Insecurity in the Labor market:
The impact of the type of contract on job satisfaction in
Spain and the Netherlands

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Abstract
In recent years European countries have seen an increase in temporary labor contracts. In this paper, we examine whether the type of labor contract affects individual’s self-reported job satisfaction. We do that by examining two countries that differ largely with respect to the labor market, i.e. Spain and the Netherlands. The results indicate that the effect of the type of contract on job satisfaction varies between these two countries. For Spain, temporary contracts (fixed-term and casual contracts) are strongly negatively correlated with job satisfaction. For the Netherlands, there is no relationship between job satisfaction and fixed-term contracts for more than a year and casual contracts. There is however a negative effect of fixed-term contracts for less than a year on job satisfaction. These country differences could be due to different individual’s traits and behavior in these countries, such as a different degree of risk tolerance. Nevertheless, it is more probable that the results reflect the different levels of uncertainty associated with temporary contracts in each country. The empirical analysis is based on the European Community Household Panel. The period studied covers the years from 1995 to 2001.

JEL-codes: I31, J3, J8

Keywords: Job satisfaction, temporary contracts.
1. Introduction

In the last years, European countries have seen a ‘flexibilization’ of the labor market, which means, among others, a reduction in the percentage of employees with a permanent contract and an increase of individuals with fixed-term and casual contracts. On the one hand, this trend may keep our European economies competitive by reducing the labor costs and increasing flexibility. On the other hand, however, it may negatively affect individuals’ job satisfaction and consequently worsen the labor climate. Often, the increase of non-permanent contracts is seen as synonymous to a reduction of job security and thus to a decrease in the quality of jobs. For example, in *Employment in Europe* (European Commission, 2003, Chapter 4) it is argued that “… employment in fixed-term contracts – is of particular relevance, not least because of job security and employment stability are key determinants of both job satisfaction and job quality”. According to the European Commission, workers in fixed-term contracts do not only experience a higher insecurity but are also found to be less well-paid (European Commission, *Employment in Europe*, 2002) and receive less training (European Commission, *Employment in Europe*, 2003).

In this paper, job quality is studied by means of the answer to a subjective question in which individuals are asked how satisfied they are with their main activity. For more than a decade, economists have used this type of subjective questions. By using this type of question, the paper focuses on a subjective definition of job quality. It is the workers themselves who define the quality of their jobs. This contrasts with the studies that focus on objective indicators of job quality.

In this paper, we present an empirical study in which we focus on the relationship between type of contract and individual job satisfaction. For that, we use two very different European countries, namely the Netherlands and Spain. This is done so as to
offer a cross-country comparison between two countries with very different labor market conditions, at least in reference to the type of contract. Spain is one if not the country in the European Union (2005) with the largest percentage of temporary contracts (Employment in Europe, 2004). In contrast, the Netherlands is one of the countries with the lowest percentage of temporary contracts as a percentage of the total working population. The most important difference between the two countries is that while in the Netherlands temporary contracts seem to be a “stepping stone” into a permanent job, in Spain temporary contracts are a “dead end”. The Netherlands is one of the countries with most transitions from temporary to permanent contracts per year (Employment in Europe, 2003 and 2004), while the opposite is true for Spain.

While there have been some studies that have looked at the relationship between Job Satisfaction and type of contract (e.g. Booth, Francesconi, and Frank, 2002; Bardasi and Francesconi, 2003; Clark, 1996; and Green and Tsitsianis, 2005), this is the first study that focuses on the comparison between two (very) different countries. This helps to understand the large differences in the European labor markets and how these affect Job Satisfaction.

The remainder of the paper is structured as follows. Section 2 describes the data. Section 3 introduces the empirical approach. Section 4 presents and discusses the results. Section 5 concludes.

2. Description of the data

Our analysis is based on the European Community Household Panel (ECHP). The ECHP is a data treasure, as it includes a fairly large number of individuals who are followed across time in a large number of countries. The present report uses the years
1995 to 2001, for the Netherlands and Spain. We could not use the first wave (1994), since in this first year individuals were not asked which type of contract they had.

In the ECHP some of the questions about individual job characteristics are only asked to those individuals who work 15 hours a week or more. For example, we only know for individuals who work 15 hours per week or more whether they work in the private or in the public sector (question PE009)\textsuperscript{ii}. Therefore, individuals in small part-time jobs have been deleted from this study. For Spain, the number of individuals working in such small part time jobs is negligible. In the Netherlands, the percentage is larger and, in the present sample, equals about 12\% of the total working population. Of these, about 41\% are students and 48\% individuals who report housework as their main activity. Additionally, we left out of the sample individuals who are self-employed, as for them the information on the type of contract does not apply. In our sample, about 13\% of the paid workers are self-employed. The final sample is based on individuals who report being working with an employer in paid employment, apprenticeship, or in training under special schemes for more than 15 hours a week\textsuperscript{iii}.

Next, some descriptive statistics of the data are presented. Between 1995 and 2001, the ECHP for the two countries studied includes about 48,000 observations of individuals who work 15 or more hours a week. These observations correspond to about 15,000 individuals, who are, on average, 3.2 years in the panel.\textsuperscript{iv}

The average Job Satisfaction of the sample is 4.5 on a 1 to 6 scale. This indicates that, as usually found in the literature, workers are fairly satisfied with their job. The average job satisfaction in Spain is 4.2 and for the Netherlands it is 4.76. The average number of working hours is 39.62 a week. For men, the average is 43 hours a week and for women about 34 hours a week. The differences between the two countries are fairly large. Working hours per week average 36.64 for the Netherlands and 42.75 for
Spain. For women, the differences are even larger than for men, as women in the Netherlands only work, on average, 29.85 hours a week in contrast with in Spain where they work 38.72 hours a week.

The vast majority of the individuals are employed in permanent contracts (79%). In Spain, the number of individuals with permanent contracts is 66% of the total sample. For the Netherlands this percentage equals 89.8%. Individuals with a fixed-term contract for more than a year represent about 6% of the total sample, and with less than a year about 7%. The other 6.5% have casual or other types of working arrangements. The number of respondents with fixed temporary contracts for more (less) than a year is about 12% (14.2%) for Spain and 1.2% (1.5%) for the Netherlands.

About 42% of the non-permanent workers are female. This percentage equals 38% in Spain and 54% in The Netherlands. It is interesting to see the distribution of type of contract by gender and education level. The results are presented in Table 1.

[Insert Table 1 about here]

3. The empirical approach

3.1 The model

In the ECHP, respondents are asked how satisfied they are with their work or main activity. The answer to this question is what is often called subjective or self-reported job satisfaction (JS), which as usual in the literature is used as a proxy for job utility (Frey and Stutzer, 2002; Luttmer, 2005). The respondents can provide their answer on a numerical scale from 1 to 6, where 1 stands for “not satisfied” and 6 for “fully
The empirical analysis aims at studying the relationship between individual self-reported Job Satisfaction ($JS$) and the type of contract. To that end, the following equation is postulated,

$$ JS = \beta_0 + \sum \beta_{1,x}x_k + \beta_2 TC + \epsilon, \quad (1) $$

where the dummy vector $TC$ indicates the type of contract. In this paper, the following options are distinguished: permanent contract, fixed-term contract for a year or less, fixed-term contract for more than a year, and casual or other types of contracts. Additionally, the regression includes a large set of individual job and personal characteristics, such as the number of working hours, the type of occupation, age of the respondent, education level, and whether there are children living in the household. They are described by the vector $x$. The inclusion of these variables makes it possible to control for characteristics other than the ‘type of contract’. The reason is that these other characteristics, which also affect job satisfaction, may be correlated with the type of contract. Then, the type of contract would pick up other effects if these variables were not included separately. Personal income and whether the employer provides education and training will also be included in equation (1). In this way, we control for the possible negative relationship between other job attributes (salary and training) and type of contract.

Finally, equation (1) includes the usual error term, indicating the unobservable part.
3.2 The econometric technique

In the literature, various regression techniques have been discussed as possible candidates to estimate subjective questions. For a detailed discussion we refer to Ferrer-i-Carbonell and Frijters (2004) and Van Praag and Ferrer-i-Carbonell (2004, chapter 2, 2006). Being aware of the advantages and shortcomings of the various econometric techniques, we here regress job satisfaction by means of what we call the Probit Ordinary Least Squares (POLS) approach as described in Van Praag and Ferrer-i-Carbonell (2004, chapter 2, 2006). The advantage is that we can use ordinary regression techniques.

In the POLS estimation method, the latent variable job satisfaction ($JS$) is an ordinal variable. Hence we can only estimate the $JS$-indifference curves. This gives us freedom to operationalize $JS$. We choose that operationalization such that the frequency distribution of $JS$ is the standard-normal distribution. In order to account for the discreteness of the observation we represent each response category $i$ by its conditional mean $J\hat{S}_i$, given that $JS$ belongs to category $i$. After that, OLS can be performed on the new variable ($J\hat{S}_i$). As shown in Van Praag and Ferrer-i-Carbonell (2004, 2006), the POLS method yields approximately the same estimates as the Ordered Probit, except for a multiplying factor due to a different normalization. The significance of the estimates, e.g. evaluated by $t$-values, is practically the same for both methods. The reason why we prefer POLS to Ordered Probit is that we can use simple OLS-techniques without any loss of information.

Our data set is a panel, i.e. it contains information on individuals across time. From an econometric perspective this means that the analysis has to (can) take into account time and individual effects. Equation (1) is now rewritten as
\[ J S_{it} = \beta_0 + \sum_k \beta_{1,k} x_{k,nt} + \beta_2 T C_{it} + \sum_j \beta_{3,j} \bar{x}_{j,n} + \gamma_i d_i + \varepsilon_{it} + \eta_n, \]  

(2)

where \( n \) stands for the individual and \( t \) for time.

The time effects \((d_t)\) are included as dummy variables (fixed time effects) corresponding to the year in which the individual is interviewed. Time effects aim to capture the unobservable characteristics that are the same for all individuals but change across time, such as the political and economic situation of a country.

Individual effects are introduced in the form of random effects, i.e. through the inclusion of a random disturbance \((\eta_n)\) that has, when averaged over the individuals \( n \), mean 0 and unknown standard deviation. These individual effects represent the unobservable characteristics that stay constant over time but differ among individuals, such as intelligence, optimism/pessimism, and introversion/extroversion. The advantage of using individual random effects instead of fixed effects is that one can include explanatory variables that remain constant over time, such as age and gender. These variables cannot be included in the individual fixed effects model, as this model is estimated by taking individual changes across time.

Finally, we differentiate between level effects and transitory effects by making the split-up \( x_{it} = (x_{it} - \bar{x}_n) + \bar{x}_n = \Delta x_{it} + \bar{x}_n \). Following Mundlak (1978) we add, for some variables \( x_j \), the term \( \sum_j \beta_{3,j} \bar{x}_{j,n} \), where \( \bar{x}_{j,n} \) is the mean of \( x_j \) across years for each individual. The transitory (or shock) effect is \( \beta_{1,k} \), while \( \beta_{1,k} + \beta_{3,k} \) is the long term (or permanent) effect.
4. Results

Table 2 presents the results of Equation (2) for the two countries separately, namely Spain and the Netherlands. First, we discuss the results found for all the variables included in the regression; then we turn to the findings on the relationship between type of contract and job satisfaction.

4.1 The relationship between Job satisfaction and individual characteristics

For both countries there seems to be a clear time trend indicating that workers in the years 1998 to 2001 were less satisfied than they used to be in 1995. For Spanish workers this downwards trend already started in 1996. As usual in the literature, a clear U-shape relationship between age and job satisfaction is found. The minimum is reached at about 34 in Spain and at about 37 in the Netherlands. Having a good health is positively correlated with job satisfaction. Individuals who work in the public sector are more satisfied with their job than workers in the private sector. The so-called gender paradox (Clark, 1997), which states that, everything else being equal, women are more satisfied with their job than men, is not found in these two countries. For the Netherlands and Spain the gender coefficient is statistically non-significant.

For the Netherlands and Spain high education is negatively correlated with job satisfaction, when compared to having low education. For Spain the effect is even found for middle education as compared to low education. This may indicate a strong relationship between the aspirations of highly educated workers and the final realizations. The total effect (yearly value and mean across years) of working hours is negative, although for Spain it is only significant at about 8%.

The remaining variables have a clearly different effect in each country. In the Netherlands “having a partner” and the “number of adults in the household” are
statistically significant, while this is not the case in Spain. In the Netherlands having a partner is positively correlated with job satisfaction. The number of children shows a negative significant coefficient for the yearly value but it is positive significant for the average over the years. This means that in the first years after getting a child job satisfaction is negatively affected, but that over a longer period having children increases job satisfaction. The sum of the two coefficients is positive.

Finally, we look at the effect of income on Job Satisfaction. Here, net monthly personal income is taken. Income is measured at the month previous to the interview. In order to make the results easier to interpret the income in the two countries have been transformed using yearly and country values of the Purchasing Power Parity (PPP). In other words, income units are made comparable across countries and years. The regression results presented in Table 2 indicate that the total income effect (yearly and average across years) is statistically significant positive for Spain. Surprisingly enough, the income coefficient is insignificant for the Netherlands. This does not mean that income as such would be unimportant for the Dutch. Financial Satisfaction questions show the opposite. But it shows that the salary is not an important determinant of job satisfaction for the Dutch workers. This may be a feature of the post-industrial society where individuals are not primarily working for the money, which is taken more or less for granted, but for ‘self-realization’.

[Insert Table 2 about here]
4.2 The relationship between Job satisfaction and type of contract

Next we focus on the main research question of this paper: what is the impact that the type of contract has on job satisfaction? The most important conclusion is that the answer to this question differs between the two countries.

The present analysis divides the labor contract into four types: ‘permanent (indefinite-term) contract’, ‘fixed-term contract for more than a year’, ‘fixed-term contract for a year or less than a year’, and ‘casual or other type of contracts’. In Table 2 the results are presented with the category “having a permanent contract” as the reference group.

For Spanish workers having a fixed-term contract or a casual contract instead of a permanent contract has a clear negative effect on job satisfaction. For example, the magnitude of the negative effect is comparable to the positive effect of having a good health or working in the public sector. Consistent with intuition, the negative coefficient of having a fixed-termed contract for more than a year is lower than the negative coefficient of having a fixed-term contract for less than a year. The coefficient of casual or other type of contracts is the largest of all.

For the Netherlands, the effect is only negative for fixed-term contracts of a year or less as compared to a permanent contract. Individuals with a fixed-term contract for more than a year or a casual contract do not seem to be less satisfied with their job than individuals with permanent contracts.

Other results from the literature give a mixed picture. Using the BHPS, Booth, Francesconi, and Frank (2002) and Bardasi and Francesconi (2003) show that British workers in seasonal-casual jobs are significantly less satisfied with their jobs than workers in permanent contracts. The same studies find no differences between the Job satisfaction of permanent workers and those with fixed term contracts. Clark (2005)
however does find a negative coefficient of “temporary job” on overall job satisfaction for UK workers represented in the BHPS 1992-2002. Similarly, Greenand and Tsitsianis (2005) report a negative relationship between type of contract and job satisfaction in West Germany and UK. In their studies, however, Clark (2005) and Greenand and Tsitsianis (2005) only differentiate between “temporary contract” and all other types of contract. This contrasts with the present study in which we distinguished among four different type of contracts.

Our results indicate that in Spain contracts other than permanent are clearly less preferred. In the Netherlands, this is not the case. This result may have to do with two factors. The first is whether individuals choose voluntarily for a non-permanent contract. If workers are forced to accept a fixed-term or casual contract against their will, it is obvious that this affects job satisfaction negatively. We surmise that in Spain the workers in contracts other than permanent are forced into it, while in the Netherlands it may be a matter of the worker’s own decision. Unfortunately, in the ECHP there are no questions in which individuals with fixed-term contracts are asked whether this type of contract was a matter of free choice or not. Nevertheless, this question was asked in the Labour Force Survey (2003). The answers given there are consistent with the results found here. More precisely, the vast majority of people in Spain said that the fact that they had a fixed-term contract was involuntary. In the Netherlands, this percentage was lower (25%).

The second factor is whether temporary contracts are used as a transitory situation preceding a more stable contract (after, e.g., a probationary period) or whether they become an everlasting situation in which the worker goes from one temporary contract to another. In other words, whether temporary contracts are a “stepping stone” or a “dead end”. As argued in the introduction, Spain is clearly a country in
which workers remain very long in temporary contracts (temporary contracts are a
dead end). In contrast, the Netherlands has, compared to the other EU countries, one
of the largest rates for yearly transitions from temporary to permanent contracts.
Thus, in the Netherlands individuals perceive a temporary contract as a transitory
state that will eventually lead to a more stable situation.

5. Conclusions

The cross-country comparison presented in this paper shows that the effect of the
“same” type of contract on job satisfaction varies between the two countries. The
results have been controlled for (at least some) other differences between permanent
workers and workers with fixed term and casual contracts. Notably, the analysis
controls for personal income and whether the employer offers education or training.
Therefore, the results presented in this paper show the effect of type of contract on job
satisfaction that comes on the top of the income, training, and other effects.

The empirical results show that while for Spanish workers not having a permanent
contract has a considerable negative impact on their job satisfaction, the effect is
much smaller (if any) in the Netherlands. The interesting question is to know why this
is the case. These country differences could be due to different individual’s
personalities in these countries. For example, Spanish workers could have a lower
degree of risk tolerance. Nevertheless, this is highly unlikely. Instead, it is more
plausible that the results reflect the different levels of uncertainty associated with each
type of contract. In the Netherlands, fixed-term contracts may represent a way of
phasing in into permanent jobs, while in Spain fixed-term contracts may represent a
low quality type of contract that is in practice maintained much longer. Therefore,
Dutch workers are not less satisfied with their job because of having a fixed term
contract, as long as this is long enough (more than a year) to give them certain stability.

An interesting question remains to be explored: what has brought these two countries into these different situations? This is especially interesting, given that the labor legislation does not differ that much across EU countries.
References


Table 1. Type of contract by education level and gender (fractions)

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permanent</td>
<td>Non-perman. Permanent</td>
<td>Non-perman. Permanent</td>
</tr>
<tr>
<td>High Education</td>
<td>0.226</td>
<td>0.188</td>
<td>0.210</td>
</tr>
<tr>
<td>Middle Education</td>
<td>0.259</td>
<td>0.213</td>
<td>0.259</td>
</tr>
<tr>
<td>Low Education</td>
<td>0.515</td>
<td>0.598</td>
<td>0.531</td>
</tr>
</tbody>
</table>
### Table 2: Job satisfaction, ECHP 1995-2001

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>t-value</th>
<th>Coeff.</th>
<th>t-value</th>
</tr>
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<tbody>
<tr>
<td><strong>Constant</strong></td>
<td>8.062</td>
<td>7.770</td>
<td>8.792</td>
<td>8.070</td>
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<tr>
<td><strong>Time dummies (ref. 1995)</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Time dummy: year 1996</td>
<td>-0.006</td>
<td>-0.410</td>
<td>-0.049</td>
<td>-2.390</td>
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<tr>
<td>Time dummy: year 1997</td>
<td>-0.013</td>
<td>-0.890</td>
<td>-0.148</td>
<td>-7.030</td>
</tr>
<tr>
<td>Time dummy: year 1998</td>
<td>-0.069</td>
<td>-3.510</td>
<td>-0.108</td>
<td>-4.980</td>
</tr>
<tr>
<td>Time dummy: year 1999</td>
<td>-0.086</td>
<td>-4.530</td>
<td>-0.122</td>
<td>-5.590</td>
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<tr>
<td>Time dummy: year 2000</td>
<td>-0.071</td>
<td>-3.440</td>
<td>-0.117</td>
<td>-5.200</td>
</tr>
<tr>
<td>Time dummy: year 2001</td>
<td>-0.075</td>
<td>-3.300</td>
<td>-0.129</td>
<td>-5.530</td>
</tr>
<tr>
<td>Ln(age)</td>
<td>-4.363</td>
<td>-7.360</td>
<td>-4.928</td>
<td>-8.030</td>
</tr>
<tr>
<td>Ln(^2)(age)</td>
<td>0.606</td>
<td>7.350</td>
<td>0.695</td>
<td>8.120</td>
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<tr>
<td>Minimum age reached at:</td>
<td>36.689</td>
<td>34.700</td>
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<tr>
<td>Male</td>
<td>0.018</td>
<td>0.970</td>
<td>-0.003</td>
<td>-0.140</td>
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<tr>
<td>Has a partner</td>
<td>0.052</td>
<td>3.040</td>
<td>0.006</td>
<td>0.320</td>
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<tr>
<td>Ln(number of adults)</td>
<td>-0.012</td>
<td>-0.780</td>
<td>-0.015</td>
<td>-0.940</td>
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<tr>
<td>Ln(number of children + 1)</td>
<td>-0.035</td>
<td>-1.330</td>
<td>-0.024</td>
<td>-0.660</td>
</tr>
<tr>
<td>Individual has good health</td>
<td>0.179</td>
<td>12.490</td>
<td>0.179</td>
<td>9.820</td>
</tr>
<tr>
<td>Indiv. has high education</td>
<td>-0.032</td>
<td>-1.720</td>
<td>-0.071</td>
<td>-2.970</td>
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<tr>
<td>Indiv. has middle education</td>
<td>0.006</td>
<td>0.350</td>
<td>-0.075</td>
<td>-3.660</td>
</tr>
<tr>
<td>Indiv. works in public sector</td>
<td>0.019</td>
<td>1.270</td>
<td>0.119</td>
<td>5.620</td>
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<tr>
<td>Ln(working hours)</td>
<td>-0.144</td>
<td>-4.060</td>
<td>0.008</td>
<td>0.170</td>
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<tr>
<td>Individual has two jobs</td>
<td>-0.032</td>
<td>-1.330</td>
<td>-0.009</td>
<td>-0.220</td>
</tr>
<tr>
<td>Ln(net month wages/salary)</td>
<td>0.000</td>
<td>0.020</td>
<td>-0.002</td>
<td>-0.210</td>
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<tr>
<td>Education or training provided by employer</td>
<td>0.057</td>
<td>5.110</td>
<td>0.094</td>
<td>6.010</td>
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<td>Fixed term contract &gt; 1year</td>
<td><strong>-0.122</strong></td>
<td><strong>-3.020</strong></td>
<td><strong>-0.167</strong></td>
<td><strong>-7.610</strong></td>
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<tr>
<td>Fixed term contract ≤ 1year</td>
<td>-0.032</td>
<td>-0.680</td>
<td><strong>-0.110</strong></td>
<td><strong>-4.980</strong></td>
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<tr>
<td>Temporary and casual work</td>
<td>0.032</td>
<td>1.610</td>
<td><strong>-0.213</strong></td>
<td><strong>-6.890</strong></td>
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<tr>
<td><strong>Average across years</strong></td>
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<tr>
<td>Ln(net month wages/salary)</td>
<td>0.002</td>
<td>0.140</td>
<td>0.043</td>
<td>2.980</td>
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<tr>
<td>Ln(working hours)</td>
<td>0.127</td>
<td>2.700</td>
<td>-0.054</td>
<td>-0.850</td>
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<td>Ln(number of children + 1)</td>
<td>0.053</td>
<td>1.720</td>
<td>0.026</td>
<td>0.630</td>
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### Dummies for occupation

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<td>Number of individuals</td>
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<table>
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<th>R-squares:</th>
<th>Included</th>
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<td>Within</td>
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<tr>
<td>Between</td>
<td>0.036</td>
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<td>Overall</td>
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<td></td>
<td>0.129</td>
</tr>
<tr>
<td></td>
<td>0.086</td>
</tr>
</tbody>
</table>

These are the individuals who answered 1 at the question “PE003: ILO main activity status at the time of interview”.

This information is taken from individuals’ answer to question PE003.

The final sample is smaller as some observations are incomplete. The variable with more missing observations is the type of contract, which is only answered by about 41,000 individuals. After that, occupation and sector are the variables with more missing observations. The final sample, which we analyse in this study, contains about 38,000 observations.

These two verbal labels are the only ones provided to the respondent.

These variables are constructed by combining the information provided by pe024 and pe025.

The set of indexes $J$ is a subset of the index set $K$.

The results are extracted from Employment in Europe (2003, p.145).