what to around $.29^{***}$ for the happier deciles that follow. With life satisfaction, the effect is even more uniform, ranging from 0.11^{***} at the 10% decile to 0.10^{***} at the 90% decile. Especially for life satisfaction, average regressions arguably deliver a rather good summary for the full distribution (for job satisfaction they do so with the exception of the very lowest two deciles). This finding is of great interest when considering that other work usually finds much stronger decreases of positive effects over the quantiles, where for example positive effects of income vanish at the highest quantiles (as is the case in this analysis as well). In substantive terms this means that while many effects in the literature have shown to apply with much stronger force to unhappy individuals and much less so to the happier individuals, working in the non-profit sector has a positive impact on subjective well-being (life satisfaction) irrespective of how happy individuals are. When it comes to public policy, it can be conjectured that working in the third sector may turn out to be a robust way of positively influencing individuals' subjective well-being, more so than other well-being conducive activities might be.

5. Assessing the economic significance of the estimates

While I have offered some intuitive sense about the economic significance of the effect that non-profit sector work has on job and life satisfaction above, life satisfaction regressions

also allow to estimate shadow prices for things one otherwise has difficulties putting a “price tag” on. Assuming that all relevant influences on subjective well-being are controlled for, our subjective well-being regressions above allow to infer the amount of compensatory money an individual would need to receive, for not being subject to a treatment of interest (Clark and Oswald, 2002; Powdthavee, 2008). In this case, we essentially would compare two individuals who are identical in all relevant aspects with the sole difference being that one individual works in a non-profit organization while the other individual works in a private firm. We know that *ceteris paribus* the first individual will then be happier than the one in the private firm. The shadow price of working in a non-profit firm would then be equal to the amount of money we would need to give to the second individual to make it equally happy as our non-profit worker. Formally, when we have the following subjective well-being regression (as we have above: with SWB being life satisfaction of individual i at time t , b_{it} the dummy variable for working in a non-profit organization, y_{it} income, and ϵ_{it} the error term that consists of unobservable person-specific fixed effect and random error term):

$$\text{SWB}_{it} = \alpha + \beta_{NPO} * b_{it} + \gamma * y_{it} + \delta * Z'_{it} + \epsilon_{it}, \quad (2)$$

shadow prices are computed quite easily for our dummy variables by dividing the regression coefficient of being in a non-profit organization (β_{NPO}) by the regression coefficient of income (γ). Doing so obviously requires a number of assumptions, mainly about which measure of income/wage to use (and of course restricts the sample to the employed parts of the populace). Therefore, Table 12 shows shadow prices for a range of different income measures. The first set of results is based on equivalized net household income, i.e taking into account transfer payments and taxes as well as correcting for household composition (in order to have a realistic measure of household income). Using such equivalized net household income leads to a shadow price for working in a non-profit organization of around 83.000 GBP. Mean average income is ca. 29.000 GBP and shadow prices for being widowed are around -312.000 GBP. The latter figure is comparable to estimates derived in Powdthavee (2008).¹³ It is a salient finding in subjective well-being research that incomes show a better fit when taking logarithms (e.g. Easterlin, 2001; Layard et al., 2008; Kahneman and Deaton, 2010), which

means there is a relationship between proportionate increases in income and subjective well-being. Said in different terms, this means higher incomes are much less strongly contributing to well-being than lower incomes (leading to the curvilinear relationship). In order to account for possible distortions from either extremely high or extremely low incomes, I have computed shadow prices trimming the sample of its bottom and top 5% of observations (set of results no. 2). The data set contains a small number of individuals with extremely high incomes. In order not to skew the analysis, the following models are all computed for individuals with monthly wages less than 5,000 GBP. 390 individuals have higher monthly wages than this number, with an average monthly wage of 6874.04. Those who earn less earn 1381.93 on average.¹⁴ We can see how the restricted sample leads to a higher coefficient for the income variable, hence leading to smaller shadow prices (working in a non-profit organization would be valued at 22.000 GBP, where mean annual income is around 27.000 GBP). If we further restrict the sample (results no. 3) to full-time workers, both the compensating shadow price and mean income increase again. This reflects the fact that full-time workers have higher life satisfaction increases through working in non-profit organizations. Result sets (4) to (7) repeat this exercise for a different income measure, namely monthly wage payments. Overall the latter set of results is comparable to the equivalized income measures. When disaggregating by gender, we can see that the shadow price is higher for females than males, resulting from a larger importance of third sector work for females when measured in terms of life satisfaction.

Please note that it is not the aim of this section to make a case for one specific shadow price being more appropriate than others but rather to show that even with very conservative assumptions, this shadow price lies in a region comparable to the total annual income of the average worker in our sample. With the plausible assumptions reflected in using the net equivalent income (i.e. after housing and taxes, corrected for inflation and for household composition, using the McClements equivalence scales), the amount of money our private firm worker would need to reach the same level of life satisfaction is around 22.000 GBP p.a. (while net equivalent income is on average around 27.000 GBP p.a.).

It is important to realize that these measures should rather be taken as orders of magnitude, not so much precise estimates, not only because they vary so much depending on

Shadow prices	
Determinant	Price (GBP)
(1) Full sample	
Mean equiv.inc. (p.a.)	28594.13
- NGO	82673.49
- disabled	-132285.00
- separated	-194695.96
- widowed	-311681.28
- talking to neighbours	111609.39
(2) Subsample: without top/bottom 5%	
Mean equiv.inc. (p.a.)	27182.15
- NGO	22072.04
- disabled	-40376.83
- separated	-52808.33
- widowed	-89504.80
- talking to neighbours	29070.87
(3) Subsample: fulltime, no top/bottom 5%	
Mean equiv.inc. p.a., FT	28343.20
- NGO	30897.45
- disabled	-37791.92
- separated	-45972.77
- widowed	-75467.31
- talking to neighbours	30565.27
(4) Subsample: fulltime (monthly wage)	
Mean wage	1749.23
- NGO	5336.37
- disabled	-5096.90
- separated	-8186.58
- widowed	-11265.25
- talking to neighbours	3828.35
(5) Subsample: fulltime (monthly wage < 5000 GBP)	
Mean wage, FT	1659.42
- NGO	1746.99
- disabled	-1686.19
- separated	-2655.58
- widowed	-3321.55
- talking to neighbours	1160.87
(6) Subsample: females (monthly wage < 5000 GBP)	
Mean wage, FT	1444.36
- NGO	1928.67
- disabled	-2813.45
- separated	-1350.19
- widowed	-1841.46
- talking to neighbours	1412.09
(7) Subsample: males (monthly wage < 5000 GBP)	
Mean wage, FT	1819.69
- NGO	1553.49
- disabled	-1104.44
- separated	-3663.12
- widowed	-5721.02
- talking to neighbours	1006.14

Table 12: Shadow prices for working in a non-profit organization.

how one defines “income” (or whether one excludes the highest incomes or not). This is especially true if one takes into account that most determinants of subjective well-being vary in strength over time, a process that has been called “hedonic adaptation” (i.e., the getting used to a constant or repeated stimulus, see [Frederick and Loewenstein, 1999](#)). To refine shadow price estimates, one would actually also need to take into account these hedonic

adaptation patterns over time (if one adapts more easily to money than to one's type of work, the computed values would be biased downwards, in the reverse case, they would be biased upwards). Despite these reservations, however, it seems fair to say that irrespective of the money measure used, these shadow prices elucidate the weak influence that money has on individual well-being as opposed to other substantive life events, such as whether one works for a good cause or not.

6. Conclusion

Volunteering for a good cause has been shown to be beneficial for one's health and well-being (Post, 2005; Meier and Stutzer, 2008; Binder and Freytag, 2013). This beneficial impact also extends to those who work for pay in the non-profit sector, as this paper has shown. Building on previous work that showed that third-sector workers enjoy higher job satisfaction (Mirvis and Hackett, 1983; Benz, 2005; Donegani et al., 2012) despite sometimes even lower pay than their peers in the private sector, this paper has explored the impact of non-profit work on life satisfaction and found a significant positive impact (the size about more than a fourth of that of getting widowed). It could be shown that this effect is quite similar across the subjective well-being distribution and exists also for those who are already happy. Shadow prices peg this effect at around 22.000 GBP p.a., nearly the average amount of equivalent income in the sample analyzed (which was roughly 27.000 GBP p.a.). This effect can be explained by third sector workers enjoying their day-to-day activities more, being more happy (affectively) and feeling that they are playing a useful role in their lives.

Adding also to our understanding of job satisfaction, the present paper has shown that for Great Britain's third sector, workers in non-profit organizations are much more satisfied than their peers in private firms with the work itself that they are doing, with their hours worked and with their job security. They are not significantly more satisfied with their pay or promotion prospects but given that they earn less on average it is interesting to note that they are not less satisfied with their pay. These results have been obtained controlling for a large number of covariates, ranging from personal to job and organizational characteristics and exploiting the panel data structure of the BHPS data set.

Nevertheless, it is important to note that even with panel data, some doubts remain as to

causal identification: it could be that there is some systematic self-selection of more altruistic individuals into third-sector work or that happier individuals are more likely to choose to work in the third sector (reverse causality). At least for volunteering in general, there is some indication that causality runs in both directions (Thoits and Hewitt, 2001) and this should be considered as a possibility here as well. While the above-mentioned findings are of great relevance for public policy, suggesting itself as something that can sustainably foster social change while at the same time robustly increasing the happiness of the third sector workforce, the question of self-selection needs to be further explored before one can generalize that everybody would be happier when working in the third sector. Further research should also pay attention to sectoral differences as it can be conjectured that not all non-profit organizations are alike. For instance, private caregiving is impacting negatively on caregivers and it could be that the strains of caregiving impact on the caregiver differently (e.g. burnout, stress) even if it is not family members one cares for. Nevertheless, the fact that people who do good also “do it with [more] joy” than others seems a heartening finding with relevance for organizing the workforce of the future.

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Appendix

	life satisfaction	GHQ-12	job satisfaction	monthly gross pay	hours worked	type of company	education	age	gender
life satisfaction	1.0000								
GHQ-12	0.5597*** (0.0000)	1.0000							
job satisfaction	0.3162*** (0.0000)	0.2520*** (0.0000)	1.0000						
monthly gross pay	0.0112** (0.0019)	0.0364*** (0.0000)	-0.0142*** (0.0001)	1.0000					
hours worked	-0.0315*** (0.0000)	0.0535*** (0.0000)	-0.0997*** (0.0000)	0.4507*** (0.0000)	1.0000				
type of company	0.0019 (0.6578)	-0.0199*** (0.0000)	0.0396*** (0.0000)	-0.0124** (0.0038)	-0.0684*** (0.0000)	1.0000			
education	0.0011 (0.6857)	0.0731*** (0.0000)	-0.0427*** (0.0000)	0.2888*** (0.0000)	0.0761*** (0.0000)	0.1084*** (0.0000)	1.0000		
age	0.0737*** (0.0000)	-0.0412*** (0.0000)	0.0373*** (0.0000)	0.1443*** (0.0000)	0.0122*** (0.0009)	0.0844*** (0.0000)	-0.3093*** (0.0000)	1.0000	
gender	-0.0045 (0.0913)	-0.1287*** (0.0000)	0.0844*** (0.0000)	-0.2966*** (0.0000)	-0.4050*** (0.0000)	0.1131*** (0.0000)	-0.0461*** (0.0000)	0.0170*** (0.0000)	1.0000
Observations	138128								

P-values in parentheses

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

Table 13: Bivariate Correlations

References

- Ahuvia, A. (2008). If money doesn't make us happy, why do we act as if it does? *Journal of Economic Psychology*, 29(4):491 – 507.
- Andreoni, J. (1989). Giving with impure altruism: Applications to charity and ricardian equivalence. *Journal of Political Economy*, 97(6):1447–1458.
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal*, 100(401):464–477.
- Bardasi, E. and Francesconi, M. (2004). The impact of atypical employment on individual well-being: Evidence from a panel of british workers. *Social Science & Medicine*, 58:1671–1688.
- Becchetti, L., Pelloni, A., and Rossetti, F. (2008). Relational goods, sociability, and happiness. *Kyklos*, 61(3):343–363.
- Becker, G. S. (1974). A theory of social interactions. *Journal of Political Economy*, 82(6):1063–1093.
- Benz, M. (2005). Not for the profit, but for the satisfaction? – evidence on worker well-being in non-profit firms. *Kyklos*, 58(2):155–176.
- Besley, T. and Ghatak, M. (2005). Competition and incentives with motivated agents. *American Economic Review*, 95(3):616–636.
- BHPS (2009). British Household Panel Survey. <http://www.iser.essex.ac.uk/ulsc/bhps/>.
- Binder, M. (2015). Volunteering and life satisfaction: a closer look at the hypothesis that volunteering more strongly benefits the unhappy. *Applied Economics Letters*, 22(11):874–885.
- Binder, M. and Coad, A. (2011). From Average Joe's happiness to Miserable Jane and Cheerful John: using quantile regressions to analyze the full subjective well-being distribution. *Journal of Economic Behavior & Organization*, 79(3):275–290.
- Binder, M. and Coad, A. (2013). Life satisfaction and self-employment: A matching approach. *Small Business Economics*, 40(4):1009–1033.
- Binder, M. and Coad, A. (2015). Heterogeneity in the relationship between unemployment and subjective well-being: A quantile approach. *Economica*.
- Binder, M. and Freytag, A. (2013). Volunteering, subjective well-being and public policy. *Journal of Economic Psychology*, 34(1):97–119.
- Bornstein, D. and Davis, S. (2010). *Social Entrepreneurship: What Everyone Needs to Know*. Oxford University Press, Oxford/New York.
- Borzaga, C. and Tortia, E. (2006). Worker motivations, job satisfaction, and loyalty in public and nonprofit social services. *Nonprofit and Voluntary Sector Quarterly*, 35(2):225–248.

- Boyce, C. J. (2010). Understanding fixed effects in human well-being. *Journal of Economic Psychology*, 31(1):1–16.
- Boyce, C. J., Wood, A. M., and Powdthavee, N. (2013). Is personality fixed? personality changes as much as “variable” economic factors and more strongly predicts changes to life satisfaction. *Social Indicators Research*, 111(1):287–305.
- Brooks, A. C. (2006). *Who really cares? The surprising truth about compassionate conservatism*. Basic Books, New York.
- Canay, I. A. (2011). A simple approach to quantile regression for panel data. *The Econometrics Journal*, 14:368–386.
- Clark, A. E. (1996). Job satisfaction in Britain. *British Journal of Industrial Relations*, 34(2):189–217.
- Clark, A. E. (1997). Job satisfaction and gender: Why are women so happy at work? *Labour Economics*, 4(4):341–372.
- Clark, A. E. and Oswald, A. J. (1994). Unhappiness and unemployment. *The Economic Journal*, 104(424):648–659.
- Clark, A. E. and Oswald, A. J. (1996). Satisfaction and comparison income. *Journal of Public Economics*, 61(3):359–381.
- Clark, A. E. and Oswald, A. J. (2002). A simple statistical method for measuring how life events affect happiness. *International Journal of Epidemiology*, 31:1139–1144.
- Clark, A. E., Oswald, A. J., and Warr, P. (1996). Is job satisfaction u-shaped in age? *Journal of Occupational and Organizational Psychology*, 69:57–81.
- 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*, 29:94–122.
- Donegani, C. P., McKay, S., and Moro, D. (2012). A dimming of the ‘warm glow’? are non-profit workers in the UK still more satisfied with their jobs than other workers? published in: *Advances in the Economic Analysis of Participatory and Labor-Managed Firms*, 13: 313–342.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In David, P. and Reder, M., editors, *Nations and Households in Economic Growth*, pages 89–125. Academic Press, New York/London.
- Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *The Economic Journal*, 111:465–484.
- Easterlin, R. A. (2003). Explaining happiness. *Proceedings of the National Academy of Sciences*, 100(19):11176–11183.

- Ferrer-i-Carbonell, A. and Frijters, P. (2004). How important is methodology for the estimates of the determinants of happiness? *The Economic Journal*, 114:641–659.
- Frank, R. H. (1996). What price the moral high ground? *Southern Economic Journal*, 63(1):1–17.
- Frederick, S. and Loewenstein, G. F. (1999). Hedonic adaptation. In Kahneman, D., Diener, E., and Schwarz, N., editors, *Well-Being: The Foundations of Hedonic Psychology*, pages 302–329. Russell Sage Foundation, New York.
- Freeman, R. B. (1978). Job satisfaction as an economic variable. *American Economic Review*, 68(2):135–141.
- Garcia-Serrano, C. (2011). Does size matter? the influence of firm size on working conditions, job satisfaction and quit intentions. *Scottish Journal of Political Economy*, 58(2):221–247.
- Gelman, A. (2007). Struggles with survey weightin and regression modeling. *Statistical Science*, 22(2):153–164.
- Gielen, A. C. and van Ours, J. C. (2014). Unhappiness and job finding. *Economica*, 81(323):544–565.
- Glaeser, E. L. and Shleifer, A. (2001). Not-for-profit entrepreneurs. *Journal of Public Economics*, 81:99–115.
- Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Picinelli, M., Gureje, O., and Rutter, C. (1997). The validity of two versions of the ghq in the who study of mental illness in general health care. *Psychological Medicine*, 27(01):191–197.
- Graham, C. and Nikolova, M. (2015). Bentham or aristotle in the development process? an empirical investigation of capabilities and subjective well-being. *World Development*, 68:163–179.
- Handy, F. and Katz, E. (1998). The wage differential between nonprofit institutions and corporations: Getting more by paying less? *Journal of Comparative Economics*, 26(2):246–261.
- Hansmann, H. B. (1980). The role of nonprofit enterprise. *The Yale Law Journal*, 89(5):835–901.
- Hayden, J. and Madsen, S. (2008). The influence of value perspectives on prior plans, job satisfaction, and turnover intentions in nonprofit agencies. *Journal of Business Inquiry*, pages 33–40.
- Helliwell, J. F. and Wang, S. (2012). The state of world happiness. In Helliwell, J., Layard, R., and Sachs, J., editors, *World Happiness Report*, chapter 2. The Earth Institute.
- Hopkins, L. (2010). Mapping the third sector: A context for social leadership. Mimeo.

- Huang, J., van den Brink, H. M., and Groot, W. (2009). A meta-analysis of the effect of education on social capital. *Economics of Education Review*, 28(4):454–464.
- Idson, T. L. (1990). Establishment size, job satisfaction and the structure of work. *Applied Economics*, 22(8):1007–1018.
- Kahneman, D. and Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences*, 107(38):16489–16493.
- Khalil, E. L. (2004). What is altruism? *Journal of Economic Psychology*, 25:97–123.
- Koenker, R. and Bassett, G. J. (1978). Regression quantiles. *Econometrica*, 46(1):33–50.
- Krueger, A. B. and Schkade, D. (2008). The reliability of subjective well-being measures. *Journal of Public Economics*, 92:1833–1845.
- Layard, R., Mayraz, G., and Nickell, S. (2008). The marginal utility of income. *Journal of Public Economics*, 92:1846–1857.
- Levy, H. and Jenkins, S. P. (2008). Documentation for derived current and annual net household income variables, BHPS waves 1-16. Mimeo.
- Light, P. C. (2003). The health of the human services workforce. Center for Public Service. The Brookings Institution.
- Lucas, R. E. (2005). Time does not heal all wounds: A longitudinal study of reaction and adaptation to divorce. *Psychological Science*, 16(12):945–950.
- Lucas, R. E., Clark, A. E., Georgellis, Y., and Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science*, 15(1):8–13.
- Meier, S. and Stutzer, A. (2008). Is volunteering rewarding in itself? *Economica*, 75:39–59.
- Mirvis, P. H. and Hackett, E. J. (1983). Work and work force characteristics in the nonprofit sector. *Monthly Labor Review*, 116(4):3–12.
- Poggi, A. (2010). Job satisfaction, working conditions and aspirations. *Journal of Economic Psychology*, 31(6):936–949.
- Post, S. G. (2005). Altruism, happiness, and health: It's good to be good. *International Journal of Behavioral Medicine*, 12(2):66–77.
- Powdthavee, N. (2008). Putting a price tag on friends, relatives, and neighbours: Using surveys of life satisfaction to value social relationships. *The Journal of Socio-Economics*, 37:1459–1480.
- Preston, A. E. (1989). The nonprofit worker in a for-profit world. *Journal of Labor Economics*, 7(4):438–463.

- Prouteau, L. and Wolff, F.-C. (2008). On the relational motive for volunteer work. *Journal of Economic Psychology*, 29(3):314–335.
- Putnam, R. D. (2000). *Bowling Alone*. Simon & Schuster, New York.
- Rose-Ackerman, S. (1996). Altruism, nonprofits, and economic theory. *Journal of Economic Literature*, 34:701–728.
- Rutherford, A. (2009). In search of the “warm glow”: Estimating pay and job satisfaction in the private, public and voluntary sectors. Mimeo, submitted in February 2009 to the International Labour Process Conference 2009.
- Snyder, M. and Omoto, A. M. (1992). Volunteerism and society’s response to the hiv epidemic. *Current Directions in Psychological Science*, 1(4):113–116.
- Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the job satisfaction survey. *American Journal of Community Psychology*, 13(6):693–713.
- Stavrova, O., Schlösser, T., and Fetchenhauer, D. (2011). Are the unemployed equally unhappy all around the world? the role of the social norms to work and welfare state provision in 28 oecd countries. *Journal of Economic Psychology*, 32(1):159–171.
- Stevenson, B. and Wolfers, J. (2008). Economic growth and subjective well-being: Reassessing the Easterlin paradox. *Brookings Papers on Economic Activity*, Spring 2008:1–87.
- Stutzer, A. and Frey, B. S. (2006). Does marriage make people happy, or do happy people get married? *Journal of Socio-Economics*, 35:326–347.
- Taylor, M. F. E. (2010). British Household Panel Survey User Manual Volume A: Introduction, Technical Report and Appendices. edited with John Brice, Nick Buck and Elaine Prentice-Lane. Colchester: University of Essex.
- Thoits, P. A. and Hewitt, L. N. (2001). Volunteer work and well-being. *Journal of Health and Social Behavior*, 42(2):115–131.
- Tidwell, M. V. (2005). A social identity model of prosocial behaviors within nonprofit organizations. *Nonprofit Management and Leadership*, 15(4):449–467.
- Wilson, J. (2000). Volunteering. *Annual Review of Sociology*, 26:215–240.
- Wilson, J. (2012). Volunteerism research. *Nonprofit and Voluntary Sector Quarterly*, 41(2):176–212.
- Wulfgramm, M. (2011). Can activating labour market policy offset the detrimental life satisfaction effect of unemployment? *Socio-Economic Review*, 9(3):477–501.
- Yunus, M. (2010). *Building Social Business - The New Capitalism that Serves Humanity’s Most Pressing Needs*. Public Affairs, New York.