

Low Wage Employment in Europe

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1. Introduction

The analysis of the structure of wages and wage inequality has been receiving increased attention in recent years. This is both because wage inequality may affect the efficiency of the labour market, and because it has a bearing on problems related with social equity, such as the incidence of poverty or social stratification. Wage inequality is an important factor underpinning overall income differentials in the developed countries, as has been shown in recent studies (see European Commission, 1998; Kahn, 1998; Bardone et al., 1998, and Smeeding, 1997). This interest has been reinforced by the sharp increase in wage inequalities in a number of industrial countries in recent years, notably in the U.S.A labour market, which also saw employment growth in excess of many European countries in recent decades (see, for instance, IMF, 1999).

Low wage employment in particular has been a focus of research and policy interest (OECD, 1996, Asplund et al. 1998 and Lucifora and Salverda 1998). On the one hand, at a macro level low wage employment is clearly relevant to social equity, as is shown by high poverty rates in countries where low wage employment is relatively high (Marx and Verbist, 1998; OECD, 1997a). On the other hand, from a micro perspective, there is a relationship between low wages and the poverty status of the households (OECD, 1997a, Eurostat, 2000). However, a high incidence of low wage employment might also positively affect total employment, providing opportunities to low qualification/productivity workers (Lucifora and Salverda, 1998; Freeman, 1998a). In practice, the incidence of low wage employment is higher in those countries where wage inequality is relatively high (Lucifora, 1998; OECD, 1997b; Blau and Kahn, 1996; Keese et. al., 1998).

Moreover, in the context of increasing returns to education and skills and the need to promote “quality” jobs, comparative analysis of the scale and nature of low-wage employment has also been receiving increased attention. There is much to be learned from differences across countries in this respect, but comparative studies have often had to rely on bringing together data from national sources, often varying in concepts,

definitions, methods and coverage. In addition, many of the data sources available are based on the individual earner, and have little information on the firm or industry in which they are working and the nature of their industrial relations and wage-setting structures.

An aspect which is very relevant for the analysis of low wage employment is its relationship with labour market institutions. The literature shows that certain labour market institutions (minimum wage, collective bargaining and so on) affect in a significant way the characteristics and the evolution of the wage structure in developed countries. Among those characteristics the establishment of wage floors may be an important one. As long as the compressing effect of wage floors is concentrated on the low part of the wage distribution, its influence on low wage employment might be substantial (Lucifora, 2001). Therefore, it is important to analyse the role played by labour market institutions in affecting the scale and pattern of low wage employment.

In order to analyse the different dimensions of low wage employment, access to harmonised data for a number of European Union countries on earnings, obtained at the level of the firm and including information about the nature of the wage-setting process, is particularly valuable. The European Structure of Earnings Survey (ESES) is such a source, and here we seek to exploit it – together with other data - to provide a more comprehensive and rounded picture of low-wage employment in Europe than has been available up until now. In particular, access to microdata from the ESES for 1995 for a group of EU countries allows us to carry out a range of analyses of low-wage employment in those countries that has not been possible heretofore.

We first present an overview of the pattern of low-wage employment in the ESES. We compare the extent and composition of low-wage employment it displays with the conventional picture from national sources, and from the European Community Household Panel Survey (ECHP) - a harmonised survey of individuals organised by Eurostat and carried out in most member states from the mid-1990s to 2001. To put low-wage employment in context, we also look at overall earnings inequality throughout the distribution in the ESES and in other sources.

We then proceed to a more in-depth analysis of the characteristics and factors associated with low-wage employment, and the extent of commonality versus differentiation across countries in that respect, for a sub-set of six countries. For this purpose we take advantage of the fact that we have been able to carry out statistical analyses of the micro-data from the ESES for Belgium, Denmark, Ireland, Italy, Spain and UK, in a manner which rigorously safeguards confidentiality, with the cooperation of Eurostat and national statistical offices.

In concluding, we highlight the further potential of comparative research using the European Structure of Earnings Survey for understanding low wage employment and designing policies for promoting employment and job quality.

2. Data, Concepts and Measures of Low Wage Employment

While many country-specific studies on the distribution of earnings and skills differentials have been carried using national sources, in recent years comparisons of low pay and earnings dispersion across countries often rely on the database brought together by the OECD (see OECD 1996, 1997, 1998). This is an extremely valuable compilation, regularly updated, which allows both up-to-date comparisons and trends over time to be studied. However, the OECD make clear that the nature of the exercise – bringing together data from different national sources - means that there are potentially important differences in definition and coverage across countries. The figures for the most part refer to full-time employees, but the period over which earnings are measured, how “full-time” is defined and measured, and the sectors covered may vary across countries. Thus for one country the figures may refer to annual earnings of full-time employees who worked all year, while for another they may refer to weekly earnings of those in work at the survey date. The potential for these technical or measurement differences to mislead as to the actual comparative situation of different countries is very real, and strong policy conclusions may be based on such evidence.

Increasingly within the European Union efforts are being made to produce harmonized socio-economic data across a variety of areas, and this has considerable potential for improving the information base for the analysis of earnings. The European Structure of Earnings Survey (ESES) is very valuable in gathering earnings data in a

harmonized manner from employers across EU countries. The ESES has particular potential for the analysis of the relationship between earnings and firm/sectoral level characteristics, particularly given access to the micro-data for in-depth statistical analysis.

In order to describe the low-wage labor market, it is necessary to define what is meant by “low wage.” There is no consensus among economists as to how to define the term, and a variety of approaches can be taken in terms of the definition of an earnings threshold and the earnings concept or measure to be employed. In this study, we have followed conventional practice in defining low-wage employment in relative terms,¹ focusing on workers receiving a significantly lower wage than the typical worker of the economy. Concretely, a low wage employee is one who receives a wage which is under two thirds of the median wage of the economy.² With such a definition, a movement towards a more unequal distribution of wages will tend to increase the share of workers who are low paid. This relative measure is probably more salient in relation to questions of fairness and relative poverty, and makes international comparisons much easier, although it would clearly not be appropriate for analysis of the relationship between low-wage employment and poverty measured in absolute terms.

A variety of measures of earnings hourly, weekly, monthly or annual may then be employed. Focusing on hourly earnings has a number of advantages. In particular it allows both full-time and part-time employees to be included and compared on a meaningful basis, whereas weekly earnings are affected by variation both in pay rates and hours worked. Including part-time workers is very important given the growth in part-time employment in some countries and the diversity in patterns across countries in the full-time/part-time mix. Similarly in studying measures of earnings over the month or year, “low” earnings may be a result of (some combination of) a low hourly rate of pay, low hours of work during the week, or weeks spent out of work entirely during the

¹ Low pay can also be defined in absolute terms vis-à-vis a subsistence level of income (usually fixed in real terms). However this approach poses a number of problems for international comparisons as the poverty level in one country will not necessarily correspond to the one used in another country.

² Organization for Economic Cooperation and Development (OECD) (1997) and Low Pay Unit (LPU) defined the low-wage cutoff as two-thirds of the median wage. Another possibility is to define low wages as those falling into the bottom quintile or decile of the wage distribution. Clearly, with such a definition, the share of workers that will be classified as low paid will not change as the distribution of wages changes and will instead be fixed at 20 or 10 percent, respectively.

month or year. While the “low-pay – no-pay” cycle may well be very important, there are significant advantages to first identifying those on low hourly pay, before going on to incorporate reduced time at work into the picture of low wage employment.

Hourly earnings are generally derived from information about pay over a week or a month and hours worked, and there is considerably scope for reporting error. It is important to note in that respect that analysis of earnings often relies on information from household surveys, but there may be systematic differences in reliability of information gathered from establishments versus individuals. One might expect employers to have more accurate data on earnings and on hours of paid work (rather than simply all hours worked) from payroll records. On the other hand, in seeking to relate earnings to individual characteristics one might expect individuals to have more accurate information than firms on for example their education levels. In addition, establishment surveys may have restrictions in terms of coverage not shared by household surveys, notably for small firm sizes and certain sectors of the economy (such as agriculture or the public sector).

It is important in this context to recall that the ESES does not cover all economic sectors: it covers mining, manufacturing, utilities, construction, wholesale and retail, hotels and restaurants, transport and communications and financial services, but does not encompass agriculture, public administration and defence, health and education, or personal services. In addition, firms with fewer than 10 employees are excluded from the scope of the survey. In measuring earnings, hourly, monthly and annual earnings can be constructed but hourly earnings are generally given the most prominence. Gross earnings may be defined to include or exclude overtime pay, shift premia and bonuses. In this paper we will make use of this earnings information from the ESES for 1995 to investigate low-wage employment in a set of EU countries for which we have been able to access the microdata, allowing a range of new analyses to be carried out.

3. The Extent of Low Wage Employment

In exploring low-wage employment in Europe we focus on six countries for which access to ESES microdata was available, namely Belgium, Denmark, Ireland Italy, Spain, and the UK.

In **Table 1** we provide information about the overall extent of low wage employment in these countries, together with figures for the USA as an important point of comparison. The table also presents some relevant information on institutional features related with wage determination. The first two columns look at the proportion of low wage employees in each country, in the ESES and also in the European Community Household Panel survey (ECHP). Results from the ESES have been calculated from the microdata, taking into account the weight of each observation in the sample, while the results from the European Community Household Panel (ECHP) have been taken from Salverda et al. (2001). The comparison between these statistical sources has special interest as they are both harmonised across countries and a common definition of low wage employment and the same period have been used. The US figures come from the Current Population Survey.

Table 1 shows a very sharp divergence between countries in relation with the incidence of low wage employment, independently of the source used: Spain, Ireland and the U.K. have a particularly high percentage of low wage employees, together with USA. On the other hand, Belgium, Italy and Denmark show a much lower incidence. It is particularly useful to be able to compare directly the extent of low pay in the firm-based ESES with the ECHP which is household-based. The broad patterns are similar, but the proportion in low wage employment in Belgium, Denmark and, in particular Ireland is rather higher in the ECHP than in the ESES.³ As Salverda et al (2001) bring out, this is largely related to the limited sectoral and firm size coverage of the ESES, since the ECHP figures in Table 1 relate to firms of all sizes and to the whole economy. Restricting attention to the sectors and firm sizes⁴ covered by the ESES, the extent of low pay in the ECHP for Ireland can be seen to be much lower than in the sample as a whole, and is in fact very close to the level shown by the ESES. Similarly the ECHP figure for Denmark is considerably lower when attention is restricted to the sectors covered by the ESES.

INSERT TABLE 1

³ These ECHP figures refer to gross wage per normal hour, whereas the ESES ones include all annual bonuses related to the special characteristics of the job, but this does not affect the broad patterns, as the Appendix brings out.

In Table 1 we also include dispersion measures for individual wages, the D5/D1 ratio,⁵ from both the ESES and ECHP. This allows us to see whether the incidence of low wage employment is strongly related to the dispersion of wages in the left tail of the distribution. In those countries with the highest incidence of low wage employment (Ireland, Spain and U.K) wage dispersion in the left tail of the distribution is indeed higher than in the rest of the countries. This suggests that the effect of labour market institutions through the establishment of wage floors is relevant in the analysis of the incidence of low wage employment.

Among the institutions influencing wage determination, minimum wages and collective bargaining play an outstanding role (see, among others, OECD, 1998; Lucifora, 2001 and Keese *et al.*, 1998). These institutions establish wage floors which, in practice, might limit the extension of low wage employment. Previous evidence suggests that in those countries with a legal minimum wage, the dispersion in the left tail of the distribution of the individual wages, and by extension, the proportion of low wage workers, tends to be lower (Keese *et al.*, 1998; OECD, 1996; Stewart, 2002). This effect varies with the degree in which the minimum wage is binding: those countries with a lower minimum wage show a wider wage structure and a higher incidence of low wage employment (OECD, 1998). Data in Table 1 broadly conform to this pattern in that Ireland, Spain and the UK have rather low minimum wages or ones that have been only recently introduced and may not yet have had very much impact on the historically-embedded wage structure.⁶

The structure of collective bargaining is another relevant factor in the determination of the wage differentials. It has been shown that those countries with a

⁴ The ECHP does not allow for an exact match since the firm size categories it employs are under 5 employees and 5-19 employees, whereas the ESES covers firms with ten or more, so the cut-off of 5 or more had to be used in deriving these ECHP results.

⁵ The D5/D1 ratio is an index of inequality: the higher it is, the greater is the inequality at the lower end of the wage distribution. D1 is the value of the upper limit of the first decile and D5 that of the fifth (D5 is therefore equal to the distribution median).

⁶ Minimum wages are often compared both within and across countries in relative terms, i.e. relative to some measure of average wages. This provides some indication of how many workers are likely to be affected by the minimum wage. The gap between minimum and average wages varies considerably for different countries (OECD, 1997), reaching the highest value in Belgium, France and Portugal (between 60 and 70 per cent) and the lowest in the Czech Republic, Korea, Mexico and Spain (between 25 and 35 per cent).

high rate of affiliation and/or a high coverage of collective bargaining display wage structures that are relatively compressed (Blau and Kahn, 1999; OECD, 1997; Nickell and Layard, 1999) and a lower incidence of low wage employment (Lucifora, 2001; Keese *et al.*, 1998; OECD, 1996).

4. Who is in Low Wage Employment?

We now look at the nature of low-wage employment in the ESES in a descriptive fashion, in terms of the gender, age, education, sector and occupation of those affected, before turning to more in-depth econometric investigation in the next section. We also discuss once again whether the pattern revealed by the ESES appears generally consistent with other sources and with the common perception of the nature of low-wage employment.

First, **Table 2** shows the risk and incidence of low-wage employment by gender. The risk figure here measures the percentage of the workers of a particular type who are low paid – for example, the percentage of all male workers who are low paid. The incidence figure indicates how low-wage workers are distributed according to a particular characteristic, which allows us to illustrate in which type of individuals or in which kind of places they tend to be concentrated. We see that women are far more likely to be below the threshold than men in all the countries covered – often as much as two or three times as likely. This means that, for most of the countries in our sample, the number of women in low wage employment is higher than the number of men. The exceptions are Spain, where the proportion of working women is lowest, and Denmark where the difference in risk is also the lowest.

INSERT TABLE 2

Table 3 shows the percentage of full-time versus part-time employees falling below the low-wage threshold. Part-time workers in the ESES are in general defined as those whose contract meant that they did not perform a full day's or week's work. We see that part-time workers are always more likely than full-time ones to be in low-wage employment, but the gap is much wider in some countries than in others. At one end of the spectrum, there is quite a narrow gap in Belgium and Denmark. In Ireland and the

UK, on the other hand, 55-60% of all part-time employees in the ESES are below the earnings threshold, compared with about 12-14% of full-time ones.

INSERT TABLE 3

The cross-tabulation by gender and full-time/part-time status together is then shown in **Table 4**. In most countries, full-time female employees account for a substantial proportion of those below the threshold. Part-time men are generally rather unimportant. Part-time women, however, account for as much as one-quarter of the low paid in Ireland, Italy and Belgium and for over 40% in the UK, whereas in Spain and Denmark they are much less significant.

INSERT TABLE 4

The risk pattern by age and the age profile of employees falling below two-thirds of median hourly earnings are shown in **Table 5**. While low wage employment is more common among young than older workers, what this brings out is that a substantial proportion of those below the threshold are in the older age groups, low pay is not simply a phenomenon affecting younger workers. It is worth remarking on the very high incidence figure for workers above 54 years of age in UK, much higher than in the rest of the countries.

INSERT TABLE 5

The risk and composition of the low paid by education level attained is the focus of **Table 6**. This brings out once again that a very substantial proportion of low-wage employees have completed second level education: it is not just a phenomenon affecting those with very limited education. The incidence in this group is higher than for the one with the lowest education level.

INSERT TABLE 6

Finally, in **Table 7** we present the risk and incidence of low pay by tenure in the job. As we can see there is an inverse relation between incidence and tenure for all countries, being more pronounced in Ireland and Spain.

INSERT TABLE 7

The overall pattern of low-wage employment shown by the ESES in terms of gender and age is very similar to that seen in alternative data sources, including the ECHP. However, an in-depth comparison has revealed some significant divergences between the ESES and the ECHP in the profile of the low paid for particular countries in terms of occupation, sector, and size of the firm (see Salverda et al., 2001). This means that more intensive investigation of the inter-relationships between the individual and firm characteristics of those in low-wage employment in the ESES is particularly important, since the number of employees covered is often much larger than in household surveys, and the fact that information is obtained from employers may offer some reassurance on the reliability of the occupational, sectoral and firm size data. In addition, as we shall see, the ESES offers the possibility of assessing more reliably potential differences across for example regions that might be missed in a household survey.

5.- Econometric Analysis of Low Wage Employment in the ESES

We now proceed to the econometric analysis of low-wage employment in the ESES. Our econometric investigation of earnings comprises three inter-linked elements. First, we look at the overall role of individual and job characteristics versus firm/establishment effects in influencing an employee's risk of low pay. We then go on to an in-depth analysis of the impact of a wide range of factors – the individual's age, gender, education, and experience, the job in terms of occupation, contract type and hours, and the firm in terms of sector of activity and wage negotiation structures – on an employee's probability of being in low-wage employment. Finally, we focus on firms rather than individuals, and investigate the characteristics influencing the extent of low-wage employment in a firm. Because of specific features of the way the data for the UK was obtained it does not have information on multiple employees for a given firm and can be included only in the second part of the analysis, so our attention is first focused on Belgium, Denmark, Ireland, Italy and Spain.⁷

⁷ The UK data was obtained via sampling national insurance records rather than firms, so unlike other countries it does not provide a sample of employees from a given firm, so firm-specific effects – in which we are particularly interested - cannot be studied.

5.1. Low-wage employment and firms

Econometric models of individual earnings most often seek to relate an employee's pay to his or her characteristics, notably education, experience and skills. Here, though, we can take advantage of one of the main features of the ESES, the fact that (except for the UK) it includes many observations per employer. This means that we can extend the focus to incorporate not only individual characteristics and features of the job they have, but also characteristics of the firm in which they work. We look in depth at the role of specific individual, job and firm-level characteristics shortly, but first aim to assess the overall role these different types of variables in affecting the risk of being low-paid.

We approach this by estimating a Mincer type human capital equation (Mincer, 1974), augmented with a set of firm effects. The model of wage determinations is

$$l_{ij} = \mathbf{m} + X_i \mathbf{b} + \mathbf{a}_j + \mathbf{e}_{ij} \quad (1)$$

where l_{ij} is a dummy that reflects whether the individual i is low paid or not; X_i is a vector of individual and observable job characteristics; \mathbf{a}_j is an error term for firm j invariant for all the employees of the firm; \mathbf{e}_{ij} is a stochastic error term; \mathbf{m} is the intercept and \mathbf{b} is a vector of parameters.

Individual regressors include gender and human capital variables such as individual's general education (measured in terms of the highest level attained), potential experience⁸ (measured as age minus age of first entry into the labour market after leaving full-time schooling) and its square, and the time spent with the current employer and its square. Education and potential experience are included in the estimates as proxies for general human capital, while seniority in the firm is a proxy for specific human capital. Job characteristics regressors included are dummies for occupational group, type of contract and a full-time/part-time job dummy. The hourly wage includes irregular annual bonuses.

⁸ Actual work experience is not known and has to be approximated.

The main methodological novelty with respect to standard models of wage determination lies in the inclusion of the establishment effects \mathbf{a}_j . These effects are common to individuals working in the same establishment and its identification is possible because in ESES we have several observations for each establishment in the sample (country samples have been filtered in order to fulfil that condition). Those effects capture the influence of demand-related factors on wages and allow one to control for heterogeneity between establishments in wage determination. Using this kind of matched employer-employee data, the analysis of wage determination can take into account the full effect of labour demand on wages, and we are able to evaluate wage determinants for employees doing the same kind of job within the same establishments. The establishment effects \mathbf{a}_j might be estimated, depending on its nature, through fixed or random effects. In our case, where ESES data come from a sample of establishments, it seems plausible that these effects correspond to a set of random effects extracted from the whole population of establishments. Therefore, the estimation procedure should take into account its potential stochastic nature. Nevertheless, the result of the Hausman test (see Hausman, 1978) suggests that the effects \mathbf{a}_j are always correlated with the variables included in the vector \mathbf{X}_i . This implies that the use of random effects generates inconsistent estimators for the parameters of the equation (Hsiao, 1985). Therefore, the establishment effects are treated in the analysis as fixed effects. This means that they should be considered as representative of the sample but not of the whole population (Greene, 1997).

With cross-section data it is not possible to separately identify if establishment effects are due to unobserved individual heterogeneity or to pure unobserved heterogeneity between firms. This means it is not possible to estimate pure firm effects but just global firm effects, which include the pure effects and the average remuneration of the individual unobserved ability in the firm (Abowd et al., 1999). A global employer wage differential can, thus, be identified for workers with identical observed characteristics even in the absence of pure employer wage differentials, if employees sort themselves into firms employing co-workers with similar unobserved skills or firms recruit workers looking for skill complementarities in production (Kremer, 1993). The evidence suggests that controlling for unobservable individual fixed-effects reduces the

magnitude of inter-firm wage differentials, but that these significantly persist and are weakly correlated with unobservable individual fixed effects (Bronars *et al.*, 1999; Abowd *et al.*, 1999, 2001 and Goux and Maurin, 1999). Pure firm effects can then be proxied, at least partially, by global firm effects.

Following Groshen (1996), the empirical analysis of how labour demand factors affect low-wage employment has been carried out through a variance decomposition based on the estimation of different specifications of the wage equation (1). This permits us to separate the variance in the dependent variable in each country into different components after separately regressing the low-wage dummy on a set of establishment dummies, on observable individual and job characteristics, and on both these sets of attributes. This technique allows us to distinguish, based on the adjusted coefficients of determination of these wage regressions, absolute and marginal fractions of the variance explained by observable characteristics of workers/jobs and by establishments. More details on the technique can be found in **Table 8**. It is important to notice that although the dependent variable in the model has a dichotomous nature **OLS** is employed in the estimation of the model. Although this linear probability model has very well-known shortcomings (it suffers from heteroskedasticity and the predicted probabilities can fall outside the range 0-1), the estimators are nonetheless consistent and allow the valuable variance decomposition analysis to be readily applied.

INSERT TABLE 8

Tables 9 and 10 show the values of the adjusted coefficient of determination of the different wage equation specifications, and the results for the proportion of the low-wage status variance explained by these different models. We see that in addition to individual and job characteristics, establishment effects do consistently play a role in determining the probability of low-wage employment. The relative importance of individual and job characteristics versus establishment effects varies widely between countries, however. Establishment effects are much weaker in Denmark than in our other four countries, while these effects are most pronounced in Spain where they account for over 30% of the explained variance. Individual and job characteristics on their own, on the other hand, account for relatively modest proportions of the explained variance everywhere except Denmark. This brings out the importance of incorporating

firm-level characteristics into the analysis of low wage employment, as we do in what follows.

INSERT TABLES 9 AND 10

5.2. Econometric analysis of the determinants of low-wage employment

Both evidence from previous studies and the cross-tabulations we presented in Section 4 above suggests that certain types of worker have a higher probability of being low paid than others. The typical picture one tends to have of low wage workers is that they are mainly women, young, have fixed term and part time contracts, work in some specific sectors, in small firms and to have a low level of qualification and tenure in the firm (see Salverda *et al.*, 2001; OECD, 1997a; Keese *et al.*, 1998).

However, cross-tabulations can of course mislead because they do not control for other individual characteristics, and we have also seen that job and firm effects as well as individual characteristics can play an important role. A more in-depth analysis of the determinants of low wages can be carried out through the estimation of a discrete response model which allows us to estimate the effect of the individual characteristics of the workers as well as the firms where they work, on the probability, in this case conditioned to other characteristics, of being low paid. We now carry out such an analysis for all six countries, the UK now being included.

In this way, continuing to define low-wage-employment as below two thirds of the median wage, the probability of receiving low wages can be specified as:

$$P[w_i < \mathbf{m}] = \Phi(X_i' \mathbf{b}), \quad i = 1, \dots, N \quad (2)$$

Where w_i is the wage of the individual i ; \mathbf{m} is the threshold that specifies low-wage employment; Φ is the standard normal accumulative distribution function; X_i is a vector of explanatory variables, including characteristics of the workers and the workplace; and \mathbf{b} is the vector of parameters to be estimated.

One relevant feature of the ESES data is its richness in information about workplace characteristics. It permits the inclusion in the model of several workplace characteristics. The variables included in X_i are the same individual and job characteristics considered in equation (1) plus some establishment characteristics. The first of employer characteristics is the size of establishment, as it is an important determinant of wages (see Oi and Idson, 1999). The second is sector (see Katz and Autor, 1999). The sectoral classification has been adjusted aggregating some NACE divisions into NACE sections in order to have the same sectoral indicators. It is important to notice that sectoral coverage in the ESES is different for Ireland as Irish data do not actually cover NACE sections F, I and K. The third is type of collective bargaining. While there are important inter-country differences in collective bargaining systems, the best way to use the information available in the ESES seems to be to construct for all the countries a dummy for cases where enterprise or establishment-level collective bargaining has been reported (this information was not available for the UK). The fourth is the type of financial control: a dummy for totally private ownership has been included where available (information on type of financial control is not available for Italy). Finally, regional indicators have also been considered where available.

Table 11 summarizes the main results of the estimation of the probit model and they are presented in the form of marginal effects, the change being the estimated probabilities induced by a marginal change in the explanatory variable. For the dummy variables the marginal effect measures the change experienced by the probability of the event when the variable changes from 0 to 1, and with the remaining variables taking its average value. For continuous variables these effects measure the change in the estimated probability for an infinitesimal change in the explanatory variable evaluated at the average value of the remaining explanatory variables. The standard errors of the coefficients correspond to the Huber/White variance estimator and therefore they are robust in relation to heteroskedasticity (White, 1982). Likewise the coefficients are robust to correlation between the observations belonging to the same establishment.

INSERT TABLE 11

In general, the effects of individual and firm characteristics on the probability of being on low wages coincide with the ones traditionally obtained in the standard wage equation, in that for example men are less likely to be on low pay than women, that probability declines as education level rises, and part-timers are more likely to be low-paid than full-timers.⁹ Nevertheless, the pattern of results does differ across these countries, so that they in effect divide into two groups. The first comprises UK, Ireland and Spain with a very high incidence of low wage employees (around 20%) and where the characteristics for those workers are well defined: young, female, low education level, part time, little experience and working in small size firms and in some specific sectors. In this group, the relative probability of receiving low wages decreases monotonically with the size of the establishment and it is lower in the case of men (with a relative probability 10% lower than women). Likewise, the incidence of low-wage employment is, as expected, significantly lower for the qualified production workers and for the administrative workers than for non-qualified production workers; and it diminishes, in general, as qualifications increase. On the other hand, workers with a permanent contract and with a full-time job, have a lower probability of receiving low wages.

The second group comprises Denmark, Belgium and Italy with a lower incidence of low wage employees (around half of the incidence in the first group) and where the characteristics of those workers are not so clearly defined, apart from those related with gender and occupation. In Belgium and Denmark the relative probability of receiving low wages is lower in the case of men (around 2%) while in Italy it is almost negligible.¹⁰ Thus, in Denmark, low wages are mainly related to lack of experience and textile and domestic sectors; in Italy they are related to part-time working and occupation, and in Belgium to some specific sectors.

The probability of low-wage employment decreases with the age of the worker, with a minimum in the interval between 25 and 54 years. In the interval with more than 54 years and with less education than the following generations, the probability of

⁹ The influence of the considered factors on the probability of receiving low wages is, in general, very similar when alternative definitions of the wage are used. Including all annual bonuses in the wage distribution brings about, however, a slight reduction of the impact of the characteristics considered in the analysis.

receiving low wages increases only for UK, although not reaching values comparable to those obtained for youths, who are the ones with the highest probability of receiving low wages.

The probability of low-paid employment decreases with education in all countries, although the effect is less important in Denmark, Belgium and Italy. Working full-time also generally lowers the incidence of low-paid employment, with the exceptions of Denmark and Spain.

Having an indefinite (rather than fixed-term) contract generally reduces the incidence of low-paid employment (though this variable is not significant in Denmark). Apprentices suffer more low-paid employment (although the effect is not very important in Italy and Belgium). The incidence of low-wage employment monotonically declines with seniority in the firm and with potential experience in the labour market, though the effect of these variables is not linear.

As regards workplace characteristics, the organisation's type of financial control is generally not significant (except for Ireland at the 5% level). The relative probability of perceiving low wages decreases with the size of the establishment (except in Denmark where it increases). Having a firm collective agreement decreases this probability (with the exception of Spain, where it increases it). Very important sectoral differences also exist. Finally, there are also significant regional effects in some countries. Very interestingly, these effects are specially important for the UK, where there is decentralized collective bargaining, and for Spain (Fernandez et al., 2003, show that these effects are much more higher for Spain when more disaggregated regional data, NUT-II, are considered), one of the few EU countries where the sectoral collective agreements have a regional scope (EIRO, 2000). In Italy and Belgium, where sectoral collective agreements have a national scope, the regional effects are much less relevant in explaining low-wage employment. This evidence suggests that the collective bargaining systems in Spain and the UK provide significant flexibility to adapt to local conditions in wage determination.

¹⁰ For a detailed analysis of inter-country differences in the gender earnings gap see Simon and Russell (2004).

Finally, let us underline that the influence of these factors on the probability of being low paid is similar when conventional alternative relative thresholds (such as half the median) are used to define low wage employment. If the first decile of the wage distribution is used as the threshold, however, the absolute value of the estimated marginal effects is often lower suggesting that as we move down along the individual wage structure the characteristics of workers become more homogeneous.

5.3. Econometric Analysis of Low Wage Employment by Gender

Among the main characteristics of the low-wage employment pattern in the European labour market, we can highlight the relatively high incidence in female employment: around one third of female employees in Spain, Ireland and UK, and around 15% in Italy, Belgium and Denmark, receive low wages. This leads us to analyse whether there are differences in the characteristics that influence male and female low wages, by estimating the probit model separately for men and women (Table 12).

INSERT TABLE 12

This analysis shows that, in the case of women, there is a greater polarization of the marginal effects of the factors determining low wages. This provides additional evidence in favour of the existence of different patterns of wage determination according to gender (Altonji and Blank, 1999; OECD, 2002; Eurostat, 2002; Blau and Kahn; 2003).

In relation to the sector variables for the countries with a high rate of low pay, the marginal effects are often more pronounced in the case of women. For instance, in Spain the extreme values of the sectorial marginal effects on the probability of receiving low wages in the case of women are approximately 45% (in the textile industry) and – 20% (in the sector of financial intermediation), while for men they are only 22% and – 6% (in the same sectors), respectively. Therefore, the location in a specific sector seems to be a much more important determinant of the probability of receiving low wages for women than for men in these countries. The same happens, in general, with the influence of the other characteristics. Working in a big firm, or having a permanent contract, reduce the risk of low-wage employment more for women than for men. In this

sense, education level is also a much more important determinant of the probability of receiving low wages for women than for men: for example in Ireland, women with an university degree have a 21% lower probability of receiving low wages than those with upper secondary level. In the case of men, this reduces the probability only by 4%.

Let us also comment on a result regarding full time contracts in Spain which diverges from the other countries. While a full-time contract reduces significantly the probability of receiving low wages in the case of men, it increases that probability for women. In the rest of countries a full-time contract reduces significantly the probability of receiving low wages. For example, -13% in the case of women in Ireland and UK and around -5% for men of Denmark, Belgium and UK. So in the case of Spanish women, part-time working hours are not penalized as far as wages are concerned, but quite the opposite, specially in the low wage sectors, which is where female employment is concentrated.

It must also be pointed out that the coefficients on the occupation variables show the most important differences between men and women. In the case of women some occupations increase significantly the probability of receiving low wages, and this is something common to all the countries, not only those with the highest incidence.

Another relevant question has to do with the potential relationship between an establishment effect and a sex segregation effect on the probability of being low paid. An alternative to capture those effects is to include the percentage of women in each establishment. In Table A in the Appendix we show the effects of including such a variable in the probit analysis of section 5.2. The results show that for Ireland and Spain the probability of being low paid for both men and women increases significantly with the percentage of women employed by establishment. For the rest of the countries this variable is not relevant.

5.4 Low Wage Employees and Low-Wage Firms?

So far our analysis has focused on employees who are or are not below a low wage threshold, and investigated the characteristics – relating to the individual, job and establishment - that are associated with a higher or lower risk of being low paid. We have seen that working in certain types of firm does impact on the probability of being

low paid, even when controlling for variation in individual and job characteristics. The size of the firm in which one works, in particular, was seen to be systematically related to the likelihood of being on low wages. In this section we shift the focus from the employee to the firm as unit of analysis. We measure the extent of low wage employment in the firm, and then seek to relate this to what we know about that firm in the ESES – notably its sector of activity, collective bargaining regime, and size. (Once again the nature of this analysis means the UK must be omitted, since it does not have information on many employees for a given set of firms.)

This involves define low wage employees in the same way as previously, that is those whose hourly earnings are below two-thirds of the median in their country's ESES sample. We then derive the proportion of employees in each firm that fall below that threshold. Rather than then trying to model that proportion, we are interested in simply distinguishing those firms having a substantial proportion of their employees on low wages. For this purpose we take an arbitrary cut-off of 20%: our dependent variable is then a dichotomous one, taking the value 1 for firms where more than one-fifth of employees are low paid and zero for all other firms. We then estimate a probit model relating this to the firm's sector of activity, size, and collective bargaining regime, and the results are shown in Table 13.

The results show that in Ireland, Italy and Spain sector of activity plays a significant role in the likelihood that a firm has a substantial proportion of its employees in low wage employment. This is less true in Belgium and Denmark, though some modest sectoral effects are still to be seen. Firm size is systematically related to the extent of low wage employment, with a consistently lower probability for larger firms. State-owned firms, in the three countries where that information is available, are also less likely to have a substantial proportion of low-wage employees. Finally, the nature of the collective wage-setting regime in which the firm operates also seems to make a difference, though in a manner that differs across the countries studied. In some, pay bargaining at local level increases the likelihood that there is a substantial proportion of low-paid employees, while in others it reduces that probability.

These results take no account of differences across firms in the composition of the labour force – for example, in the proportion who are women, younger workers, or

working part-time. Since we have seen that the risk for an individual of being low paid is often related to those characteristics, it is useful to also introduce into the model three additional variables which capture the extent to which the firm's workforce is female, under 25, and part-time respectively. Table 14 shows the results when this is done. We see that all three workforce composition variables are indeed consistently significant across the five countries. There is consistently a positive relationship between the proportion of the workforce who are women and the likelihood of having a substantial proportion low paid, and the same is true of the proportion of the workforce aged under 25. In four of the five countries there is also a positive association between the proportion of the workforce working part-time and the likelihood that a substantial proportion is low paid, but Denmark is the exception where the sign on that variable is reversed.

Having introduced these additional variables, the broad pattern of the results is still similar to Table 13. However, the sectoral effects that we highlighted in Ireland and Italy are somewhat reduced, firm size is no longer significant in Denmark, and being a state-owned firm is no longer significant in Ireland. So some but by no means all of the relationships displayed in Table 13 reflect differences in workforce composition across firms in terms of gender, age and part-time working. Even when these are taken into account, there remain systematic associations in most of the countries whereby knowing a firm's sector of activity, bargaining regime and size would help in predicting the likelihood that it had a substantial proportion of employees at low wages.

Conclusions

In this paper we have examined the pattern of low-wage employment in the European Structure of Earnings Survey, a unique dataset with enormous potential in that context. We focus on six countries for which an in-depth analysis can be carried out, namely Belgium, Denmark, Ireland, Italy, Spain and the UK. We found first that the patterns of low wage employment and overall earnings dispersion shown by the ESES for these countries are reasonably consistent with what is known from other sources.

Results from the ESES also confirm for example the much higher risk of low pay generally facing women, and allowed us to provide a picture of who is affected by low-

wage employment in different countries. However, the real potential of the ESES is in the in-depth investigation of the inter-relationships between the various individual and firm-related characteristics associated with low wage employment. Access to the micro-data for these countries in a manner that protected confidentiality has allowed us to go beyond a description to in-depth analysis of these inter-relationships.

The estimates this allowed us to produce, have shown that these countries can be divided into two groups. The first comprises Ireland, Spain and the UK. These countries have a relatively high incidence of low wage employment (of the order of 20%), and the incidence and profile of low-wage employment is highly structured. The likelihood of being in low wage employment is strongly related to age, gender, hours worked, education experience, firm size and sector. In Belgium, Denmark and Italy, on the other hand, the incidence of low wage employment is a good deal lower (at about half the level in the first group), and apart from gender and occupation the characteristics of low-wage workers are not so clearly defined.

Turning from employees to their firms, we were also able to demonstrate using the ESES that in most of the countries studied a firm's sector of activity, bargaining regime and size help in predicting the likelihood that it has a substantial proportion of employees at low wages. This partly reflects differences in workforce composition across firms in terms of gender, age and part-time working, but even when these are taken into account, there remain systematic associations between the proportion of the workforce in low wage employment and the firm's sector, size, and bargaining regime.

We have emphasised in this paper that many of the data sources generally available for the analysis of low pay are based on the individual earner, and have little information on the firm or industry in which they are working and the nature of their industrial relations and wage-setting structures. The European Structure of Earnings Survey, by contrast, combines wage information provided by employers in a harmonised framework – perhaps more reliably than household surveys – with information about both the individual and the firm in which they work. This allowed us to investigate the role of establishment versus individual and job characteristics in the low pay context, with the results demonstrating that establishment effects do indeed

account for a significant proportion of the variance in the risk of being low paid in most of the countries studied.

As we have demonstrated here, being able to analyse the micro-data from that survey under appropriate conditions has allowed an in-depth investigation of the factors associated with low-wage employment. There remains considerable scope for further analysis on this topic, one promising area for further investigation being the role of wage-setting and industrial relations structures on the prevalence and nature of low-wage employment. The potential of comparative research using data from this source for understanding low wage employment and designing policies for promoting job quality is evident, and it will be important to exploit this potential fully as new and more up-to-date data from the ESES becomes available.

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Table 1
Incidence of low wage employment, wage dispersion and wage-setting characteristics.

Country	Incidence of low wage employment ^a		D5/D1 ^b		Collective bargaining system				Mechanism of regulation of low wages ^f
	ESES	ECHP	ESES	ECHP	Coordination ^c	Dominant level ^d	Extension of collective agreements ^e	Coverage rate ^d (%)	
Spain	21.3	22.8	1.72	1.97	1.5	Sectoral	High	83	Minimum wage
United Kingdom	20.6	20.8	1.80	1.81	1	Enterprise	Inexistent	36	Minimum wage
Ireland	18.1	25.1	1.76	2.13	1	National	Inexistent	66	Minimum wage
Belgium	9.1	11.8	1.41	1.56	2	National	High	96	Minimum wage
Italy	8.8	9.2	1.39	1.50	2	Sectoral	High	90	Collective agreements
Denmark	8.1	11.6	1.45	1.66	3	National/sectoral	Inexistent	69	Collective agreements
United States	25.2	25.2	2.09	2.09	1	Enterprise	Inexistent	16	Minimum wage

^a Employee share with a hourly wage lower than two third of the median wage. In all cases the information relates to 1995. Values according to the European Structure of Earnings Survey (ESES) correspond to own elaboration. Results for the European Community Household Panel (ECHP) come from Salverda et al.(2001). The United States figure is from the Current Population Survey

^b D1 is the value of the upper limit of the first decile and D5 that of the fifth (D5 is therefore equal to the distribution median). The United States values are based in annual wages and they proceed from the Current Population Survey (OCDE, 1996) and the rest of countries are based in hourly wages.

^c Nickell and Layard (1999). Average of coordination of union and employer organizations. 1 indicates low coordination, 2 medium coordination and 3 a high degree of coordination.

^d EIRO (2002) and Traxler et al. (2001).

^e European Commission (2000).

^f Eurostat (2003). The implantation of the minimum wage in Ireland and The United Kingdom was in 2000 and 1999, respectively.

Table 2

Risk and Incidence of low pay by gender.

<i>Country</i>	<i>Male</i>		<i>Female</i>	
	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>
Spain	16,7	58,3	37,0	41,7
Italy	5,9	46,8	16,2	53,2
Ireland	12,2	39,7	27,7	60,3
Belgium	5,1	38,9	19,3	61,1
Denmark	8,2	52,6	11,9	47,4
United Kingdom	10,8	31,0	34,9	69,0

Table 3

Risk and Incidence of low pay by working time status.

<i>Country</i>	<i>Full-time</i>		<i>Part-time</i>	
	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>
Spain	20,6	91,5	48,7	8,5
Italy	6,3	65,1	42,1	34,9
Ireland	13,8	67,3	59,5	32,7
Belgium	6,6	63,7	29,9	36,3
Denmark	8,4	92,1	4,8	4,7
United Kingdom	12,2	48,3	57,3	51,7

Table 4

Risk and Incidence of low pay by working time status and gender.

<i>Country</i>	<i>Male</i>				<i>Female</i>			
	<i>Full-time</i>		<i>Part-time</i>		<i>Full-time</i>		<i>Part-time</i>	
	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>
Spain	16,3	55,9	43,4	2,4	35,4	35,7	51,3	6,0
Italy	4,2	32,5	51,4	14,2	11,9	32,6	37,4	20,6
Ireland	9,3	28,8	68,2	10,9	21,6	38,5	56,0	21,8
Belgium	4,2	31,5	31,2	7,4	14,7	32,2	29,5	28,9
Denmark	6,5	48,5	3,4	1,6	12,7	43,6	6,1	3,1
United Kingdom	8,4	22,8	53,8	8,2	20,8	25,5	58,0	43,5

Table 5

Risk and Incidence of low pay by age.

<i>Country</i>	<i>Less than 25 years</i>		<i>Between 25 and 54</i>		<i>More than 54 years</i>	
	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>	<i>Risk</i>	<i>Incidence</i>
Spain	65,1	27,8	18,2	68,6	8,8	3,6
Italy	27,6	32,7	6,7	63,0	6,8	4,2
Ireland	50,4	54,7	10,6	42,5	8,7	2,8
Belgium	30,4	30,2	7,1	66,5	6,4	3,2
Denmark	39,8	61,8	3,6	34,7	3,4	3,4
United Kingdom	40,0	29,8	16,2	58,8	23,8	11,4

Table 6

Risk and Incidence of low pay by education level.

Education level	Spain		Italy		Ireland		Belgium		Denmark		UK	
	Risk	Incid.	Risk	Incid..	Risk	Incid.	Risk	Incid.	Risk	Incid.	Risk	Incid.
Primary	21,2	30,4	10,9	18,1	21,0	7,1	13,2	17,4	4,4	4,9	32,5	41,6
Lower secondary	34,2	47,4	12,3	64,3	20,6	24,5	15,2	37,0	18,6	46,0	24,7	32,4
Upper secondary	15,6	13,7	4,5	17,2	22,5	61,4	8,9	39,0	6,9	45,3	14,5	21,1
Non-university Degree	14,4	5,6	5,1	0,2	8,1	6,1	3,7	5,9	3,0	2,0	8,2	2,7
Bachelor	5,5	2,8	0,4	0,2	2,7	0,9	0,7	0,7	1,7	1,4	5,1	2,1
Postgraduate	0,8	0,0	0,0	0,0	0,4	0,0	0,4%	0,0	0,8	0,4	1,9	0,1

Table 7

Risk and Incidence of low pay by tenure.

Country	Less than 2 years		Between 2 and 4 years		Between 5 and 9 years		More than 9 years	
	Risk	Incid.	Risk	Incid..	Risk	Incid.	Risk	Incid..
	Spain	42,0	54,9	30,4	16,9	16,1	17,3	4,9
Italy	15,2	38,2	10,9	25,5	5,9	20,8	2,7	15,5
Ireland	43,4	49,0	24,7	28,2	10,9	14,6	3,7	8,2
Belgium	15,8	51,8	9,7	18,0	5,1	17,8	1,9	12,4
Denmark	15,9	66,2	13,6	19,0	4,3	7,8	2,7	6,9
United Kingdom	32,5	49,5	21,3	24,9	15,8	16,3	11,1	9,2

Table 8

Low-wage status variance breakdown.

Source	Proportion of variance explained
Establishment	$R_C^2 - R_B^2$
Individual and job characteristics	$R_C^2 - R_A^2$
Establishment and individual and job characteristics	$R_A^2 + R_B^2 - R_C^2$
Unexplained	$1 - R_C^2$
Total	1

Note: R_A^2 , R_B^2 y R_C^2 are the values of the adjusted coefficients of determination of three different specifications of the wage equation (1). These specifications include as explanatory variables in turn a set of establishment dummies, observable individual and job characteristics and both set of attributes. Individual and job characteristics comprise sex, education, potential experience and its square, seniority in the firm and its square, type of contract, full-time/part-time job and occupation.

Table 9

Relative influence of labor demand factors in determining low-wage status.

Country	Adjusted coefficient of determination		
	R_A^2	R_B^2	R_C^2
Belgium	0.374	0.194	0.428
Denmark	0.131	0.442	0.486
Ireland	0.411	0.334	0.535
Italy	0.358	0.191	0.441
Spain	0.513	0.295	0.602
<i>Control variables</i>			
Individual and job characteristics	No	Yes	Yes
Establishment fixed-effects	Yes	No	Yes

Note: See Table 8.

Table 10

Low-wage status variance breakdown: Empirical results.

<i>Country</i>	<i>Share of wage variability explained by(%)</i>				<i>Total</i>
	<i>Establishment</i> $(R_C^2 - R_B^2)$	<i>Individual and job characteristics</i> $(R_C^2 - R_A^2)$	<i>Establishment and individual and job characteristics interaction</i> $(R_A^2 + R_B^2 - R_C^2)$	<i>Unexplained</i> $(1 - R_C^2)$	
Belgium	23.4	5.4	14.0	57.2	100
Denmark	4.4	35.5	8.7	51.4	100
Ireland	20.1	12.4	21.0	46.5	100
Italy	25.0	8.3	10.8	55.9	100
Spain	30.7	8.9	20.6	39.8	100

Note: See Table 8. The explained variance proportion has been normalized to one hundred.

Table 11
Determinants of low-wage employment. Probit estimation results. ESES 1995.

	<i>Denmark</i>		<i>Italy</i>		<i>Ireland</i>		<i>United kingdom</i>		<i>Spain</i>		<i>Belgium</i>	
	<i>Marginal effect</i>	<i>Signif.</i>	<i>Marginal effect</i>	<i>Signif.</i>	<i>Marginal effect</i>	<i>Signif.</i>	<i>Marginal effect</i>	<i>Signif.</i>	<i>Marginal effect</i>	<i>Signif.</i>	<i>Marginal effect</i>	<i>Signif.</i>
Male	-0.026	0.000	-0.012	0.000	-0.134	0.000	-0.076	0.000	-0.128	0.000	-0.030	0.000
Female	Reference		Reference		Reference		Reference		Reference		Reference	
Manager	Reference		Reference		Reference		Reference		Reference		Reference	
Professional	0.027	0.003	0.042	0.085	0.006	0.828	-0.035	0.000	0.013	0.341	0.005	0.444
Associate Professional	0.022	0.002	0.049	0.041	-0.011	0.618	0.058	0.000	0.065	0.000	0.028	0.000
Clerk	0.055	0.000	0.045	0.026	0.117	0.000	0.121	0.000	0.163	0.000	0.039	0.000
Service skilled worker	0.088	0.000	0.202	0.000	0.212	0.000	0.357	0.000	0.228	0.000	0.116	0.000
Industry skilled worker	0.010	0.212	0.153	0.000	0.173	0.000	0.121	0.000	0.182	0.000	0.100	0.000
Industry operator	0.015	0.066	0.138	0.000	0.188	0.000	0.220	0.000	0.169	0.000	0.111	0.000
skilled service skilled worker	0.039	0.001	0.292	0.000	0.358	0.000	0.391	0.000	0.331	0.000	0.192	0.000
Preprimary and primary	Reference		Reference		Reference		Reference		Reference		Reference	
Lower Secondary	0.001	0.742	-0.002	0.059	-0.042	0.000	-0.018	0.000	-0.011	0.001	-0.003	0.032
Upper secondary	-0.006	0.009	-0.011	0.000	-0.042	0.000	-0.037	0.000	-0.066	0.000	-0.014	0.000
Non-university Degree	-0.014	0.000	-0.010	0.007	-0.115	0.000	-0.039	0.000	-0.077	0.000	-0.016	0.000
Bachelor	-0.017	0.000	-0.011	0.000	-0.118	0.000	-0.045	0.000	-0.099	0.000	-0.018	0.000
Post graduate	-0.022	0.000	All=0		-0.111	0.000	-0.052	0.000	-0.096	0.001	-0.013	0.000
Part -Time	Reference		Reference		Reference		Reference		Reference		Reference	
Full-time	0.032	0.000	-0.198	0.000	-0.148	0.000	-0.109	0.000	-0.010	0.125	-0.016	0.000
Fixed-Term	Reference		Reference		Reference		Reference		Reference		Reference	
Indefinite duration	-0.010	0.077	-0.011	0.000	-0.027	0.120	-0.030	0.000	-0.056	0.000	-0.014	0.000
Apprentice	0.610	0.000	0.007	0.012	0.312	0.000	0.259	0.000	0.338	0.000	0.030	0.003
Tenure	-0.001	0.046	-0.002	0.000	-0.015	0.000	-0.011	0.000	-0.017	0.000	-0.003	0.000
Tenure*Tenure	0.000	0.876	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Experience	-0.003	0.000	-0.002	0.000	-0.018	0.000	-0.007	0.000	-0.011	0.000	-0.002	0.000
Experience*Experience	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Privately owned firm	0.012	0.071	-	-	0.002	0.951	0.047	0.000	0.043	0.000	0.002	0.344
Size <20	Reference		Reference		Reference		Reference		Reference		Reference	
Size 20-49	-0.003	0.011	-0.006	0.000	-0.080	0.000	-0.011	0.004	-0.035	0.000	-0.002	0.128
Size 50-99	-0.004	0.005	-0.009	0.000	-0.111	0.000	-0.015	0.000	-0.069	0.000	-0.008	0.000
Size 100-199	-0.005	0.018	-0.012	0.000	-0.113	0.000	-0.024	0.000	-0.082	0.000	-0.010	0.000
Size >199	-0.009	0.000	-0.017	0.000	-0.197	0.000	-0.068	0.000	-0.109	0.000	-0.021	0.000
Nace divisions 10-14	-0.011	0.413	-0.010	0.001	0.068	0.272	-0.004	0.871	-0.028	0.629	-0.002	0.833
Nace division 15	0.036	0.035	-0.011	0.000	0.166	0.000	0.038	0.038	0.072	0.357	0.001	0.743
Nace division 16	-0.014	0.193	-0.011	0.001	0.319	0.007	All=0		0.019	0.827	0.005	0.762
Nace division 17	0.021	0.123	-0.002	0.747	0.196	0.000	0.134	0.000	0.288	0.007	0.088	0.000
Nace division 18	0.099	0.000	0.021	0.031	0.377	0.000	0.345	0.000	0.402	0.001	0.193	0.000

Nace division 19	0.035	0.142	0.004	0.502	0.257	0.002	0.195	0.000	0.128	0.149	0.036	0.058
Nace division 20	0.002	0.833	-0.002	0.745	0.146	0.004	0.073	0.003	0.161	0.081	-0.004	0.506
Nace division 21	-0.005	0.634	-0.008	0.024	0.041	0.293	-0.014	0.404	0.050	0.515	-0.001	0.899
Nace division 22	-0.003	0.787	-0.008	0.002	-0.018	0.530	0.001	0.936	0.044	0.556	-0.007	0.067
Nace division 23	-0.002	0.856	-0.011	0.000	-0.056	0.126	-0.022	0.402	-0.068	0.161	-0.003	0.648
Nace division 24	0.000	0.973	-0.011	0.000	-0.008	0.800	-0.005	0.756	-0.023	0.697	-0.007	0.069
Nace division 25	-0.001	0.882	-0.008	0.042	0.103	0.009	0.048	0.015	0.032	0.658	-0.006	0.129
Nace division 26	-0.005	0.621	-0.010	0.003	0.053	0.160	0.046	0.025	-0.004	0.952	-0.008	0.037
Nace division 27	0.007	0.555	-0.011	0.000	0.064	0.322	-0.013	0.453	-0.046	0.404	0.002	0.794
Nace division 28	0.007	0.566	-0.009	0.021	0.079	0.028	0.028	0.119	-0.010	0.879	-0.006	0.064
Nace division 29	0.018	0.168	-0.010	0.001	0.117	0.006	-0.005	0.772	-0.003	0.966	0.002	0.726
Nace division 30	Reference		Reference		Reference		Reference		Reference		Reference	
Nace division 31	0.019	0.182	-0.008	0.025	0.110	0.014	0.075	0.001	0.030	0.680	0.008	0.459
Nace division 32	0.069	0.020	-0.010	0.002	0.124	0.039	0.049	0.020	0.014	0.856	-0.004	0.466
Nace division 33	0.017	0.303	-0.007	0.106	0.048	0.314	0.069	0.002	0.042	0.608	0.002	0.843
Nace division 34	0.006	0.632	-0.009	0.023	0.079	0.138	-0.039	0.007	0.006	0.933	-0.011	0.000
Nace division 35	0.001	0.920	-0.008	0.085	-0.021	0.736	-0.016	0.371	-0.014	0.828	-0.007	0.192
Nace division 36	0.011	0.358	-0.004	0.345	0.117	0.005	0.071	0.001	0.134	0.129	0.020	0.021
Nace division 37	0.035	0.090	-0.008	0.264	0.000	0.994	0.026	0.683	-0.006	0.935	0.051	0.038
Nace divisions 40-41	0.004	0.777	-0.014	0.000	-0.031	0.443	-0.058	0.000	-0.049	0.359	-0.007	0.175
Nace division 45	0.004	0.719	-0.010	0.001			0.022	0.211	-0.008	0.898	0.002	0.718
Nace division 50	0.024	0.075	-0.009	0.026	0.188	0.000	0.157	0.000	0.005	0.940	0.009	0.144
Nace division 51	0.016	0.176	-0.010	0.001	0.091	0.011	0.106	0.000	0.090	0.270	0.008	0.122
Nace division 52	0.080	0.000	-0.011	0.000	0.260	0.000	0.153	0.000	0.132	0.132	0.032	0.000
Nace division 55	-0.013	0.117	-0.010	0.001	0.354	0.000	0.319	0.000	0.051	0.495	0.082	0.000
Nace division 60	0.016	0.338	-0.011	0.000	-	-	0.063	0.002	0.007	0.919	0.017	0.012
Nace division 61	0.029	0.102	-0.008	0.161	-	-	0.082	0.027	-0.089	0.117	-0.008	0.215
Nace division 62	-0.021	0.000	All=0		-	-	-0.050	0.007	-0.016	0.820	-0.001	0.940
Nace division 63	0.015	0.239	-0.010	0.003	-	-	0.039	0.042	-0.019	0.753	0.005	0.402
Nace division 64	-0.018	0.011	-0.012	0.000	-	-	0.000	0.984	0.043	0.574	0.009	0.132
Nace divisions 65-67	-0.021	0.004	-0.017	0.000	-0.018	0.603	-0.022	0.108	-0.064	0.202	0.000	0.931
Nace division 70	-0.002	0.821	All=0		-	-	0.116	0.000	-0.015	0.812	0.000	0.980
Nace division 71	0.027	0.092	All=0		-	-	0.154	0.000	0.069	0.398	0.020	0.092
Nace division 72	0.007	0.592	-0.010	0.008	-	-	0.050	0.039	0.081	0.342	0.002	0.801
Nace divisions 73-74	0.007	0.499	-0.009	0.016	-	-	0.090	0.000	0.113	0.183	0.014	0.015
Lazio	-	-	Reference		-	-	-	-	-	-	-	-
Northwest	-	-	-0.002	0.395	-	-	-	-	-	-	-	-
Lombardy	-	-	-0.006	0.004	-	-	-	-	-	-	-	-
Northeast	-	-	-0.002	0.493	-	-	-	-	-	-	-	-
Emilia Romagna	-	-	-0.002	0.379	-	-	-	-	-	-	-	-
Center	-	-	0.004	0.184	-	-	-	-	-	-	-	-
Abruzzo Molise	-	-	0.013	0.001	-	-	-	-	-	-	-	-
Campania	-	-	0.019	0.000	-	-	-	-	-	-	-	-
South	-	-	0.021	0.000	-	-	-	-	-	-	-	-
Sicily	-	-	0.033	0.000	-	-	-	-	-	-	-	-

Sardinia	-	-	0.009	0.050	-	-	-	-	-	-	-	-
South East	-	-	-	-	-	-	Reference	-	-	-	-	-
North	-	-	-	-	-	-	0,122	0,000	-	-	-	-
Yorkshire-Humberside	-	-	-	-	-	-	0,096	0,000	-	-	-	-
East Midlands	-	-	-	-	-	-	0,094	0,000	-	-	-	-
East Anglia	-	-	-	-	-	-	0,075	0,000	-	-	-	-
South West	-	-	-	-	-	-	0,074	0,000	-	-	-	-
West Midland	-	-	-	-	-	-	0,095	0,000	-	-	-	-
North West	-	-	-	-	-	-	0,074	0,000	-	-	-	-
Wales	-	-	-	-	-	-	0,138	0,000	-	-	-	-
Scotland	-	-	-	-	-	-	0,082	0,000	-	-	-	-
Northwest	-	-	-	-	-	-	-	-	Reference	-	-	-
Northeast	-	-	-	-	-	-	-	-	-0,085	0,000	-	-
Madrid region	-	-	-	-	-	-	-	-	-0,058	0,000	-	-
Center	-	-	-	-	-	-	-	-	-0,004	0,483	-	-
East	-	-	-	-	-	-	-	-	-0,067	0,000	-	-
South	-	-	-	-	-	-	-	-	-0,026	0,000	-	-
Canary Islands	-	-	-	-	-	-	-	-	0,044	0,000	-	-
Brussels Region	-	-	-	-	-	-	-	-	-	-	Reference	-
Flanders	-	-	-	-	-	-	-	-	-	-	-0,001	0,513
Wallonia	-	-	-	-	-	-	-	-	-	-	-0,001	0,641
Number of observations	548073		94514		35459		80347		169031		81364	
Pseudo R2	0.4736		0.3782		0.4216		0.3904		0.3914		0.4007	

Table 12. Determinants of low-wage employment. Probit estimation results by sex. ESES. 1995.

	Denmark						Italy						Ireland					
	Males			Females			Males			Females			Males			Females		
	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.
Manager	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	Reference
Professional	0.008	0.006	0.113	0.090	0.029	0.000	0.092	0.122	0.082	0.973	0.002	0.000	0.036	0.027	0.076	0.152	0.093	0.077
Associate professional	0.009	0.006	0.055	0.092	0.022	0.000	0.070	0.092	0.098	0.981	0.002	0.000	0.046	0.021	0.003	0.082	0.082	0.289
Clerk	0.029	0.011	0.000	0.136	0.026	0.000	0.071	0.091	0.090	0.920	0.023	0.000	0.208	0.043	0.000	0.319	0.063	0.000
Services skilled worker	0.024	0.013	0.008	0.180	0.040	0.000	0.214	0.206	0.012	0.987	0.001	0.000	0.162	0.030	0.000	0.408	0.063	0.000
Industry skilled worker	0.002	0.005	0.667	0.050	0.025	0.008	0.124	0.101	0.005	0.998	0.001	0.000	0.112	0.024	0.000	0.473	0.067	0.000
Industry operator	0.008	0.006	0.145	0.053	0.021	0.002	0.124	0.106	0.008	0.996	0.001	0.000	0.122	0.021	0.000	0.422	0.064	0.000
Non-skilled service worker	0.014	0.009	0.059	0.179	0.039	0.000	0.312	0.242	0.003	0.992	0.001	0.000	0.246	0.038	0.000	0.596	0.054	0.000
Preprimary and primary	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Lower secondary	0.006	0.001	0.000	-0.008	0.003	0.006	-0.002	0.001	0.011	0.001	0.004	0.888	-0.014	0.004	0.001	-0.067	0.026	0.015
Upper secondary	-0.001	0.001	0.429	-0.011	0.004	0.003	-0.006	0.001	0.000	-0.014	0.005	0.008	-0.034	0.005	0.000	-0.149	0.032	0.000
Non-universtiy degree	-0.003	0.001	0.044	-0.024	0.003	0.000	-	-	-	-0.020	0.012	0.262	-0.036	0.003	0.000	-0.222	0.019	0.000
University degree	-0.006	0.001	0.000	-0.024	0.003	0.000	-0.005	0.001	0.000	-0.027	0.006	0.007	-0.033	0.002	0.000	-0.244	0.015	0.000
Post graduate	-0.008	0.001	0.000	-0.035	0.002	0.000	-	-	-	-	-	-	-0.029	0.002	0.000	-	-	-
Part-time	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Full-time	0.014	0.001	0.000	0.053	0.006	0.000	-0.246	0.018	0.000	-0.178	0.010	0.000	-0.077	0.015	0.000	-0.174	0.021	0.000
Fixed-term	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Indefinite duration	-0.008	0.003	0.001	-0.014	0.015	0.311	-0.002	0.002	0.101	-0.018	0.008	0.009	-0.020	0.007	0.001	-0.062	0.030	0.029
Apprentice	0.455	0.053	0.000	0.586	0.087	0.000	0.008	0.003	0.000	0.057	0.017	0.000	0.170	0.034	0.000	0.577	0.064	0.000
Tenure	-0.001	0.000	0.000	0.000	0.001	0.474	-0.001	0.000	0.000	-0.004	0.001	0.000	-0.005	0.000	0.000	-0.033	0.003	0.000
Tenure*Tenure	0.000	0.000	0.000	0.000	0.000	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
Experience	-0.002	0.000	0.000	-0.003	0.000	0.000	-0.001	0.000	0.000	-0.003	0.001	0.000	-0.008	0.000	0.000	-0.025	0.002	0.000
Experience*Experience	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
Privately owned firm	0.002	0.005	0.684	0.013	0.009	0.216	-	-	-	-	-	-	-0.052	0.015	0.000	0.121	0.054	0.069
Size <20	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Size 20-49	0.003	0.001	0.001	0.004	0.002	0.099	0.000	0.001	0.858	-0.002	0.003	0.525	-0.011	0.004	0.003	-0.041	0.036	0.258
Size 50-99	0.004	0.001	0.001	0.003	0.003	0.217	0.000	0.001	0.659	-0.004	0.004	0.235	-0.015	0.003	0.000	-0.074	0.034	0.040
Size 100-199	0.006	0.002	0.000	0.006	0.004	0.090	0.000	0.001	0.536	-0.008	0.004	0.035	-0.015	0.003	0.000	-0.105	0.032	0.003
Size >199	0.006	0.001	0.000	0.004	0.002	0.115	-0.001	0.001	0.069	-0.006	0.004	0.113	-0.017	0.004	0.000	-0.141	0.036	0.000
Firm agreement	-0.006	0.002	0.048	0.000	0.003	0.879	-0.001	0.001	0.063	-0.006	0.003	0.066	0.002	0.002	0.334	-0.019	0.013	0.155
Low-pay share	0.128	0.008	0.000	0.372	0.014	0.000	0.063	0.006	0.000	0.297	0.014	0.000	0.233	0.014	0.000	1.246	0.035	0.000
Nace divisions 10-14	-0.006	0.003	0.169	0.004	0.030	0.896	-0.003	0.003	0.438	0.022	0.027	0.318	-0.002	0.013	0.877	0.380	0.138	0.006
Nace division 15	0.015	0.008	0.009	0.013	0.020	0.473	-0.005	0.001	0.113	-0.013	0.010	0.264	-0.005	0.009	0.613	0.084	0.058	0.124
Nace division 16	-0.009	0.001	0.003	-0.007	0.018	0.739	-0.003	0.003	0.474	-0.029	0.005	0.028	-0.028	0.002	0.000	0.254	0.086	0.002
Nace division 17	-0.001	0.004	0.760	0.034	0.026	0.104	-0.003	0.003	0.421	0.004	0.014	0.780	-0.012	0.007	0.158	0.091	0.059	0.099
Nace division 18	0.010	0.009	0.158	0.045	0.028	0.040	-0.005	0.001	0.073	-0.002	0.012	0.873	-0.018	0.005	0.031	0.012	0.049	0.797
Nace division 19	0.011	0.018	0.428	0.040	0.036	0.154	-0.003	0.002	0.367	-0.004	0.012	0.727	0.010	0.020	0.552	-0.039	0.072	0.607
Nace division 20	-0.002	0.003	0.560	0.028	0.026	0.195	-0.002	0.004	0.737	-0.001	0.013	0.952	0.005	0.011	0.653	0.164	0.104	0.089
Nace division 21	-0.003	0.003	0.411	-0.002	0.016	0.886	-0.004	0.002	0.207	0.010	0.016	0.507	-0.011	0.008	0.237	-0.002	0.078	0.981

Nace division 22	-0.002	0.003	0.619	-0.008	0.013	0,570	-0,004	0,002	0,325	-0,008	0,011	0,535	-0,005	0,010	0,665	0,012	0,054	0,816
Nace division 23	0.001	0.005	0.751	-0.004	0.025	0,883	-0,004	0,002	0,279	-0,011	0,023	0,696	-0,025	0,003	0,000	-	-	-
Nace division 24	-0.001	0.004	0.888	0.003	0.017	0,862	-0,004	0,002	0,294	-0,004	0,012	0,769	-0,013	0,007	0,136	0,059	0,055	0,259
Nace division 25	-0.002	0.003	0.508	0.006	0.018	0,735	-0,003	0,003	0,519	0,000	0,013	0,976	-0,015	0,006	0,047	0,148	0,065	0,014
Nace division 26	-0.005	0.002	0.077	0.009	0.021	0,646	-0,003	0,003	0,460	0,000	0,014	0,980	-0,010	0,008	0,295	0,268	0,088	0,001
Nace division 27	-0.002	0.004	0.528	0.011	0.021	0,568	-0,004	0,002	0,194	0,024	0,030	0,334	-0,005	0,012	0,708	0,135	0,144	0,314
Nace division 28	-0.004	0.002	0.178	0.012	0.020	0,528	-0,003	0,003	0,442	0,000	0,013	0,997	-0,003	0,009	0,724	0,179	0,069	0,005
Nace division 29	-0.001	0.003	0.807	0.018	0.021	0,337	-0,003	0,003	0,426	0,010	0,017	0,502	-0,011	0,007	0,218	0,251	0,071	0,000
Nace division 30	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Nace division 31	0.001	0.004	0.802	0.020	0.023	0,318	-0,003	0,002	0,369	-0,004	0,012	0,759	-0,010	0,008	0,256	0,003	0,050	0,958
Nace division 32	0.003	0.005	0.427	0.056	0.036	0,038	-0,004	0,002	0,221	0,009	0,017	0,586	-0,011	0,010	0,352	0,013	0,057	0,811
Nace division 33	0.000	0.004	0.938	0.022	0.026	0,312	-0,004	0,001	0,183	0,000	0,014	0,978	-0,006	0,009	0,565	0,023	0,056	0,672
Nace division 34	-0.004	0.003	0.244	0.039	0.034	0,139	-0,003	0,003	0,526	-0,010	0,018	0,621	-0,001	0,011	0,933	0,153	0,121	0,172
Nace division 35	-0.004	0.004	0.346	0.024	0.024	0,230	-0,001	0,004	0,800	0,032	0,039	0,290	-0,006	0,012	0,684	0,122	0,161	0,419
Nace division 36	-0.001	0.003	0.794	0.014	0.020	0,433	-0,001	0,004	0,784	0,000	0,013	0,979	0,000	0,010	0,973	0,036	0,056	0,504
Nace division 37	0.021	0.028	0.276	0.030	0.047	0,435	0,001	0,007	0,890	0,008	0,030	0,769	-	-	-	0,466	0,051	0,000
Nace divisions 40-41	-0.005	0.004	0.367	0.011	0.024	0,631	-0,006	0,001	0,004	-0,024	0,008	0,087	-0,014	0,009	0,221	0,085	0,111	0,417
Nace division 45	-0.005	0.002	0.063	0.015	0.021	0,410	-0,003	0,003	0,460	0,000	0,018	0,993	-	-	-	-	-	-
Nace division 50	-0.004	0.002	0.156	0.000	0.016	0,991	-0,002	0,003	0,558	-0,009	0,017	0,644	0,005	0,012	0,630	0,153	0,080	0,037
Nace division 51	0.000	0.003	0.965	0.007	0.017	0,687	-0,004	0,002	0,270	-0,018	0,009	0,149	0,000	0,010	0,976	0,151	0,059	0,006
Nace division 52	-0.006	0.002	0.025	-0.005	0.015	0,766	-0,004	0,002	0,195	-0,024	0,007	0,025	-0,011	0,007	0,211	-0,026	0,048	0,595
Nace division 55	-0.006	0.002	0.088	-0.027	0.007	0,020	-0,003	0,003	0,393	-0,012	0,010	0,315	-0,021	0,005	0,004	-0,038	0,048	0,436
Nace division 60	-0.003	0.006	0.663	0.023	0.025	0,273	-0,005	0,002	0,136	-0,006	0,018	0,763	-	-	-	-	-	-
Nace division 61	0.006	0.009	0.441	0.028	0.031	0,258	-0,001	0,006	0,867	-0,008	0,033	0,831	-	-	-	-	-	-
Nace division 62	-0.007	0.002	0.009	-0.036	0.003	0,000	-	-	-	-	-	-	-	-	-	-	-	-
Nace division 63	-0.004	0.003	0.189	-0.001	0.016	0,927	-0,005	0,001	0,014	0,008	0,020	0,644	-	-	-	-	-	-
Nace division 64	-0.010	0.001	0.000	-0.019	0.011	0,190	-0,005	0,001	0,043	-	-	-	-	-	-	-	-	-
Nace divisions 65-67	-0.008	0.002	0.001	-0.038	0.009	0,002	-	-	-	-0,026	0,007	0,016	-0,006	0,010	0,581	0,062	0,064	0,310
Nace division 70	0.006	0.005	0.168	-0.006	0.014	0,688	-	-	-	-	-	-	-	-	-	-	-	-
Nace division 71	0.003	0.005	0.415	-0.006	0.020	0,795	-	-	-	-	-	-	-	-	-	-	-	-
Nace division 72	0.005	0.007	0.367	0.001	0.017	0,936	0,000	0,007	0,945	-0,017	0,010	0,199	-	-	-	-	-	-
Nace divisions 73-74	0.002	0.004	0.652	-0.006	0.014	0,698	-0,005	0,001	0,049	-0,030	0,005	0,000	-	-	-	-	-	-
Lazio	-	-	-	-	-	-	Reference	-	-	Reference	-	-	-	-	-	-	-	-
Northwest	-	-	-	-	-	-	-0,001	0,001	0,466	-0,004	0,008	0,634	-	-	-	-	-	-
Lombardy	-	-	-	-	-	-	-0,002	0,001	0,091	-0,004	0,008	0,621	-	-	-	-	-	-
Northeast	-	-	-	-	-	-	-0,001	0,001	0,171	0,003	0,008	0,696	-	-	-	-	-	-
Emilia Romagna	-	-	-	-	-	-	-0,002	0,001	0,131	0,003	0,009	0,742	-	-	-	-	-	-
Center	-	-	-	-	-	-	0,001	0,001	0,281	0,004	0,009	0,600	-	-	-	-	-	-
Abruzzo Molise	-	-	-	-	-	-	0,000	0,001	0,792	0,012	0,011	0,232	-	-	-	-	-	-
Campania	-	-	-	-	-	-	0,003	0,002	0,039	0,021	0,014	0,082	-	-	-	-	-	-
South	-	-	-	-	-	-	0,001	0,001	0,592	0,010	0,011	0,326	-	-	-	-	-	-
Sicily	-	-	-	-	-	-	0,003	0,002	0,014	-0,003	0,010	0,810	-	-	-	-	-	-
Sardinia	-	-	-	-	-	-	0,003	0,002	0,070	0,011	0,014	0,388	-	-	-	-	-	-

Table 12 (contin.). Determinants of low-wage employment. Probit estimation results by sex. ESES. 1995.

	United Kingdom						Spain						Belgium					
	Males			Females			Males			Females			Males			Females		
	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.	Marginal effect	Standard error	Signif.
Manager	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	Reference
Professional	-0.017	0.003	0.000	-0.082	0.024	0.003	0.081	0.020	0.000	0.138	0.076	0.057	0.007	0.006	0.073	0.037	0.042	0.300
Associate professional	0.017	0.006	0.000	0.148	0.023	0.000	0.116	0.019	0.000	0.234	0.070	0.001	0.011	0.005	0.003	0.045	0.040	0.185
Clerk	0.100	0.009	0.000	0.196	0.014	0.000	0.218	0.026	0.000	0.390	0.061	0.000	0.017	0.007	0.000	0.067	0.031	0.022
Services skilled worker	0.248	0.016	0.000	0.479	0.017	0.000	0.207	0.026	0.000	0.410	0.064	0.000	0.036	0.015	0.000	0.134	0.060	0.002
Industry skilled worker	0.047	0.006	0.000	0.382	0.024	0.000	0.164	0.018	0.000	0.489	0.058	0.000	0.021	0.008	0.000	0.202	0.076	0.000
Industry operator	0.109	0.008	0.000	0.436	0.021	0.000	0.155	0.017	0.000	0.478	0.061	0.000	0.024	0.010	0.000	0.229	0.081	0.000
Non-skilled service worker	0.242	0.014	0.000	0.553	0.017	0.000	0.375	0.031	0.000	0.591	0.050	0.000	0.048	0.017	0.000	0.291	0.082	0.000
Preprimary and primary	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Lower secondary	-0.006	0.002	0.001	-0.041	0.007	0.000	-0.010	0.001	0.000	-0.041	0.011	0.000	-0.002	0.001	0.008	-0.023	0.005	0.000
Upper secondary	-0.021	0.002	0.000	-0.048	0.008	0.000	-0.018	0.001	0.000	-0.123	0.012	0.000	-0.005	0.001	0.000	-0.057	0.007	0.000
Non-university degree	-0.015	0.002	0.000	-0.105	0.011	0.000	-0.021	0.001	0.000	-0.108	0.015	0.000	-0.005	0.001	0.000	-0.073	0.005	0.000
University degree	-0.020	0.002	0.000	-0.124	0.012	0.000	-0.029	0.001	0.000	-0.198	0.013	0.000	-0.006	0.001	0.000	-0.071	0.003	0.000
Post graduate	-0.025	0.002	0.000	-0.110	0.028	0.002	-0.018	0.018	0.519	-	-	-	-	-	-	-0.055	0.003	0.000
Part-time	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Full-time	-0.068	0.007	0.000	-0.174	0.007	0.000	0.001	0.004	0.833	0.073	0.012	0.000	-0.012	0.003	0.000	-0.016	0.006	0.002
Fixed-term	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Indefinite duration	-0.009	0.003	0.000	-0.088	0.011	0.000	-0.021	0.002	0.000	-0.084	0.011	0.000	-0.007	0.002	0.000	-0.073	0.016	0.000
Apprentice	0.176	0.019	0.000	0.317	0.035	0.000	0.113	0.030	0.000	0.177	0.059	0.002	0.013	0.008	0.009	0.034	0.054	0.449
Tenure	-0.006	0.000	0.000	-0.020	0.002	0.000	-0.006	0.000	0.000	-0.030	0.002	0.000	-0.001	0.000	0.000	-0.008	0.001	0.000
Tenure*Tenure	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Experience	-0.004	0.000	0.000	-0.011	0.001	0.000	-0.005	0.000	0.000	-0.021	0.001	0.000	-0.001	0.000	0.000	-0.011	0.001	0.000
Experience*Experience	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Privately owned firm	0.024	0.002	0.000	0.100	0.010	0.000	-0.005	0.003	0.113	0.027	0.018	0.140	-0.001	0.001	0.339	-0.003	0.007	0.704
Size <20	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Size 20-49	-0.007	0.002	0.004	-0.015	0.012	0.211	-0.005	0.001	0.000	-0.021	0.010	0.040	0.000	0.000	0.548	-0.002	0.005	0.641
Size 50-99	-0.011	0.002	0.000	-0.020	0.013	0.121	-0.008	0.001	0.000	-0.041	0.011	0.000	0.000	0.001	0.932	-0.020	0.005	0.000
Size 100-199	-0.015	0.002	0.000	-0.037	0.013	0.006	-0.011	0.001	0.000	-0.069	0.012	0.000	-0.001	0.001	0.026	-0.013	0.005	0.027
Size >199	-0.038	0.003	0.000	-0.133	0.012	0.000	-0.012	0.002	0.000	-0.088	0.011	0.000	-0.003	0.001	0.000	-0.036	0.005	0.000
Firm agreement	-	-	-	-	-	-	0.006	0.002	0.000	0.004	0.011	0.753	-0.002	0.001	0.002	0.005	0.005	0.382
Female share	-	-	-	-	-	-	0.259	0.008	0.000	1.236	0.018	0.000	0.048	0.005	0.000	0.379	0.019	0.000
Nace divisions 10-14	0.006	0.018	0.724	0.079	0.082	0.303	-0.013	0.011	0.375	-0.197	0.072	0.069	0.000	0.005	0.935	0.057	0.032	0.022
Nace division 15	0.043	0.024	0.013	0.032	0.051	0.518	-0.009	0.013	0.540	-0.194	0.084	0.078	-0.002	0.003	0.605	0.073	0.023	0.000
Nace division 16	-	-	-	-	-	-	-0.026	0.003	0.003	-0.198	0.076	0.084	-0.002	0.004	0.702	0.095	0.063	0.038
Nace division 17	0.087	0.035	0.000	0.189	0.065	0.001	-0.002	0.017	0.920	-0.066	0.121	0.609	-0.001	0.004	0.818	0.278	0.046	0.000
Nace division 18	0.290	0.074	0.000	0.334	0.065	0.000	-0.010	0.013	0.511	-0.106	0.111	0.393	-0.004	0.001	0.147	0.151	0.039	0.000
Nace division 19	0.128	0.052	0.000	0.248	0.078	0.000	-0.007	0.014	0.639	-0.201	0.071	0.054	-0.003	0.002	0.488	0.140	0.065	0.002

Nace division 20	0.064	0.032	0.003	0.150	0.091	0.068	-0.004	0.016	0.834	-0.188	0.076	0.083	-0.001	0.004	0.772	0.140	0.054	0.000
Nace division 21	0.004	0.014	0.771	-0.060	0.047	0.251	0.003	0.020	0.878	-0.118	0.105	0.333	-0.001	0.004	0.841	0.125	0.042	0.000
Nace division 22	0.014	0.017	0.334	-0.026	0.046	0.588	0.004	0.020	0.832	-0.162	0.089	0.154	-0.003	0.002	0.433	0.131	0.046	0.000
Nace division 23	-0.012	0.014	0.520	0.028	0.096	0.765	-0.021	0.008	0.158	-0.216	0.071	0.066	-0.002	0.003	0.640	0.312	0.148	0.001
Nace division 24	-0.003	0.011	0.793	0.013	0.052	0.797	-0.005	0.016	0.782	-0.199	0.076	0.062	-0.003	0.002	0.392	0.104	0.026	0.000
Nace division 25	0.035	0.022	0.036	0.093	0.060	0.095	-0.009	0.013	0.555	-0.199	0.071	0.058	-0.002	0.003	0.716	0.072	0.035	0.006
Nace division 26	0.039	0.024	0.027	0.095	0.064	0.110	-0.008	0.014	0.600	-0.148	0.093	0.202	-0.003	0.002	0.413	0.159	0.065	0.000
Nace division 27	0.003	0.014	0.795	0.031	0.068	0.642	-0.010	0.013	0.520	-0.158	0.093	0.186	0.001	0.007	0.825	0.268	0.065	0.000
Nace division 28	0.022	0.018	0.129	0.116	0.061	0.037	-0.008	0.014	0.599	-0.200	0.071	0.057	-0.002	0.003	0.657	0.124	0.049	0.000
Nace division 29	0.005	0.013	0.665	0.012	0.051	0.812	-0.001	0.017	0.965	-0.219	0.061	0.028	0.000	0.005	0.923	0.189	0.047	0.000
Nace division 30	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-	Reference	-	-
Nace division 31	0.048	0.026	0.011	0.132	0.062	0.019	-0.007	0.014	0.673	-0.213	0.066	0.037	0.000	0.005	0.985	0.122	0.068	0.010
Nace division 32	0.042	0.026	0.023	0.042	0.057	0.441	-0.015	0.012	0.378	-0.218	0.061	0.032	-0.003	0.002	0.447	0.119	0.046	0.000
Nace division 33	0.045	0.028	0.021	0.105	0.063	0.070	0.012	0.027	0.619	-0.205	0.069	0.053	-0.001	0.004	0.756	0.082	0.041	0.007
Nace division 34	-0.012	0.008	0.267	-0.095	0.043	0.072	-0.007	0.014	0.641	-0.213	0.064	0.036	-0.003	0.002	0.295	0.039	0.036	0.182
Nace division 35	-0.002	0.013	0.865	0.037	0.071	0.585	-0.008	0.014	0.622	-0.243	0.048	0.014	-0.003	0.002	0.456	0.176	0.087	0.002
Nace division 36	0.059	0.029	0.003	0.093	0.061	0.102	-0.002	0.017	0.884	-0.151	0.093	0.191	-0.001	0.004	0.750	0.148	0.054	0.000
Nace division 37	0.006	0.049	0.887	0.208	0.223	0.297	-0.015	0.011	0.325	-0.227	0.071	0.079	-0.004	0.001	0.224	0.058	0.045	0.091
Nace divisions 40-41	-0.023	0.005	0.017	-0.146	0.034	0.004	-0.016	0.010	0.241	-0.143	0.096	0.229	-0.002	0.003	0.620	0.008	0.040	0.826
Nace division 45	0.029	0.019	0.059	0.079	0.058	0.141	-0.018	0.010	0.187	-0.194	0.074	0.067	0.000	0.005	0.990	0.289	0.057	0.000
Nace division 50	0.131	0.041	0.000	0.228	0.064	0.000	0.005	0.020	0.794	-0.096	0.113	0.447	0.000	0.005	0.976	0.198	0.045	0.000
Nace division 51	0.083	0.031	0.000	0.166	0.059	0.002	-0.009	0.013	0.548	-0.171	0.088	0.129	0.001	0.006	0.886	0.133	0.028	0.000
Nace division 52	0.099	0.034	0.000	0.262	0.056	0.000	-0.018	0.008	0.150	-0.209	0.082	0.056	-0.003	0.002	0.268	0.096	0.025	0.000
Nace division 55	0.254	0.059	0.000	0.432	0.058	0.000	-0.015	0.010	0.273	-0.223	0.077	0.037	-0.003	0.001	0.235	0.070	0.025	0.000
Nace division 60	0.064	0.028	0.001	0.126	0.063	0.029	-0.006	0.015	0.728	-0.146	0.094	0.208	0.002	0.006	0.789	0.051	0.036	0.078
Nace division 61	0.100	0.057	0.004	0.079	0.104	0.411	-	-	-	-0.079	0.183	0.692	-0.001	0.004	0.793	0.068	0.062	0.146
Nace division 62	0.007	0.020	0.682	-0.189	0.024	0.001	-0.020	0.007	0.096	-0.174	0.085	0.132	0.006	0.011	0.438	-0.020	0.045	0.720
Nace division 63	0.030	0.021	0.069	0.104	0.060	0.058	-0.013	0.011	0.352	-0.204	0.069	0.051	-0.001	0.004	0.828	0.116	0.037	0.000
Nace division 64	0.030	0.022	0.073	-0.075	0.042	0.117	-0.015	0.010	0.296	-0.162	0.089	0.156	0.001	0.006	0.803	0.144	0.038	0.000
Nace divisions 65-67	0.016	0.016	0.251	-0.073	0.039	0.089	-0.007	0.015	0.689	-0.211	0.078	0.049	-0.002	0.004	0.672	0.140	0.033	0.000
Nace division 70	0.100	0.041	0.000	0.191	0.064	0.001	-0.017	0.009	0.200	-0.190	0.077	0.087	-0.003	0.002	0.329	0.149	0.062	0.000
Nace division 71	0.133	0.046	0.000	0.245	0.075	0.000	-0.009	0.014	0.572	-0.214	0.067	0.051	0.003	0.008	0.650	0.102	0.074	0.053
Nace division 72	0.041	0.031	0.063	0.086	0.067	0.171	-0.003	0.018	0.863	-0.166	0.086	0.146	-0.001	0.004	0.802	0.097	0.054	0.012
Nace divisions 73-74	0.109	0.035	0.000	0.100	0.053	0.044	-0.015	0.010	0.290	-0.217	0.072	0.038	-0.003	0.002	0.359	0.048	0.018	0.001
South East	Reference	-	-	Reference	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North	0.049	0.006	0.000	0.260	0.017	0.000	-	-	-	-	-	-	-	-	-	-	-	-
Yorkshire-Humberside	0.040	0.004	0.000	0.205	0.013	0.000	-	-	-	-	-	-	-	-	-	-	-	-
East Midlands	0.033	0.004	0.000	0.215	0.014	0.000	-	-	-	-	-	-	-	-	-	-	-	-
East Anglia	0.024	0.006	0.000	0.181	0.018	0.000	-	-	-	-	-	-	-	-	-	-	-	-
South West	0.032	0.005	0.000	0.159	0.014	0.000	-	-	-	-	-	-	-	-	-	-	-	-
West Midland	0.037	0.004	0.000	0.201	0.012	0.000	-	-	-	-	-	-	-	-	-	-	-	-
North West	0.031	0.004	0.000	0.163	0.012	0.000	-	-	-	-	-	-	-	-	-	-	-	-
Wales	0.066	0.008	0.000	0.261	0.019	0.000	-	-	-	-	-	-	-	-	-	-	-	-

Scotland	0.029	0.004	0.000	0.189	0,013	0,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Northwest	-	-	-	-	-	-	Reference	-	-	Reference	-	-	-	-	-	-	-	-	-
Northeast	-	-	-	-	-	-	-0,013	0,001	0,000	-0,069	0,012	0,000	-	-	-	-	-	-	-
Madrid region	-	-	-	-	-	-	-0,010	0,002	0,000	0,001	0,015	0,930	-	-	-	-	-	-	-
Center	-	-	-	-	-	-	-0,007	0,001	0,000	-0,026	0,014	0,081	-	-	-	-	-	-	-
East	-	-	-	-	-	-	-0,010	0,001	0,000	-0,038	0,012	0,002	-	-	-	-	-	-	-
Sout	-	-	-	-	-	-	-0,011	0,001	0,000	-0,052	0,015	0,001	-	-	-	-	-	-	-
Canary Islands	-	-	-	-	-	-	-0,006	0,002	0,003	-0,051	0,018	0,006	-	-	-	-	-	-	-
Brussels Region	-	-	-	-	-	-	-	-	-	-	-	-	Reference	-	-	Reference	-	-	-
Flanders	-	-	-	-	-	-	-	-	-	-	-	-	-0,003	0,001	0,000	0,006	0,005	0,304	-
Wallonia	-	-	-	-	-	-	-	-	-	-	-	-	-0,001	0,001	0,055	0,012	0,008	0,146	-

Table 13: Determinants of Firm-level Probability of Having More than One-Fifth of Employees Low Paid, ESES 1995

	Marginal Effect				
	Belgium	Denmark	Ireland	Italy	Spain
Nace10			0.1117		-0.0949
Nace11		0.0587		-0.0895	0.2752
Nace13				0.2076	-0.0885
Nace14	-0.1501	-0.1517	-0.0182	0.0715	0.1896
Nace15	-0.1237	0.0797	0.2102**	0.0553	0.3568
Nace16	-0.1440		0.1874	0.0189	0.3376*
Nace17	-0.0452	0.1266	0.3375**	0.3116**	0.4740**
Nace18	0.1746	0.2696*	0.5029**	0.6328**	0.6178**
Nace19	-0.0744	0.3269*	0.3872**	0.4819**	0.3573**
Nace20	-0.1419	-0.0633	0.1805*	0.3379**	0.4271**
Nace21	-0.1343	-0.0253	0.1385	0.0960	0.2307*
Nace22	-0.1777*	0.0887	-0.0225	0.0264	0.2854**
Nace23				-0.0554	-0.0878
Nace24	-0.1686	-0.0206	-0.0964	-0.0093	0.0762
Nace25		-0.0495	0.1702**	0.1441**	0.2903**
Nace26	-0.1703	-0.0856		0.0736	0.1533
Nace27	-0.1705	0.0960	0.1725	-0.0062	-0.0228
Nace28	-0.1546	-0.0002	0.1994**	0.1293*	0.1685
Nace29	-0.1448	0.0172	0.1000	0.0693	0.0487
Nace30			reference		
Nace31	-0.1447	0.1028	0.1536*	0.0987	0.2093*
Nace32	-0.1558	-0.0262	0.1721*	-0.0508	0.2157*
Nace33	-0.1334	0.0537	-0.0065	0.0751	0.1886
Nace34	-0.1481	0.0259	0.0691	0.2130**	0.1123
Nace35	-0.1557	0.0488		0.0269	0.2035
Nace36	-0.1226	0.0665	0.2761**	0.2512**	0.3627**
Nace37	-0.0784			0.1742	0.0654
Nace40	-0.1722	-0.1326		-0.1179**	0.0574
Nace41	-0.1494				0.1966
Nace45	-0.1562	0.1666		0.0833	0.2090*
Nace50	-0.1255	0.2845*	0.3212**	0.2848**	0.1335
Nace51	-0.1467	0.0947	0.0917	0.0290	0.3483**
Nace52	0.0951	0.5252**	0.5319**	0.1136	0.5341**
Nace55	0.3519	0.1627	0.8887**	0.2619**	0.4616**
Nace60	-0.0755	-0.0452		-0.0571	0.1600
Nace61		0.0527		0.1000	
Nace62	-0.1516				0.3131**
Nace63	-0.1300	0.0618		0.0009	0.1723
Nace64	-0.0755				0.3619**
Nace65	-0.1883*	-0.1693**		-0.1304**	-0.2554**
Nace66		-0.1552*			-0.0870
Nace67	-0.1379	-0.0995			0.0611
Nace70	-0.0352	-0.0975			0.2424*
Nace71	-0.0786	0.1243			0.3096**
Nace72	-0.1633	-0.1616*		-0.0356	0.2638*
Nace73	-0.1408	0.0834			
Nace74	-0.1189	0.0426		0.2504**	0.4085**
Firm pay agreement	-0.107**	0.1601**	0.1524**	-0.1249**	-0.1568**
Other pay agreement				0.0490**	0.0039
Firm size	-0.002**	-0.00002**	-0.0033**	-0.0032**	-0.0176**
State Owned	-0.140**		-0.2723**		-0.134**
Pseudo R ²	0.1736	0.1508	0.2057	0.1704	0.1589
N firms	4197	13390	2507	7485	17905

Table 14: Determinants of Firm-level Probability of Having More than One -Fifth of Employees Low Paid

	Controlling for Composition of Workforce, ESES 1995				
	Marginal Effect				
	Belgium	Denmark	Ireland	Italy	Spain
Nace10			0.1779		0.0372
Nace11		-0.0564		-0.0858	0.1375
Nace13				0.2979	-0.0004
Nace14	-0.1143	-0.1148	0.0909	0.0979	0.2893**
Nace15	-0.0969	-0.0268	0.0783	0.0270	0.3558**
Nace16	-0.1267		0.2157	-0.0618	0.3406*
Nace17	0.0433	0.0898	0.2495**	0.2257**	0.4569**
Nace18	0.2185	0.2683*	0.3597**	0.5013**	0.5675**
Nace19	-0.0237	0.3076*	0.2302	0.3925**	0.2978**
Nace20	-0.0981	-0.0563	0.2395**	0.2922**	0.4376**
Nace21	-0.0821	-0.0426	-0.0208	0.0724	0.2615*
Nace22	-0.1579	0.0477	-0.1483*	0.0088	0.2893**
Nace23				-0.0433	-0.0530
Nace24	-0.1318	-0.0378	-0.1517*	-0.0079	0.1053
Nace25		-0.0745	0.0419	0.1169	0.2918**
Nace26	-0.1242	-0.0394		0.0775	0.2185
Nace27	-0.1331	0.0938	0.3241*	-0.0016	0.0436
Nace28	-0.1340	-0.0301	0.1655*	0.0996	0.2002
Nace29	-0.1210	-0.0146	0.0203	0.0487	0.1138
Nace30					
Nace31	-0.1192	0.0418	-0.0694	0.0303	0.2362*
Nace32	-0.1184	-0.0521	-0.0476	-0.0457	0.1583
Nace33	-0.1064	0.0286	-0.1546	0.0037	0.1940
Nace34	-0.1135	0.0052	0.0198	0.1717*	0.1185
Nace35	-0.1118	0.0826		0.0403	0.2881**
Nace36	-0.0352	0.0308	0.1627*	0.2151**	0.3662**
Nace37	0.0004			0.2249	0.1395
Nace40	-0.1376	-0.0936		-0.0989**	0.1301
Nace41	-0.0884				0.2437*
Nace45	-0.1115	0.1487		0.0834	0.2830**
Nace50	-0.0846	0.0192	0.2589**	0.1905*	0.1842
Nace51	-0.1093	0.0689	0.0441	-0.0056	0.3399**
Nace52	-0.0395	0.4151**	0.0971	-0.0240	0.4277**
Nace55	0.1813	0.0174	0.4572**	0.1493*	0.3851**
Nace60	0.0101	0.0248		-0.0261	0.2577*
Nace61		0.0140		0.1299	
Nace62	-0.1215				0.2904*
Nace63	-0.1129	0.0337		-0.0266	0.1824
Nace64	-0.0256				0.3456**
Nace65	-0.1649	-0.1597**		-0.1114**	-0.2220**
Nace66		-0.1338			-0.0808
Nace67	-0.1185	-0.0799			0.0364
Nace70	0.0077	-0.0400			0.2546*
Nace71	-0.0194	0.0909			0.3300**
Nace72	-0.1455	-0.1526*		-0.0669	0.2194
Nace73	-0.1142	0.0816			
Nace74	-0.1371	-0.0147		0.0928	0.3762**
Firm pay agreement	-0.1037**	0.0899**		-0.1012**	-0.1289**
Other pay agreement			0.0982**	0.0545	-0.0091
Firm size	-0.0017**	-0.0000	-0.0048**	-0.0019	-0.0208**
State Owned	-0.1145**		-0.1280		-0.1183**
Percent women	0.1265**	0.1387**	0.4389**	0.0329**	0.2839**
Percent under 25	0.6164**	0.534**	1.2897**	0.4365**	1.0467**
Percent part-time	0.3524**	-0.2972**	0.7241**	0.4189**	0.1587**
Pseudo R ²	0.2815	0.2704	0.3834	0.2796	0.2446
N firms	4197	13390	2507	7485	17905

Table A.1. Determinants of low-wage employment. Probit estimation results. ESES. 1995

	Denmark		Italy		Ireland		Spain		Belgium	
Number of obs	548073		93275		34540		165219		80204	
Pseudo R2	0,4743		0,3853		0,4291		0,3985		0,4074	
	<i>Marginal effect</i>	<i>Signif,</i>	<i>Marginal effect</i>	<i>Signif,</i>	<i>Marginal effect</i>	<i>Signif,</i>	<i>Marginal effect</i>	<i>Signif,</i>	<i>Marginal effect</i>	<i>Signif,</i>
Male	-0,026	0,000	-0,008	0,000	-0,104	0,000	-0,087	0,000	-0,024	0,000
Female	Reference		Reference		Reference		Reference		Reference	
Manager	Reference		Reference		Reference		Reference		Reference	
Professional	0,025	0,005	0,047	0,069	0,013	0,643	0,017	0,236	0,005	0,367
Associate Professional	0,022	0,004	0,055	0,032	-0,003	0,884	0,068	0,000	0,026	0,000
Clerk	0,054	0,000	0,050	0,020	0,136	0,000	0,169	0,000	0,035	0,000
Service skilled worker	0,089	0,000	0,219	0,000	0,217	0,000	0,221	0,000	0,103	0,000
Industry skilled worker	0,011	0,232	0,155	0,000	0,180	0,000	0,176	0,000	0,092	0,000
Industry operator	0,015	0,082	0,143	0,000	0,187	0,000	0,165	0,000	0,102	0,000
skilled service skilled worker	0,039	0,001	0,297	0,000	0,363	0,000	0,324	0,000	0,174	0,000
Preprimary and primary	Reference		Reference		Reference		Reference		Reference	
Lower Secondary	0,000	0,812	-0,002	0,049	-0,042	0,000	-0,011	0,001	-0,003	0,019
Upper secondary	-0,006	0,003	-0,010	0,000	-0,096	0,000	-0,061	0,000	-0,013	0,000
Non-university Degree	-0,015	0,000	-0,009	0,010	-0,113	0,000	-0,072	0,000	-0,016	0,000
Bachelor	-0,017	0,000	-0,010	0,000	-0,116	0,000	-0,094	0,000	-0,017	0,000
Post graduate	-0,023	0,000	All=0		-0,107	0,000	-0,091	0,003	-0,012	0,000
Part-Time	Reference		Reference		Reference		Reference		Reference	
Full-time	0,032	0,000	-0,199	0,000	-0,144	0,000	-0,003	0,597	-0,015	0,000
Fixed-Term	Reference		Reference		Reference		Reference		Reference	
Indefinite duration	-0,009	0,147	-0,011	0,000	-0,032	0,074	-0,054	0,000	-0,014	0,000
Apprentice	0,617	0,000	0,008	0,007	0,308	0,000	0,346	0,000	0,027	0,005
Tenure	-0,001	0,051	-0,002	0,000	-0,015	0,000	-0,016	0,000	-0,003	0,000
Tenure*Tenure	0,000	0,792	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Experiencie	-0,003	0,000	-0,002	0,000	-0,017	0,000	-0,010	0,000	-0,002	0,000
Experiencie*Experiencie	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Privately owned firm	0,012	0,059			-0,021	0,534	0,036	0,000	0,003	0,054
Size <20	Reference		Reference		Reference		Reference		Reference	
Size 20-49	-0,003	0,061	-0,006	0,000	-0,081	0,000	-0,033	0,000	-0,002	0,176
Size 50-99	-0,003	0,073	-0,008	0,000	-0,110	0,000	-0,065	0,000	-0,007	0,000
Size 100-199	-0,004	0,138	-0,010	0,000	-0,111	0,000	-0,078	0,000	-0,009	0,000
Size >199	-0,008	0,011	-0,014	0,000	-0,195	0,000	-0,103	0,000	-0,018	0,000
Industry-level agreements	Reference									
Enterprise-level agreements	-0,005	0,168								
Uncovered establishments	0,002	0,445								
National/industry and local agreements			Reference							
National/industry agreements only			0,007	0,000						
Local agreements only			0,042	0,000						

National agreements					Reference						
Other agreements					0,023	0,004					
A major collective agreement											
Not covered by a major collective agreement											
National agreements							Reference				
Agreements settled at a level above that of the enterprise or workplace							-0,010	0,010			
Enterprise agreements							-0,037	0,000			
Workplace-level agreements							-0,039	0,000			
Other agreements							0,007	0,553			
National and/or sectoral collective agreements									Reference		
Wages are renegotiated collectively within the individual companies									-0,007	0,000	
Other agreements									0,006	0,002	
Female share < 30	0,001	0,792	-0,003	0,030	-0,041	0,000	-0,023	0,000	-0,002	0,132	
Female share 30-50	Reference		Reference		Reference		Reference		Reference		
Female share 50-70	-0,004	0,065	0,002	0,297	0,017	0,148	0,017	0,005	0,001	0,617	
Female share >70	0,005	0,780	0,004	0,019	0,044	0,009	0,077	0,000	0,009	0,000	
naceC	-0,010	0,436	-0,009	0,006	0,120	0,095	-0,025	0,661	0,005	0,662	
nace15	0,038	0,027	-0,010	0,000	0,195	0,000	0,054	0,457	0,009	0,222	
nace16	-0,014	0,205	-0,010	0,000	0,307	0,008	0,012	0,878	0,008	0,651	
nace17	0,026	0,075	-0,001	0,873	0,205	0,000	0,220	0,026	0,106	0,000	
nace18	0,101	0,000	0,020	0,039	0,337	0,000	0,283	0,007	0,184	0,000	
nace19	0,040	0,110	0,006	0,369	0,275	0,002	0,096	0,240	0,049	0,035	
nace20	0,003	0,773	0,002	0,757	0,207	0,000	0,150	0,093	0,035	0,823	
nace21	-0,004	0,697	-0,007	0,097	0,069	0,103	0,037	0,605	0,009	0,428	
nace22	0,000	0,961	-0,009	0,007	-0,008	0,783	0,035	0,620	-0,004	0,502	
nace23	-0,002	0,885	-0,010	0,001	-0,039	0,309	-0,066	0,149	0,003	0,751	
nace24	0,005	0,642	-0,010	0,002	0,002	0,951	-0,030	0,588	-0,003	0,631	
nace25	0,000	0,985	-0,006	0,154	0,135	0,001	0,025	0,720	-0,001	0,819	
nace26	-0,004	0,688	-0,008	0,032	0,082	0,048	-0,007	0,906	-0,004	0,441	
nace27	0,007	0,544	-0,010	0,001	0,115	0,113	-0,039	0,473	0,011	0,252	
nace28	0,008	0,497	-0,006	0,122	0,116	0,003	-0,009	0,880	-0,002	0,722	
nace29	0,019	0,152	-0,008	0,020	0,163	0,000	-0,001	0,989	0,011	0,194	
nace30	Reference		Reference		Reference		Reference		Reference		
nace31	0,021	0,153	-0,007	0,075	0,114	0,012	0,023	0,733	0,019	0,194	
nace32	0,074	0,013	-0,009	0,011	0,115	0,062	0,012	0,866	0,000	0,956	
nace33	0,019	0,259	-0,006	0,167	0,048	0,310	0,035	0,659	0,007	0,475	
nace34	0,007	0,601	-0,006	0,192	0,104	0,077	0,005	0,944	-0,009	0,054	
nace35	0,002	0,900	-0,005	0,274	0,023	0,732	-0,009	0,883	-0,001	0,859	
nace36	0,014	0,243	-0,001	0,777	0,140	0,002	0,123	0,149	0,033	0,009	
nace37	0,037	0,075	-0,006	0,465	0,017	0,577	-0,006	0,934	0,061	0,019	
naceE	0,006	0,690	-0,013	0,000	-0,009	0,831	-0,042	0,420	-0,004	0,509	
nace45	0,004	0,673	-0,008	0,014			-0,009	0,881	0,009	0,209	
nace50	0,025	0,064	-0,007	0,091	0,228	0,000	0,000	0,996	0,022	0,028	
nace51	0,017	0,147	-0,009	0,001	0,110	0,003	0,069	0,365	0,015	0,055	
nace52	0,092	0,000	-0,011	0,000	0,235	0,000	0,080	0,307	0,036	0,001	

nace55	-0,011	0,211	-0,009	0,002	0,324	0,000	0,028	0,686	0,099	0,000
nace60	0,018	0,295	-0,010	0,002			0,010	0,876	0,030	0,006
nace61	0,033	0,067	All=0				-0,078	0,204	-0,006	0,483
nace62	-0,021	0,000	-0,007	0,216			-0,015	0,825	0,005	0,732
nace63	0,018	0,172	-0,009	0,003			-0,030	0,591	0,011	0,215
nace64	-0,016	0,044	-0,011	0,000			0,020	0,777	0,013	0,131
naceJ	-0,019	0,015	-0,015	0,000	-0,024	0,493	-0,070	0,126	0,006	0,417
nace70	0,000	0,990	All=0				-0,023	0,701	0,004	0,671
nace71	0,028	0,083	All=0				0,065	0,408	0,042	0,010
nace72	0,008	0,552	-0,009	0,012			0,035	0,643	0,011	0,252
nace7374	0,010	0,379	-0,008	0,015			0,080	0,307	0,016	0,049
Lazio			Reference							
Northwest			-0,003	0,236						
Lombardy			-0,006	0,004						
Northeast			-0,002	0,335						
Emilia Romagna			-0,003	0,315						
Center			0,003	0,261						
Abruzzo Molise			0,013	0,001						
Campania			0,017	0,000						
South			0,019	0,000						
Sicily			0,032	0,000						
Sardinia			0,009	0,040						
South East										
North										
Yorkshire-Humbershire										
East Midlands										
East Anglia										
South West										
West Midland										
North West										
Wales										
Scotland										
Northwest						Reference				
Northeast							-0,081	0,000		
Madrid region							-0,056	0,000		
Center							-0,001	0,854		
East							-0,066	0,000		
South							-0,024	0,000		
Canary Islands							0,047	0,000		
Brussels Region									Reference	
Flanders									-0,001	0,483
Wallonia									-0,0009045	0,626

