Would you accept this job ?
An evaluation of the decision utility of workers in the for-profit and nonprofit sectors.

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Abstract: In this paper, we intend to evaluate the determinants of the decision utility of workers from the for-profit and nonprofit sectors. In our setting, decision utility is a function that workers use to evaluate the expected benefits from job offers. For that purpose, we use the methodology of conjoint analysis that collects laboratory data on workers' stated preferences towards fictitious job offers characterized by ten attributes. Intrinsic motivation of nonprofit workers is tested by specifically analyzing the weight in their decision utility of three of these attributes, namely wages, working time and loyalty from the employer. The results show mixed evidence of motivational differences for the two groups. First, we do not find any difference in the effect of wages on utility. However, nonprofit workers reach their maximum decision utility for a longer working time, showing superior intrinsic motivation for work. Furthermore, they are ready to abandon a higher percentage of their wage to work a supplementary hour than for-profit workers as long as the working week is inferior to 32 hours. Finally, our findings show that for-profit workers evaluate more highly job offers where higher effort is exchanged for employer's loyalty. In contrast, nonprofit workers do not obtain higher utility from such a deal. We interpret this result as evidence of their intrinsic motivation. As the nature of the goals pursued in the nonprofit sector provides them with high work morale, they do not obtain any gain in well-being from a supplementary demonstration of loyalty from their employer.

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1. Introduction.

In this paper, we try to evaluate the determinants of the decision utility of workers from the for-profit and nonprofit sectors. In our setting, decision utility is a function that workers will use to evaluate the expected benefits from various job offers.

Firms in the nonprofit sector are partly characterized by their goals. One of the alleged objective of the nonprofit organizations is to produce goods and services that generate social benefits. Therefore, individuals could prefer to participate to the production of these services as they are judged as socially desirable on various grounds. In the terminology of Besley and Ghatak (2005), non-profit employees would be assimilated to motivated agents defined as "agents who pursue goals because they perceive the intrinsic benefits from doing so".

A large strand of the literature on the motivation of nonprofit and for-profit employees has then tried to test this prediction identifying differences in utility from the characteristics of their chosen jobs, particularly focusing on the wage differential between the two sectors. Following a compensating differentials argument, workers employed in the nonprofit sector would be ready to donate labour to be involved in the production of a good that they consider as valuable for the society, i.e. to work for a lower hourly wage. Empirical evidence however is mixed. The most recent studies to date (Leete (2001), Ruhm and Borkoski (2003)) found opposite results in the United States, the first concludes that the wage differential is in favour of the for-profit workers for certain industries of the service sector while the second exhibit no significant difference in compensation between for-profit firms and nonprofit organizations. Reasons for opposite results can be found in the difficulty to control for differences in productivity between workers in the two sectors. Furthermore, nonprofit organizations are restricted by the nondistribution constraint of profits. In this context, Borjas and *al* (1983) states that the

nonprofits managers could be tempted to set above market wages for the whole workforce.

Recently, Benz (2005) followed a subjective approach trying to estimate the utility function of for-profit and nonprofit employees using reported levels of job satisfaction. He found evidence that nonprofit workers report higher well-being in the workplace than for-profit ones. Using data from seven European countries, Lanfranchi et al. (2005) exhibit similar results. Following Kahneman et al (1997), this exercise can be seen as an attempt to measure the differences in *experienced utility* in the for-profit and nonprofit sectors. This concept is linked with the pleasures and pain that are derived from the experience in the job. It is essentially different from the most commonly used in modern microeconomics notion of decision utility which is usually inferred from observed actual choices but can also be exposed by hypothetical decisions in experimentation.

In this study, we intend to use the workers' stated preferences towards fictitious job offers to assess the determinants of the decision utility of for-profit and nonprofit workers. For that purpose, we use the methodology of conjoint analysis that collects data on hypothetical choices of individuals in a simulated labour market setting (see McFadden (1986) for a presentation).

In our experimental setting, individuals reveal their preferences when they select between jobs. The survey proposes descriptions of five fictitious job offers to workers who are supposed to have lost their previous employment. Each job offer, called a vignette, is characterized by ten specific attributes chosen to describe its quality. The evaluation of the vignettes is then analyzed to reveal the most valuables attributes for nonprofit and for-profit employees.

Among those attributes, superior intrinsic motivation of nonprofit workers over for-profit workers may be tested by specifically analyzing the weight of three attributes of the

job profiles, namely wages, working time and loyalty from the employer in their decision utility. The results show mixed evidence of motivational differences for the two groups.

The wage semi-elasticity of utility is around 1.17 for for-profit workers while it is inferior for nonprofit workers, but the difference is however insignificant. Though, the number of working hours a week shows a clear inverted-U-pattern, with a maximum at about 27 hours a week for the for-profit workers and about 29 hours a week for the nonprofit workers. This evidence is in line with the labour donation hypothesis as nonprofit workers reach their maximum decision utility for a longer working time, showing a higher intrinsic motivation for work. Furthermore, they are ready to abandon a higher percentage of their wage to work a supplementary hour than for-profit workers as long as the working week is inferior to 32 hours. Surprisingly, above this threshold, they would require a higher wage compensation for any increase in the number of worked hours than their counterparts from the for-profit sector.

Finally, our findings show that for-profit workers evaluate more highly job offers where higher effort is exchanged for employer's loyalty. In contrast, nonprofit workers do not obtain higher utility from such a deal. We interpret this result as evidence of their intrinsic motivation. As the nature of the goals pursued in the nonprofit sector provides them with high work morale, they do not obtain any gain in well-being from a supplementary demonstration of loyalty from their employer.

The rest of the paper is organized as follows. Section 2 will describe the methodology of the conjoint analysis and the characteristics of our experiment. Section 3 will describe our model decision utility and the chosen estimation methods. Section 4 will present and discuss our estimation results.

2. Methodology and Experiment.

2.1. Conjoint analysis.

Producers are eager to discover the saleability of new products projects. One of the favourite methods of investigation is to propose panel of consumers with a large set of versions of a new good only differing by some of their attributes. This method of gathering and treating experimental data, designed by marketing researchers, is called "conjoint analysis" by Green (1974). Paired comparisons, ranking and cardinal evaluation of proposed alternatives yield information on stated preferences and choice. Empirical treatment of this information is based on the original work of Luce, 1959, on individual choice behaviour and has been originally designed by McFadden, 1973.

Such laboratory experiment has the major advantage to propose potential buyers with a large set of alternative products. In spite of its flexibility, conjoint analysis has been rarely used in economic research, one noticeable exception being van Beek et al (1997) where it is applied to reveal the preferences of employers with respect to job applicants.

In this study, we will focus on the supply side of the labour market and try to discover workers' preferences with respect to job offers. Workers are then asked to evaluate and choose between hypothetical job profiles, called vignettes, consisting of attributes like wage, working hours, nature of the employment contract. Hopefully, the experiment will allow expose the mapping between inputs and output of labour market choices, namely the relationship between the job attributes and job acceptance by the workers. Previous studies have made use of answers of employees to explicit questions to derive what have been called their values in the job. Clark (1997) and Soza-Poza and Souza-Poza (2000) have analyzed the differences in preferences for specific attributes between male and female workers. Our approach relies on observation of hypothetical choices and is assumed to come closer to measuring the true decision utility of the workers.

2.2. Experimental setting.

The experimental setting takes place in a larger survey that was designed in the context of the EPICURUS project to investigate the link between work patterns, labour market experiences and job satisfaction. This new dataset has been collected on line in seven European countries, namely Denmark, France, Finland, Greece, the Netherlands, Spain and the United Kingdom. The sample includes salaried individuals with a relatively low education (maximum upper secondary school) i.e. exclude self-employed, students, unemployed, pensioners and workers in primary sector. Furthermore, the sample was stratified to persons aged 18-65 years. The total number of respondents is 5463 with an unequal distribution between countries for costs reasons.[2]

The information collected can be summarized in three parts. First, objective information was collected about the individual respondent and his household and his past and current job situation. Second, a large set of subjective information is available encompassing opinions about the job, measures of overall job satisfaction but also of various domains of the job, measures of satisfaction with areas of life and with life in general. Third, hypothetical evaluations and choice of job offers were obtained from the respondents.

Each surveyed worker was exposed to the following fictitious situation. Considering that he has lost his current job, he has been proposed five vignettes representing job offers defined by ten attributes aimed at describing the quality of the job. The number of alternatives has been limited to five for tractability purposes. Considering that vignettes were proposed to the respondents following their answers to the first two parts of the survey, we assumed that a higher number of job profiles would be too difficult to evaluate properly. The questionnaire was designed not to require more than half an hour to be filled

[2] Distribution of answers across countries is given in Table A1 in the appendix.

in. The selection of the attributes was also made to describe the most relevant characteristics of the job in accordance with the findings of the subjective well-being literature.[3] An example of a vignette or job profile is given in Table 1 below.[4]

Table 1: example of a vignette proposed to individual respondents

Net hourly wage rate	20% more per hour than your current wage
Type of Contract	One-year contract with a high probability of continuation with a permanent contract
Weekly work hours	30 hours per week
Starting/ending times	The work starts at the usual time. You can however choose on which days to work.
Training opportunities	The employer will offer you a 1 month training program in the course of the year.
Work organization	The job involves working in a varying team
Control over own work	No one controls your work.
Work intensity	The job is fairly demanding, which means that sometimes you may have to work at high speed.
Time of retirement and Labour disability	This company has no early retirement plans.
Loyalty and effort	Same working conditions as in other firms. Loyalty from both sides. Shirking and low performance work is impossible.

Some of these attributes require supplementary comments. The hourly wage rate is expressed as a percentage of the current wage earned by the worker. The type of contract may take six different levels from the most to the least secure arrangement. The number of weekly working hours has been restricted to values between 20 and 50 hours. The last attribute has been designed to mimic a modified version of the Akerlof theory of gift exchange. The workers are proposed with two types of explicit arrangements. The first assumes that there is no loyalty between the employer and its workforce, the former being likely to interrupt the contract while the workers are not required to perform efficiently and may shirk. On the contrary, the second postulates that the employer will be loyal to his employees by ensuring them against premature interruption of the labour contract and,

[3] The full list of attributes and the possible levels assigned to them is given in Table A2 in the appendix.
[4] In supplement to the wording of the proposed attributes, respondents were given access to supplementary information about their detailed meaning while clicking on an information window.

in exchange, the worker will be unable to shirk and to perform badly. The rest of the attributes describe various elements of the working conditions offered in the job.

This description of the job profile is by essence incomplete. The respondent was then explicitly informed that all unspecified traits of the job offer were identical to the characteristics of his current job.

Random combination of the levels of the ten attributes would result in a very large number of possible vignettes with some of these being unrealistic considering the true available jobs in the labour market. The sample of vignettes has been restricted to 95 hypothetical job offers, divided into 19 combinations of 5 vignettes. Each respondent was then randomly assigned with one these combinations. The quality of the answering rate was quite reasonable. For example, in France, only 12 out of 1008 interviewed individuals did not answer the vignette questions. On average each respondent has evaluated 4.92 vignettes. Thus almost all respondents did evaluate 5 vignettes. The descriptive statistics of the sample of vignettes is given in Table 2 below.

Each vignette was proposed on a separate screen in the Internet questionnaire. At the bottom of each screen, the respondent was then required to evaluate the vignette on a 0 to 10 cardinal scale. The average evaluation of vignettes in the sample is 4.15. Then, the respondent was asked if he would accept this offer. In order to allow the respondent to reconsider his evaluation, he was allowed to go back and forth on the five screens displaying the five vignettes and modify his answers. This is essentially similar to the recall hypothesis in the job search theory.

Table 2: The vignette's attributes: Descriptive Statistics

Variable	Mean	Min.	Max
Type of contract (dummy variables)			
Permanent contract with no risk of being fired	0.18	0	1
Permanent contract with risk of being fired & with economic compensation	0.13	0	1
Permanent contract with risk of being fired & with no economic compensation	0.18	0	1
One-year contract with high probability of continuation with a permanent contract	0.24	0	1
One-year contract with high probability of continuation with a temporary contract	0.16	0	1
(reference: One-year contract with.no probability of continuation)	0.11	0	1
Ln(Working hours) (Working hours ranged from 20 to 50)	3.54	2.99	3.91
Net wages per hour: expressed as a percentage of wages at current job.	-0.02	-0.5	0.5
Working schedules (dummy variables)			
Flexible working hours	0.17	0	1
Office working hours (you can choose which days your work)	0.28	0	1
Rotating shifts (system)	0.31	0	1
(reference: The employer decides about the working times (not in the night) and may change them monthly			
Training: 1= The employer will offer you a 3 months training program in the course of the year 2= 1 month training, 3= 10 days training 4= 5 days training 5= 1 day training; 6= no training	3.42	1	6
Work organization (dummy variables)			
Job not in teamwork	0.30	0	1
Job in varying teamwork	0.32	0	1
(reference Job in fixed team)	0.38	0	1
Control over own work (dummy variables)			
Job has a fixed routine	0.40	0	1
Can choose order tasks: job tasks are fixed, but you may decide when & how things are done	0.34	0	1
(reference: No one controls your work)	0.26	0	1
Intensity due to high speed (dummy variables)			
Often high speed	0.24	0	1
Sometimes high speed	0.16	0	1
(reference: never working at high speed)	0.16	0	1
Intensity due to tight deadlines (dummy variables)			
Often tight deadlines	0.17	0	1
Sometimes tight deadlines	0.16	0	1
(reference: never working with tight deadlines)	0.12	0	1
Retirement & Labour disability (dummy variables)			
Have to stop before 65 (have to stop before 65 because the job is physically very demanding)	0.12	0	1
Early retirement 55 (firm has early retirement plans)	0.20	0	1
Early retirement 60 (firm has early retirement plans)	0.24	0	1
(reference: the firm has no early retirement plans)	0.16	0	1
Loyalty-no shirking(dummy variables)			
Loyalty from both sides; interruption of the labour contract and low performance impossible	0.57	0	1

3. Choice model and empirical set-up.

In this section, we will first discuss the assumed choice model of the respondent. Then, we will present the econometric models used to evaluate his preferences.

3.1. The Choice Model.

Kahneman and al (1997) makes an explicit difference between experienced utility and decision utility, the former being formed by experience of episodes coming from the previous choices of the individual, the latter measuring the mapping between attributes and evaluation of current alternatives faced by the individual. Following the interpretation given by Ferrer-i-Carbonel and al (2005) of our current experimental setting, we will assume that experienced utility of the current can be proxied by the levels of satisfaction with his current job reported by the worker while preferences associated with decision utility are stated by the evaluations of the hypothetical job profiles proposed to the respondent. The results displayed in Ferrer-i-Carbonel (2005) showed significant differences between the two utility concepts.

Considering these two concepts of utility as different does not mean that they are not linked with each other. In this paper, we view the decision utility of any worker as dependant of the given attributes of job offers, his or her measured and unmeasured characteristics and also of hedonic past experience in their current job, namely his experienced utility. In other words, our concept of decision utility is related with the preferences at the very moment of the experiment, similar in essence to the original random utility model of Thurstone (1927).

We then assume that respondent *i* evaluates each job offer J according to a cardinal scale V_i expressed as a function of the vector of the k attributes of J, $D_J = (D_{1J}, D_{2J}, ..., D_{kJ})$, and the vector of individual and current job characteristics, x_i:

$$V_i(J) = V(D_{1J}, D_{2J}, ..., D_{kJ}, x_i) \quad (1)$$

We will further assume that this scale has an additive separable form:

$$V_i(J) = \alpha_1 D_{1J} + \alpha_2 D_{2J} + ... + \alpha_k D_{kJ} + \beta_1 x_{1i} + \beta_2 x_{2i} + ... + \beta_n x_{ni} \quad (2)$$

Choosing this simple additive form will allow calculate compensatory values or tradeoffs interpretation between the *D* and the *x*s, i.e. changes in the attributes and personal or current job characteristics that will leave the respondent indifferent between two different job offers.

Furthermore, interactions between individual characteristics and job attributes may enter this linear form permitting the marginal utility of any attribute to vary in accordance with the respondents' traits. For example, socioeconomic background of individual may influence their preferences for labour donation. Lanfranchi and Narcy (2006) shows that if the father of worker holds a job directed towards social welfare improvement, then the worker is significantly more likely to be employed in the nonprofit sector. Similarly, Prouteau and Wolff (2004) reports that, in France, previous parents' involvement in voluntary work increases the likelihood of children to engage into unpaid work. We will therefore hypothesize that the decision utility of for-profit and nonprofit workers may differ, not only through the additive introduction of intrinsic motives to work in nonprofit organizations, but also through the change in the marginal utility of hours or wages for example.

3.2. Empirical setup.

We will assume that the additive scale or decision utility (2) $V_i(J)$ could be estimated by following empirical model:

$$V_{iJs} = \sum_{k=1}^{k=10} \alpha_{ks} D_{kJ} + \beta_s' x_{is} + \varepsilon_{iJs} \quad (3)$$

where the random term is assumed to be independent of the explanatory variables.

However, the true value of the decision utility is unobservable and we only observe the evaluation U_{iJs} of the vignette *J* by the individual *i* working in the sector *s* (s= for-profit or nonprofit), such that $U_{iJs} = f(V_{iJs})$ but reported on a discrete scale 0-10,. The observed variable is an ordered variable and our empirical could therefore be estimated using ordered probit or logit models. However, fixed-effects ordered probit estimation method is still uncertain and quite difficult to handle. For purpose of tractability and to facilitate the computations of the tradeoffs between wages and the remaining attributes, we have chosen to transform the discrete reported evaluations of the vignettes U_{iJs} into continuous values denoted $\overline{U}_{iJs}$. This transformation requires that the transformed values preserve the ranking of the original evaluations.

In this paper, we will use the COLS method introduced by van Praag and Ferrer-i-Carbonel (2004, Chapter 2). Considering the discrete scale 0-10, any discrete value taken by our observed discrete variable U_{iJs} represent a transformation of V_{iJs} belonging to one of the intervals [0,0.5],…, (9.5, 1]. If the scale is then linearly transformed into the 0-1 scale, we can construct our new variable $\overline{U}_{iJs}$ for each possible eleven values using the following formula:

$$\overline{U}_{iJs} = E(V_{iJs} | \lambda_{n-1} < V_{iJs} < \lambda_n) = \frac{n(\lambda_{n-1}) - n(\lambda_n)}{N(\lambda_n) - N(\lambda_{n-1})} \quad (4)$$

where the λ take their values in {0, 0.05, 0.15, 0.25,…,0.95, 1} and *n* and *N* represent the Normal density and distributions functions. The new dependant variable of our econometric model $\overline{U}_{iJs}$ is then the conditional mean of V_{iJs} and our model is rearranged as follows:

$$\overline{U}_{iJs} = \sum_{k=1}^{k=10} \alpha_{ks} D_{kJ} + \beta_s' x_{is} + \varepsilon_{iJs} \quad (5)$$

and can be estimated using conventional linear methods. Moreover, van Praag and Ferrer-i-Carbonel have shown that the estimated coefficients obtained with the COLS method are identical to the coefficients obtained with ordered probit model, up to a multiplying positive factor.

We further decompose the error term into a specific individual effect ε_i and a white noise component μ_{iJ}. The specification (5) will be estimated for the two samples of for-profit and nonprofit sectors taking advantage of the panel structure coming from the sequence of the five vignettes. Fixed effect and random effect models will be proposed, the former having the obvious advantage to control for all individual and current job characteristics. Moreover, the value of the ten attributes being chosen at random, the likelihood of correlation between individual effects and explanatory variables is reduced. However, the random effects model will allow us to estimate a single model where all the observable attributes of the vignettes will be systematically interacted with a dummy measuring the nonprofit status of the workers. Likely, we will be able to test for significant differences in the marginal utilities of the characteristics of the hypothetical job between for-profit and nonprofit workers.

The presentation of vignettes being perfectly randomized and the respondent being able to revise his evaluation of each vignette all along the duration of the experiment, we can discard the risk of an effect of the ordering of the vignettes on the reported levels of satisfaction with the job profiles.

3.3 Testable hypotheses

The first goal of our econometric model is to determine if the decision utility stated by for-profit and nonprofit workers are identical. The reasons for differences in their respective preferences towards the attributes of the job offers can be traced in the alleged intrinsic motivation of nonprofit workers.

Labour donation theory postulates that both the moral, political and ethical goals of nonprofit organizations and the nature of their goods and services aimed at generating social benefits will attract workers who will be ready to work for nonmonetary reasons, for the sake of the mission. Using data from the American Quality of Employment Survey, Mirvis and Hackett (1977) report evidence that on average "nonprofit workers are more likely to report that their work is more important to them than the money they earn". Then, ceteris paribus, these intrinsically motivated workers would set a lower reservation wage to accept a given job in the nonprofit sector. Assuming that the remaining attributes of the jobs are properly controlled, a positive piece of evidence on favour of this theory would be a lower marginal decision utility of wages for nonprofit workers.

Besides, following Kreps (1997), "workers may take sufficient pride in their work so that effort up to some level increases utility." Once again, we will be unable to identify the real causes for workers to consider work as a good up to a certain level of effort, but we may test such an assumption considering a quadratic function of worked hours in the attributes of the decision utility. Therefore, we will be able to identify the number of optimal weekly hours of a job offer for nonprofit and for-profit workers.

Finally, the last attribute proposed in each vignette explicitly introduces the concept of reciprocal loyalty in the design of the hypothetical job offer. The first value of this attribute defines an explicit work contract where no loyalty is required from employer and worker, that is the latter has freedom to exert a low effort (shirk) or perform badly while the employer may dismiss him at his own will even before the end of the duration of the

contract. On the contrary, the alternative explicit work contract is characterized by reciprocal loyalty, the employer being credibly committed to job stability in exchange of a strict requirement of high effort and performance.

We hypothesize that for-profit and nonprofit workers may evaluate these two contracts differently. In fact, if the workers are intrinsically motivated by working for the nonprofit sector, such explicit arrangements may give birth to the well-known crowding-out effect when intrinsic motivation is partially reduced by the external motivator (Frey (1997)).

Among the attributes, the influence of wage in each vignette is measured as a continuous variable, the percentage change of the wage at current job, dW_i / W_i while the working hours are introduced as a quadratic form, the rest being dummy variables. Our estimated model is then written as:

$$\overline{U}_{iJs} = \sum_{k=1}^{k=8} \alpha_{ks} D_{kiJ} + \delta(dW_{iJ} / W_i) + \gamma_s \ln(hours)_{iJ} + \nu_s \ln^2(hours)_{iJ} + \beta_s' x_{is} + \varepsilon_{iJs} \qquad (6)$$

4. Results and Interpretations

4.1. Estimated decision utility for nonprofit and for-profit workers

Results from the random effect model where attributes are interacted with a dummy for the non profit status of the respondent are reported in table 3 below. The estimated coefficients associated with the different values of the attributes for the for-profit workers are given in the first column. In the second column are given the differences in estimated marginal decision utilities for the nonprofit workers.

Inspection of this table will first help to assess job quality through the evaluation of its characteristics by the workers themselves. Therefore, use of conjoint analysis helps to

rank the workers' preferences over a given number of attributes of the job. Our analysis will therefore highlight what aspects of the labour relationship are the most important for European low qualified workers. We will also show evidence of motivational differences for the two groups. We first focus on the characteristics of the job that would not be evaluated differently by forprofit and non-profit workers according to the hypothesis of intrinsically motivated workers.

In terms of attributes of the job, a first inspection of the results clearly reveals that the workers are more sensitive to the type and horizon of the labour contract than to any other job characteristics. Respondents from both sectors evaluate the values of this attribute identically. Not surprisingly, the respondents rank first a permanent contract with no risk of being fired and last a one-year contract with no probability of continuation. More interesting is the fact that they would prefer a temporary contract with a strong probability to remain employed one year later either permanently or temporarily to a permanent contract with a high probability to be fired. This evidence is in line with a strong and growing reported feeling of job insecurity in Europe.

In terms of working conditions, forprofit and non-profit workers exhibit similar preferences. They both incline toward flexible working times associated with a freedom of choice over the working days. Hence, a labour contract where they are supposed to start at usual working times only ranked second. A job appears to increase in value when workers are given at least some discretion while the options of working hours decided by the employer and especially rotating shifts are unattractive.

Table 3: Random effects COLS model of decision utility (model with interaction terms)

	Marginal utility for attributes (Forprofit workers)		*Difference in marginal utility for attributes between groups*	
	Coeff.	Z-value	Coeff.	t-value
Perm.cont with no risk of dismis.	.3946	13.30	-.068	-0.70
Perm.cont. with risk but compens.	.2526	8.21	-.069	-0.68
Perm.cont. with risk and no comp.	.0565	1.80	-.087	-0.86
Temporay .cont. to perman.cont	.2292	7.39	.027	0.27
Temporat.cont. to temporary.cont	.2799	10.85	-0.077	-0.91
(ref. Temp.cont.to unemployment)				
Ln(Working hours)	6.36	9.86	5.04	2.40
Ln2(Working hours)	-.969	-10.45	-.729	-2.41
Wages	1.175	55.47	-.050	-0.74
Flexible working hours	.132	5.56	-.078	-1.03
Office working hours	.099	4.88	.031	0.49
Rotating shifts	-.070	-3.63	-.024	-0.38
(ref. work.times decided by employer)				
Training 1 to 3 months	.111	5.97	.064	1.03
Training 5 to 10 days	.061	3.52	.081	1.42
(ref. employer offers no training)				
Job not in teamwork	.042	2.53	-.125	-2.32
Job in varying teamwork	.013	0.79	-.120	-2.24
(ref. Job in fixed team)				
Job has a fixed routine	-.116	-6.55	-.025	-0.45
Can choose order tasks	.050	2.70	.015	0.26
(ref. noone controls your work)				
Often high speed	-.173	-9.23	-.085	-1.39
Sometimes high speed	-.001	-0.03	-.037	-0.53
(ref. never working at high speed)				
Often tight deadlines	-.109	-5.32	-.144	-2.20
Sometimes tight deadlines	-.030	-1.49	-.047	-0.71
(ref. never working with tight dead.)				
Have to stop before 65	.080	2.87	.112	0.206
Early retirement 55	.224	9.97	-.066	0.354
Early retirement 60	.206	8.95	-.086	0.248
(ref. firm has no early retirement plan)				
Loyalty-No-shirking	.124	8.54	-.093	
Constant	-10.24	-9.07		
Number of Observations	18574			
Number of Groups	3744			

Note : the model also includes variables measuring gender, age, age squared, level of education and dummies for country specific effects.

In terms of control over work, the respondents from the two sectors show an identical and strong preference for autonomy over routine. However, to be given fixed tasks and freedom to decide when and how execution should be done is preferable to a complete control over the contents of the work. As noticed previously in the case of working times, rules that define the scope of the worker's autonomy are seen as a positive asset.

Working at high speed, that involves being put under physical tension, drives nonprofit and for-profit respondents to decrease the reported utility of the job. This negative evaluation is even strengthened when workers has to work with tight deadlines, a proxy for psychological pressure, nonprofit workers being even more negative about this attribute. A likely explanation for this surprising result may be found in the characteristics of the jobs in nonprofit sector. Among the various questions about their work roles in the Mirvis and Hackett study cited above, nonprofit workers were especially negative about the more demanding time pressure they had to face. If this specific trait carries over our sample, respondents may have induced to rank this characteristic very badly according to their previous negative experience.

Looking at work organization, forprofit workers find more attractive a job in which no team work is involved. On the contrary, nonprofit workers appear to rank first to work in a fixed team and last to work in a varying team. It is then difficult to strongly state that these workers have a superior taste for working in group.

All workers are also keen on preferring a job which gives them the opportunity to quit their job 5 to 10 years before the legal retirement age.

We turn now to the three attributes that we hypothesize to be differently ranked by the two groups of workers. As predicted by conventional utility theory, the absolute wage has a positive impact on the evaluation of the job profile. The wage elasticity is around 1.17 for for-profit workers while it is inferior for nonprofit workers, around 1.12, but the

difference is not significant at the usual statistical levels. Therefore, nonprofit workers do not seem ready to sacrifice a higher percentage of their current wage than their forprofit counterparts to obtain a similar job.

However, when turning to the effects of weekly worked hours on decision utility, the results exhibit clear differences between the two groups of workers. First, the number of working hours a week shows a clear inverted-U-pattern, with a maximum at 27 hours a week for the for-profit workers and about 29 hours a week for the nonprofit workers. Apparently, the working activity would indeed become a true « bad » only above a level of working hours rather inferior to the European average weekly working hours for both groups of workers. However, the significant difference in the optimal number of working hours is clearly in line with the labour donation hypothesis as nonprofit workers reach their maximum utility for a longer working time, showing a higher intrinsic motivation for work. We will come back in details below to the optimal length of the working week in both sectors.

Finally, the evaluation of the attribute defining the job in terms of reciprocal loyal behaviour from the employer and his employee reveals strong differences in preferences between the two groups of workers. Our findings show that for-profit workers evaluate more highly job offers where higher effort is exchanged for employer's loyalty. In contrast, nonprofit workers do not obtain higher utility from such a deal, neither from the possibility to shirk on behalf of an uncommitted employer.

We interpret this result as another evidence of their intrinsic motivation. As the nature of the goals pursued in the nonprofit sector provides them with high work morale, they do not obtain any gain in well-being from a supplementary demonstration of loyalty from their employer. On the contrary, if nonprofit workers originally consider their manager as another agent of the trustee, motivated by the nature of the mission, any change in the

implicit nature of their contract will signal that the true nature of the employment relationship is modified. Explicit offer of job security in return of high effort and performance reveals that the believed implicit cooperation or reciprocity with the managers is not true anymore. The explicit loyalty offer will act as an extrinsic motivator that changes their perception of the contract.

Our interpretation of this result mimics the rationale given by Gneezy and Rustichini (2000) for the results of their experiment where subjects were given a task to perform for a fixed fee or for a piece-rate system of payment. They found out that workers paid a fixed fee exert a higher effort than workers with the performance contract when the piece-rate was too low. When the piece rate was introduced, the nature of the contract was modified and proper incentives were lost until the extrinsic motivator reached a high level. We see Gneezy and Rustichini and our results as examples of the situations where intrinsic motivation can be crowded out by extrinsic motivators found by Benabou and Tirole (2003). Their informed principal-agent model proves that when the motivated worker is less informed than the manager, a change in the way of compensating the job may conduct the agent to reassess their beliefs about his own quality or about the nature, interest and difficulty of the job.

4.2. Supplementary evidence on the length of the working week and intrinsic motivation

We further investigated our first findings on the optimal length of the working week calculating the trade-off between wages and working hours for the two categories of workers. We ran within sector, random and fixed effects estimations of the decision utility and use the results to display the profiles of the tradeoffs between wages and working

hours over the admitted range of the working week in the vignettes, 20 to 50 hours. Results from the within sector estimations are reported in Table A3 in the appendix and show very similar results to the one obtained previously. The calculated profiles are given in figures 1 and 2 below and show very interesting pattern of preferences.

Fig1: comparison of wage/working hours trade offs (fixed effects model)

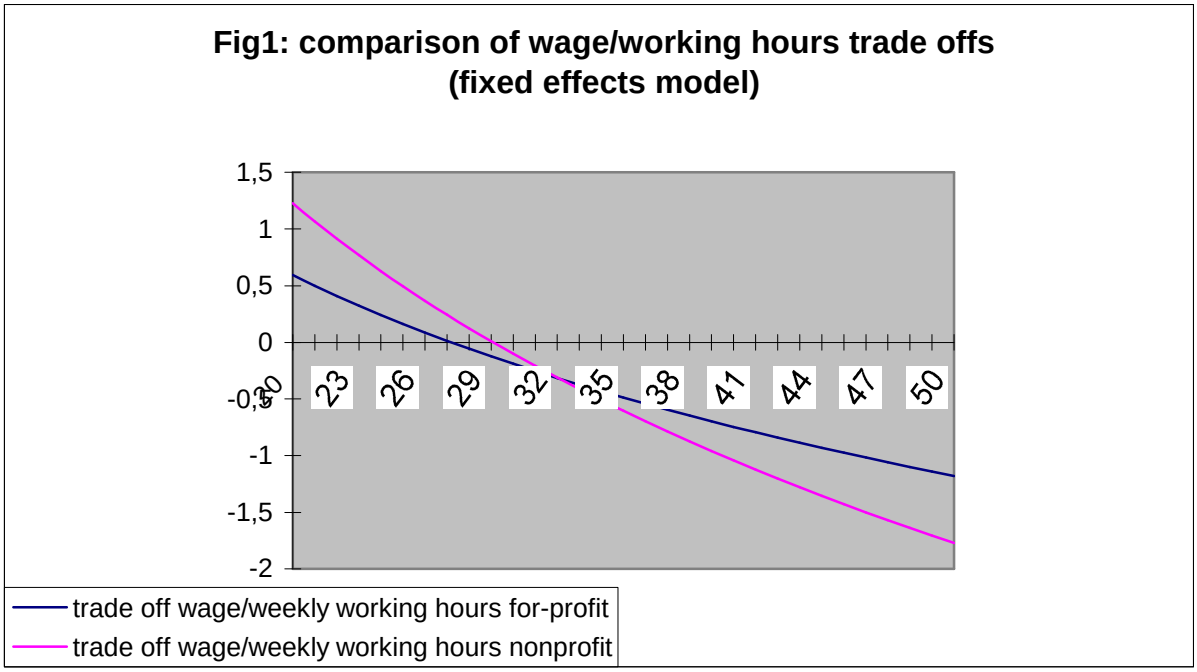
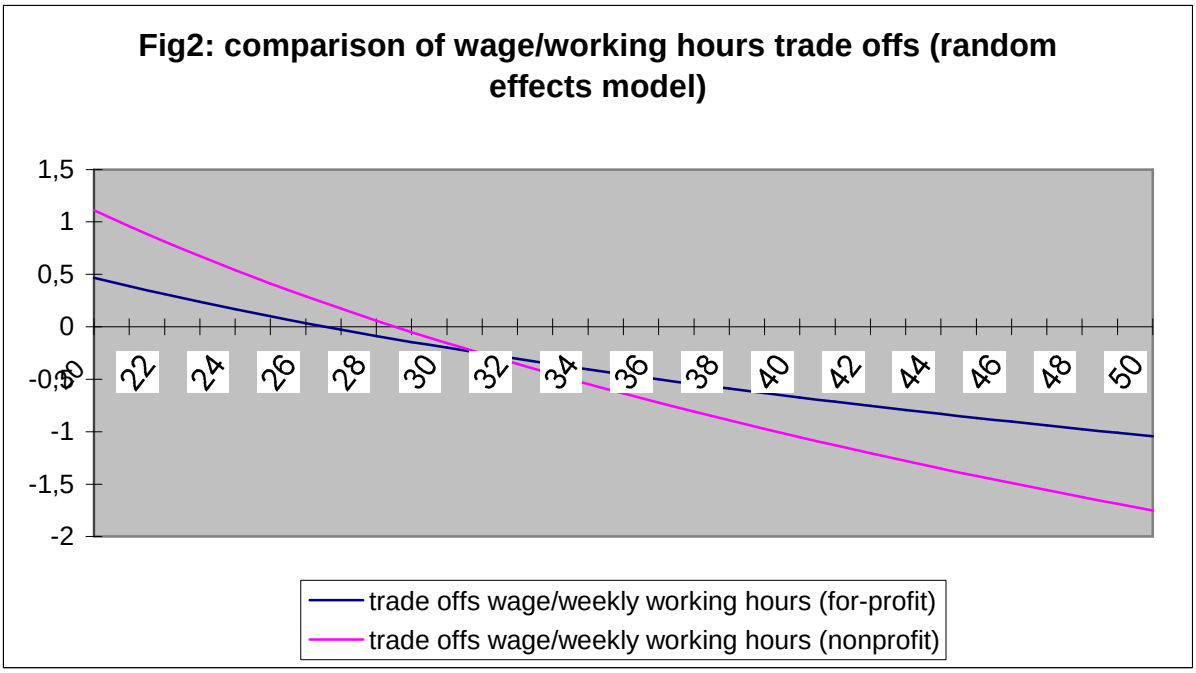


Fig2: comparison of wage/working hours trade offs (random effects model)



In both figures, it can be seen that the optimal length of the working week, defined as a zero tradeoff between wages and working hours, is higher for the nonprofit workers, with similar values to the ones calculated above. Moreover, whenever nonprofit workers are offered contract with fewer weekly worked hours than their optimum, they are ready to give up a higher percentage of their current wage than for-profit workers to work a supplementary hour in a similar job. Accordingly, they not only experience an increase in satisfaction coming from work up to a longer working week than forprofit workers, but are also ready to exchange wage for work at a lower rate whenever they are intrinsically motivated.

However, this pattern is reversed when the required working hours become slightly higher than the optimal value. For a working week superior than 32 hours or so, nonprofit employees would require higher wage compensation than their counterparts from the for-profit sector for any supplementary hour of work. Once the employer requires hours in excess of the optimal length of the working week, non-profit workers are more and more reluctant to offer supplementary effort in exchange of supplementary wages.

Altogether our empirical evidence draws a more complicated pattern than the simple assumption that nonprofit workers would be ready to supply labour at a lower price. Hence, for-profit workers also appear to obtain intrinsic satisfaction from work's sake. They are not dissatisfied with the work itself but are less motivated than those in the forprofit sector for short working week. Besides, intrinsic motivation of nonprofit workers seems to fade away more rapidly. A first reason for these surprising results may be found in the structure of the workforce employed in the non-profit sector. For example, more women are found to be employed in nonprofit organizations than in for-profit firms (see Leete (2001) and Lanfranchi and Narcy (2006) for North American and French evidence). A high proportion of these women have working husbands and children and their

opportunity cost of work may rise more rapidly. Second, a sort of crowding out effect may be at work. When the workers are obliged to supply effort beyond their optimal level, supplementary wages will act as extrinsic motivators that may reinforce the difficulty of the job. The more the workers were originally intrinsically motivated, the higher will be this negative effect.

Anyhow, if nonprofit employers are aware of the higher wage costs of long working week, they would be induced to offer labour contracts with fewer working hours than for-profit employers. This may partly explain why there are more part-time employees in the non-profit sector and why the working week is also shorter. On average, personal calculations from the Labour force Survey in France in 2001 reveal that the average weekly worked hours are 37 and 39 for full-time salaried workers and 33.9 and 36.5 including part-time workers in non-profit and forprofit organizations respectively.

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APPENDIX

Table A1: Number of individual respondents per country.

Country	Number of Respondents	Frequency
Denmark	1,011	18.51
France	1,008	18.45
Greece	800	14.64
The Netherlands	1,007	18.43
Spain	304	5.56
Finland	331	6.06
United Kingdom	1,002	18.34
Total	5,463	100

Table A2: List of the attributes values.

Net hourly wages
From –50% to + 50% of the current wage.

Type of contract
1- Permanent contract with almost no risk of losing the job
2- Permanent contract with risk of losing the job with severance pay.
3- Permanent contract with risk of losing the job with no severance pay.
4- One-year contract with high probability of continuation with a permanent contract.
5- One-year contract with high probability of continuation with another temporary contract.
6- One-year contract with no probability of continuation.

Working hours
X hours per week (between 20 and 50 hours a week)

Start/ending times
Flexible working times.
Work starts at the usual time.
Rotating shift system.
The employer decides about the working times (not in the night)

Training opportunities
3 months training program in the course of the year.
1 month training program in the course of the year.
10 workdays training program in the course of the year.
5 workdays training program in the course of the year.
1 workday training in the course of the year
No specific training

Work organization:
The job does not involve teamwork.
The job involves working in a varying team.
The job involves working in a fixed team.

Control over own work.
The job has a completely fixed routine, which you cannot influence
Your job tasks are fixed, but you may decide on when and how things are done.
No one controls your work.

Intensity
The job is very demanding, which means that you will have to work most of the time at high speed.
The job is fairly demanding, which means that sometimes you may have to work at high speed.
The job is not very demanding, which means that you will rarely have to work at high speed.
The job is very demanding, which means that you will have to meet tight deadlines most of the time.
The job is fairly demanding, which means that sometimes you may have to meet tight deadlines. The job is not very demanding, which means that you will rarely have to meet tight deadlines.

Time of retirement
You will have to stop before retirement age
You can retire at age X (55 or 60)
No early retirement plans.

Loyalty & Shirking
No loyalty from both sides; Shirking and low performance is possible.
Loyalty from both sides; Shirking and low performance work is impossible

Table A3 : COLS model of decision utility within sector (fixed and random effects models)

	Fixed Effects Non-profit workers		*Fixed effects For- profit workers*		*Random effects Non-profit workers*		*Random Effects For-profit workers*	
	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
Perm.cont with no risk of dismis.	.345	3.62	.403	12.98	.317	3.51	.395	13.30
Perm.cont. with risk but compens.	.197	1.95	.248	7.54	.184	1.95	.253	8.21
Perm.cont. with risk and no comp.	-.023	-0.22	.085	2.51	-.030	-0.32	.057	1.82
Temporay .cont. to perman.cont	.279	2.63	.218	6.36	.246	2.60	.229	7.40
Temporat.cont. to temporary.cont	.252	2.93	.279	10.12	.198	2.51	.280	10.85
(ref. Temp.cont.to unemployment)								
Ln(Working hours)	12.43	5.46	7.504	9.92	11.69	5.96	6.35	9.87
Ln2(Working hours)	-1.844	-5.64	-1.136	-10.45	-1.741	-6.17	-.968	-10.46
	.							
Wages	1.127	17.06	1.175	53.72	1.118	17.50	1.174	55.34
Flexible working hours	.083	1.08	.145	5.65	.043	0.50	.131	5.49
Office working hours	.156	2.43	.123	5.61	.130	2.16	.097	4.81
Rotating shifts	-.082	-1.34	-.068	-3.39	-.098	-1.66	-.070	-3.60
(ref. work.times decided by employer)								
Training 1 to 3 months	.189	2.96	.141	6.93	.194	3.33	.111	5.91
Training 5 to 10 days	.155	2.56	.086	4.45	.152	2.85	.061	3.53
(ref. employer offers no training)								
Job not in teamwork	-.097	-1.83	.054	3.03	-.089	-1.77	.042	2.51
Job in varying teamwork	-.120	-2.29	.015	0.84	-.111	-2.24	.014	0.87
(ref. Job in fixed team)								
Job has a fixed routine	-.123	-2.02	-.089	-4.44	-.137	-2.57	-.117	-6.61
Can choose order tasks	.087	1.36	.064	3.09	.071	1.24	.050	2.66
(ref. noone controls your work)								
Often high speed	-.253	-4.19	-.179	-9.02	-.272	-4.78	-.173	-9.21
Sometimes high speed	-.060	-0.86	-.013	-0.55	-.044	-0.67	-.001	-0.02
(ref. never working at high speed)								
Often tight deadlines	-.281	-4.33	-.138	-6.39	-0.255	-4.19	-.108	-5.24
Sometimes tight deadlines	-.087	-1.36	-.031	-1.46	-0.074	-1.21	-.030	-1.49
(ref. never working with tight dead.)								
Have to stop before 65	.226	2.52	.081	2.62	.195	2.35	.079	2.81
Early retirement 55	.157	2.21	.220	9.14	.168	2.54	.225	9.97
Early retirement 60	.130	1.69	.210	8.34	.129	1.84	.206	8.92
(ref. firm has no early retirement plan)								
Loyalty-No-shirking	.030	0.70	.130	8.65	0.029	0.68	0.123	8.46
Constant	-21.32	-5.36	-12.93	-9.80	-18.91	-5.52	-10.25	-9.10
Number of Observations	1793		16791		1793		16791	
Number of Groups	360		3386		360		3386	

Note : the random effects model also includes variables measuring gender, age, age squared, level of education and dummies for country specific effects.