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Does size matter? The influence of firm size on working conditions and job satisfaction

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Non-technical summary

Are working conditions in larger firms better or worse than in smaller firms? Are workers in those workplaces more satisfied? What happens with worker mobility when one compares firm-size classes? Although the recent empirical literature on job satisfaction has studied different dimensions (such as gender wage growth, comparison income and unemployment, and job matching), few works have analysed the potential impact of work environment on job satisfaction and the diverging effects of the working conditions and the structure of work by firm size. The purpose of this paper is to partially fill this gap.

To do so, I draw on a survey directed to workers which contains detailed information not also on personal, job and firm characteristics but also on job satisfaction, working conditions and structure of work, and expected exit from the firm where individuals are currently working. The findings of the paper are as follows.

First, the analysis of working conditions points out that workers in larger firms fare worse in nearly all the work environment indicators. Employees in firms with at least 500 workers appear to be the group facing the worst working environment. Since a wide set of characteristics have been controlled for, these results are not simply reflecting the distribution of jobs across different size workplaces.

Second, working in large firms (500 employees or more) significantly reduces job satisfaction when no controls for working conditions and the structure of work are included in the multivariate analysis. The effect is particularly strong in the case of satisfaction with firms' work organization. However, controlling for these factors substantially alters the results, since differentials across size categories become statistically insignificant. Overall, these results provide strong support for the hypothesis that lower levels of worker satisfaction in larger firms may be largely attributed to the greater rigidity in the structure of the working environment.

Third, the analysis of the relationship between job satisfaction and expected exits from firms has revealed that no systematic differences exist in worker mobility across firm-size categories, irrespective of conditioning on the current wage. This finding seems to reflect that observed wage differentials by firm size are utility-equalizing, so they are due to differences in working conditions.

DOES THE SIZE MATTER?
THE INFLUENCE OF FIRM SIZE
ON WORKING CONDITIONS AND JOB SATISFACTION

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Abstract

Using a Spanish survey, this paper investigates the relationship between firm size and working conditions, and whether firm size differences in workers' job satisfaction can be accounted for by differences in their work environment. The results indicate that: (1) workers in larger firms have a significantly lower level of autonomy and, in general, face worse working conditions; (2) working in large firms has no statistically significant effect on job satisfaction after controlling for working conditions; and (3) no systematic differences exist in worker mobility across firm-size categories. We conclude that observed wage differentials by firm size are utility-equalizing, so they are due to differences in working conditions.

JEL Classification: J28, J81, J63

Keywords: firm size, working conditions, job satisfaction, labour mobility

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1. Introduction

The recent empirical literature on job satisfaction has studied different dimensions. These include *inter alia* gender (Clark, 1997), wage growth (Clark, 1999), comparison income and unemployment (Clark and Oswald, 1994, 1996) and job matching (Belfield and Harris, 2002). However, the analysis of the potential impact of work environment on job satisfaction and the diverging effects of the working conditions and the structure of work by firm size has been one feature hardly treated in the literature. The purpose of this paper is to partially fill this gap by empirically investigating the relationship between firm size and working conditions, and the extent to which firm size differences in workers' job satisfaction can be accounted for by differences in their work environment.

The exception to this scarcity is Idson (1990), who empirically investigates such relationships for the US, finding that observed lower levels of job satisfaction in larger firms can largely be attributed to the inflexibility of the work environment. He finds that, in the absence of controlling for the nature of the work environment, employees are less satisfied with their jobs in larger firms, but introducing controls for working conditions acts to remove that relationship. Other authors have followed a similar approach in other strands of the literature. For instance, in order to provide an explanation for the observed negative effect of unionization on job satisfaction, some authors emphasize the importance of including measures for working conditions and job attributes capturing employee control in the workplace. After taking that into account, results indicate that unionization has a null effect on job satisfaction (Pfeffer and Davis-Blake, 1990; Bender and Sloane, 1998). The rationale behind this strategy is that some attributes (union membership, firm size) can be confounded with place of employment, being taken as a proxy for work environment, so it is necessary to adequately control for the relevant working conditions and job attributes that affect job satisfaction.

This paper follows this line of research. Its contribution to the existing knowledge on job satisfaction and working conditions lies in three areas. First, I use a survey containing a wide range of information on features such as physical environment, security at work, systems of working organization, employees' autonomy in their jobs, to what extent the job involves social relations, to what extent there is encouragement to find ideas for improving the work, and so on. This enables me to analyse several indicators of the working conditions and the structure of work. Instead of relying on some very specific aspects, I have selected a number of dimensions

regarding the work environment and constructed six measures. The survey also contains detailed information on personal, job and firm characteristics, which will be used as controls in the multivariate setting. Second, I analyse five measures of job satisfaction rather than one. To the extent that these measures cover different aspects of workers satisfaction with their jobs, I am likely to capture more diverse components of workers' satisfaction and have a more sophisticated understanding of how firm size influences workers' satisfaction. Third, I can add to the literature by explicitly analysing the underlying mobility decisions of workers, since the database allows me to construct a variable reflecting workers' expectations for leaving their current job within one year. This enables me to study whether working conditions and job satisfaction generates differences in workers' search behaviour by firm-size classes.

The remainder of this paper is organised as follows. Section two provides a background on the research topic. Section three presents the characteristics of the dataset and some descriptives of the objective indicators on working conditions and job satisfaction measures broken down by firm size. Section four analyses the relationship between working conditions and firm size in a multivariate setting, explicitly taking into account different individual, job and firm characteristics. Section five look at the relationship between job satisfaction and firm size, and the extent to which, after controlling for different characteristics (including wages), these job attributes can account for such relationship. Section six focuses on whether job satisfaction influences workers' decisions to exit from their current firm. Finally, section seven summarises the main conclusions.

2. Background

The existence of a positive effect of employer size on wages is well documented in the economic literature (Oi and Idson, 1999). Traditional explanations suggest that large employers hire more skilled workers, compensate workers for poor working conditions, have more market power and share their excess profits with their workers, mimic unionisation, and/or substitute high monitoring costs with wage premia (Lallemand et al., 2007).

Compensating wage differentials may account for the employer-size wage premium if working conditions are worse within large organizations, as it has been considered for a long time. Earlier studies attributed the existence of systematic employer size differences in wages to large employers providing a more impersonal

work atmosphere (Lester, 1967), offering more formal work rules and regimentation (Masters, 1969), and generating longer commuting (Scherer, 1976).

Only two studies (Kwoka, 1980, and Idson, 1990) look directly at the potential relationship between firm size and job satisfaction to explain workplace-size wage differentials. In particular, Idson (1990) finds that, in the absence of control for the nature of the work environment, employees are less satisfied with their jobs in larger firms. But the introduction of controls for working conditions removes that relationship. Therefore, observed lower levels of job satisfaction in larger workplaces can largely be attributed to differences in working conditions (more rules, a less autonomous and more impersonal work atmosphere, etc.).

But why should this be so? According to Stafford (1980), the firm of common working conditions will cause dissatisfaction with wider policies for all but the worker with median preferences for these work rules. Thus, in larger workplaces there will be a greater average level of dissatisfaction since the number of workers who value differently the established working conditions is higher. Moreover, since larger firms are characterised by higher capital intensity, employers will attempt to achieve a continuous utilization rate of their capital, so workers will be constrained in their freedom to determine the pace of work, when they work, etc., thereby yielding a greater regimentation in the work environment. On the other hand, Oi (1983) assumes that the entrepreneurial input varies across firms, so larger firms are centred on more able managers. In order to economize on the higher opportunity costs of these managers, the firm organizes production in a more structured fashion so as to reduce required monitoring time. This generates a more regimented working environment in larger firms.

Idson and Oi (1999) have recently challenged this perspective. These authors argue that large firms typically offer jobs with better working conditions (the workplace is safer, fringe benefits are superior, there are generous time-off benefits, they offer better promotion expectations and more job security), so they cannot contribute to the firm-size wage premium.[1] Winter-Ebmer and Zweimüller (1999), using data for Switzerland, give evidence to support this view, based on their analysis of workers' search and mobility behaviour. They find that, irrespective of conditioning on the

[1] They advance a theory based on the idea that employees at larger firms are more productive and hence command higher wages in a competitive labour market.

current wage, workers employed in larger firms are significantly less likely to look for another job or to change job within one year.

3. Dataset and descriptives

The database used in the empirical analysis is the 'Working Conditions Survey' (*Encuesta de Calidad de Vida en el Trabajo*, ECVT). This is a yearly survey carried out by the Spanish Ministry of Labour and Social Affairs since 1999. Here, I use the editions from 2000 to 2003. The ECVT is a nationally representative random sample survey of all employed individuals aged 16 years and above living in households. Employment means having been working at least one hour during the reference week (the week previous to the interview week). Sampling design takes into account three variables: autonomous community (region), municipality size, and number of inhabitants in the census's section. Selection of employed individuals within the households (one per household) is purely random.[2]

The potential of the ECVT as a source to analyse economic and social features related to the labour market comes from the fact that it was designed with the aim of collecting information on workers' current labour status but also on their social relations, their socio-economic situation, their attitudes, and their values with respect to the work they are carrying out. The survey covers a wide array of issues, which allows one to control for a large set of individual and workplace attributes. It contains information on two broad sets of variables that will be used in the following sections as controls. On the one hand, there are workers' personal and socio-demographic characteristics such as gender, age, marital status, number of children, attained educational level, region of residence, size of the municipality, and union membership. On the other hand, individuals provide information on the characteristics of the job they are performing (occupation, working hours, tenure, type of contract, and wage –in intervals) and the employer for which they are working (institutional sector, industry affiliation, training status, type of collective bargaining agreement, and size).[3]

Each edition of the original ECVT sample comprises roughly 6,000 employed individuals. In general, I have dropped those individuals who are not wage and salary workers (this eliminates about 1,500 observations each year) and those with missing

[2] Sampling design weights have been used when computing descriptive statistics in this section.
[3] Size refers to the firm/organization (not the plant or the establishment) where the individual is currently working.

information on basic variables used later in the empirical section, for instance, those who do not know what type of contract they have or do not report the job satisfaction level (this excludes an additional group of 1,500 observations).[4] After implementing the selection criteria, the information used in this paper refers to 12,241 wage and salary workers. Table A.1 in the Appendix provides the distribution of the variables for the full sample.

For our purposes, the survey elicits information from individuals on job satisfaction, working conditions and expected exit from the firm. Information on worker's satisfaction is available from different sections of the survey questionnaire. There is one general question on satisfaction with his/her present job. The exact wording of this question is as follows: 'And now, talking about satisfaction at work in general, could you put in this scale, where 1 is very dissatisfied and 10 is very satisfied, how satisfied are you with this job?' Thus, individuals are required to provide a rating on a scale of 1 to 10. Moreover, the survey asks for similar responses concerning four different dimensions of job satisfaction in other parts of the questionnaire. In particular, workers are inquired about the degree of satisfaction with firms' work organization, with jobs' physical environment, with jobs' security conditions, and with their pay. Responses for these four facets of satisfaction are ranked from 1 (very satisfied) to 5 (very dissatisfied). Table 1 (at the end of the paper) provides the mean levels of all satisfaction measures broken down by employer size.

The figures from the table suggest that average reported overall job satisfaction is remarkably similar across workers independently of the size of the firm where they work.[5] The same occurs with reported satisfaction with pay.[6] Interestingly enough, this homogeneity disappears when we turn to the other three satisfaction measures. Here we find either a clear negative association between satisfaction and firm size (in the case of the indicator of satisfaction with work organization) or a less clear negative one (in the case of the indicators of satisfaction with work environment and with security at work)[7].

[4] The only exception is the variable on wages, since 11 percent of the sample report 'do not know/do not answer'. This is the reason why I have kept it for the empirical analysis, creating a corresponding 'missing' category.

[5] According to the data, less than 9 percent indicate that they are dissatisfied (values 1-4), 42 percent indicate that their level of satisfaction is quite good (values 5-7), and nearly half of all the individuals that they are satisfied (values 8-10). This distribution is very similar across firm size categories.

[6] Tests for the differences in the means of overall job satisfaction and satisfaction with pay measures across different firm sizes suggest that they are not statistically significant.

[7] Tests for the differences in the means of satisfaction across different firm sizes show that all of them are statistically significant in the case of satisfaction with organization while they are not significant for the

Therefore, descriptive statistics point out that in general individuals in smaller workplaces report higher levels of satisfaction with their working conditions than individuals in larger workplaces.

Furthermore, the questionnaire contains a wide set of questions concerning features of the physical environment, security at work, working posture, mental strain, systems of working organization, employees' autonomy in their jobs, to what extent the job involves social relations, to what extent there is encouragement to find ideas for improving the work, and so on. In order to capture working conditions and industrial relations climate, I have constructed six indicators that combine objective information about real situations of the activities and relations that take place in the working environment, and subjective information about workers' perceptions of their labour conditions and relations. The advantage of this method is that it imposes certain rigour and facilitates comparison over time or between particular jobs in the same and in different countries (Roustang, 1977). The indicators I use in this paper are based on those designed by the Spanish Ministry of Labour and Social Affairs (ECVT, 2001). Each one refers to a particular area of the industrial relations quality. The definitions of the indicators are provided in the Appendix.

Table 1 offers the mean levels of the objective indicators on the structure of work by employer size. By comparing the means of these groups for the more general indicator, we obtain that workers in large firms (100 employees or more) report worse working conditions than workers in smaller firms. However, when it comes to more specific indicators, the result is somehow reversed, since workers in the largest firms (500 employees or more) show the highest scores in all of them (a sort of U-shaped relationship is detected in four indicators).[8]

The questionnaire also asks workers about the likelihood of leaving their current jobs. In particular, the question reads as follows: 'Looking one year ahead, how likely are you to leave your current job, i.e. to stop working in what you are currently working?' There are five possible answers: it is totally sure, it is very likely, it is somewhat likely, it is a bit unlikely, and it is very unlikely. Next, those workers who choose the first two responses (i.e. those who are more likely to leave their current jobs) are inquired about the main reason to leave their current job. The possible answers

groups of firms of 50 employees or more in the case of satisfaction with work environment and with security at work.

range from retirement and early retirement to better job offers from other firms, ending of the contract or layoff, plant closing, family reasons, marriage, maternity/paternity, it is not economically worth, and others. The figures in Table 1 show that the overall proportion of likely leavers within one year is roughly 9 per cent but there are significant differences across firm-size classes: from nearly 12 per cent in firms with 1-9 employees to 6 per cent in firms with 500 employees or more.[9]

4. Firm size and working conditions

A number of previous studies have posited that the work environment in larger firms is more rigidly structured than in smaller firms, with potential implications for differentials in worker satisfaction. We have previously seen that our dataset shows the existence of some differences in working conditions by employer-size classes. These results might be viewed as derivative from the types of workers employed in different size firms or the regional and/or industrial distribution of different size firms. To investigate this, I have performed a multivariate analysis: I have run a series of regressions on the six objective indicators of working conditions including a wide range of explanatory variables. In each regression, the dependent variable is ordinal, which requires the use of ordered techniques. The ordered probit models consider the ordinal nature of the dependent variable explicitly. Table 2 reports the results. For the sake of brevity, it only provides the coefficients of the firm size categories and the point estimates for the difference of coefficients between pairs of categories. Table A.2 in the Appendix offers the full results for the specification shown in the first column.

The estimate results show that, for a wide variety of measures of working conditions and work structure, larger firms exhibit lower scores, other things being equal. In fact, compared with the reference category (workers in small firms with less than 10 employees), individuals who work in larger firms (100 employees or more in some specifications and 500 employees or more in others) fare worse in all the work environment indicators (save for the 'pride' indicator). Differences between the categories capturing large firms and the rest are statistically significant in almost all specifications. This means that, in general, the larger the workplace is, the worse the working conditions, and that employees in firms with at least 500 workers appear to be

[8] All these results are supported by the tests for differences in the means of working conditions indicators across different firm sizes (available from the author upon request).

the group facing the worst working environment. This result fits well with previous studies on this issue (Idson, 1990, for the US).

It is worth noting that I have taken into account a wide set of personal, job and firm characteristics (including occupational groups, type of job and industry), so these results are not simply reflecting the distribution of jobs across different size workplaces. Therefore, they can be taken as giving evidence that workers in larger firms have a significantly lower level of autonomy and participation on the type of work they do and, in general, face worse working conditions, since the attributes included in the previous estimations do not completely explain why there is a "firm size" differential in the structure of work. The question that arises is to what extent these factors can account for firm size differences in workers' job satisfaction. This would be analysed in the next section.

Before that, we briefly comment on the results obtained for the rest of variables included in the regressions (see Table A.2). Many of the control variables used in the estimations turn out to be important predictors of the working conditions themselves. This is especially true for job and workplace related variables. To begin with, the industry variable seems to be a significant one: some categories (in particular, those from the service sector, as social, personal and public services) are usually associated with better working conditions (this applies to all except to the integration indicator).[10]

Workers in non-manual, high-skilled occupations enjoy better working conditions.[11] These conditions worsen gradually as we move from those jobs to manual and/or less skilled occupations. Accordingly, workers with managerial/supervision tasks enjoy better conditions than simple employees.

Furthermore, the estimated coefficients on the variable type of contract suggest that workers holding temporary contracts suffer worse working conditions than their permanent counterparts. The only exception appears to be the general conditions

[9] Tests for average difference in firm sizes rates show that these are the groups with significantly higher and lower rates, while the rest are not statistically different among them.

[10] Industries have been grouped into eleven categories. The service sector has been divided into five subsectors: traditional services (wholesale and retail trade, hotels and restaurants, and transportation); production services (communications, financial intermediation, real state, renting and business activities); social services (education, health and social work); personal services (recreational, cultural and personal services); and public services (public administration, defence, compulsory social security and public sewage).

[11] Occupations have been grouped into four categories according to the type of tasks and qualifications the job requires to properly perform it: white collar high skilled workers (professionals, technicians and managers); white collar low skilled workers (clerks and commerce, sales and services workers); blue

indicator. Job tenure (and its square, included both as continuous variables) is not significant. When I combine contract type with job tenure in categories (results not shown), I find no significant differences among tenure categories for permanent workers but, in the case of temporary workers, those with shorter job tenure (less than 1.5 years) are more likely to suffer poorer working conditions.

Work environment in firms with firm/plant-level collective agreements turns out to be significantly better than those in firms with higher-level agreements (according to three of the indicators but not to the general one). But at the same time union members seem to suffer poorer conditions. This could happen if unionisation were associated with hazardous jobs and working conditions (Duncan and Stafford, 1980). But given the institutional framework of the Spanish industrial system, we can rule out this explanation: there are no separated union and non-union jobs/workplaces and being affiliated to a union remains a personal choice not related to the type of collective bargaining in force in the workplace. Therefore, it is more plausible to argue that union members are more aware of (or more pessimistic about) the work environment and the structure of work, so they tend to report poorer working conditions than their non-union counterparts.

Finally, there is some evidence that longer hours of work (imperfectly captured by the full-time/part-time dummy) are associated with worse working conditions. This happens in the case of the general conditions, participation and autonomy indicators. And with regards to the personal characteristics, it is worth noting one striking result: women report to suffer significantly worse working conditions if we use the general conditions indicator (as previously found by Loprest, 1992), whereas they enjoy better work environment measured by the rest of indicators on the structure of work.

5. Firm size and job satisfaction

As mentioned in the introduction, I make use of five measures of satisfaction that cover different aspects of workers satisfaction with their job. This allows me to capture more diverse components of workers' satisfaction. The ordinal nature of the dependent variables (they take values from 1 to 10 or from 1 to 5) requires the estimation of ordered probit models. Table 3 reports the results of satisfaction regressions which investigate the relationship between firm size and the five alternative

collar high skilled workers (agriculture, construction and industry specialized workers); and blue collar low skilled workers (labourers).

measures of job satisfaction. As before, it only provides the coefficients of the firm size categories and the point estimates for the difference of coefficients between pairs of categories. Table A.3 in the Appendix gives the full results for the specifications shown in the first two columns.

For each measure, I have estimated two different specifications of the ordered probit model: one with the working conditions variables (model 1) and another one without them (model 2). Some authors emphasize the importance of including measures for working conditions and job attributes capturing employee control in the workplace in the job satisfaction regressions. The rationale is that, without including these variables, other variables (such as union membership) were confounded with place of employment, being taken as a proxy for work environment. This strand of the literature shows that, once relevant working conditions and job attributes that affect satisfaction and lead to unionization are adequately controlled for, the negative effect of unionization on job satisfaction disappears. In other words, the observed negative effect of unionization on job satisfaction was a statistical artefact since there were relevant variables omitted from the models (Pfeffer and Davis-Blake, 1990; Gordon and Denisi, 1995; Bender and Sloane, 1998).

Previous studies have included a different number of variables proxying working conditions in the estimation of the job satisfaction regressions. For instance, Bender and Sloane (1998) used two controls (employer/employee relations very harmonious and employer/employee relations harmonious), whereas Bryson et al. (2004, 2005) used a set of variables (16) capturing individual opinions about the climate of industrial relations and the trade unions. Instead of including particular questions concerning these issues, I make use of the indicators analysed in the previous section in the estimation procedure.

The estimate results shown in Table 3 suggest that working in large firms (500 employees or more) significantly reduces job satisfaction when no controls for working conditions and the structure of work are included in the regressions. This holds for all the satisfaction measures save for satisfaction with pay. The effect is particularly strong in the case of satisfaction with firms' work organization. However, controlling for these factors substantially alters the results obtained, since the magnitude of the coefficients on firm size drops and the differentials across size categories become statistically insignificant (as in Idson, 1990). There are two exceptions to this general finding. The first one is that the strong association between working in large firms and having low levels of satisfaction with firms' work organization remains. The second one is that

workers in medium-sized firms (100-499 employees) show significantly higher levels of job satisfaction than similar workers, due to their higher satisfaction with jobs' environment.

Overall, the general result of no effect of firm size on job satisfaction after taking into account working conditions indicators agrees with that of Bender and Sloane (1998) and others in the literature on union/non-union satisfaction differentials and by Idson (1990) in the analysis of firm size differentials. These authors emphasize that the use of rich datasets is essential to overcome the problem generated by the omission of relevant variables in the estimation of models to examine the relationship between job satisfaction and some workplaces' characteristics.

Many of the control variables used in the regressions turn out to be important predictors of job satisfaction itself, although it is worth noting that some of them become statistically insignificant when I include the working conditions indicators (whose coefficients, by the way, are always well-determined and statistically significant, see Table A.3). In particular, this applies to the job and firm related variables. For instance, individuals working in non-manual, high-skilled occupations report significantly higher job satisfaction than co-workers in manual, low-skilled occupations, whatever the satisfaction measure I use (save for that on satisfaction with work organization). However, if I include the work environment indicators, the coefficients on that category usually turn to be negative and statistically significant. Exactly the same occurs with the variable capturing the type of job.

Moreover, in the case of the industry variable, the inclusion of the working conditions indicators eliminates the statistical significance of its categories in the overall job satisfaction measure (that reflects satisfaction to be higher in social, public and personal services), although it remains otherwise in the measure of satisfaction with security. This also happens with the wage variable. A significantly positive relationship is found between monthly wages (measured in intervals) and job satisfaction indicators, reflecting that higher pay is associated with higher job satisfaction. The strongest relationship is found between wages and satisfaction with pay. However, this association only remains for the latter and for the overall job satisfaction measure, once I control for the indicators on the structure of work.

I also find that holding a temporary contract and being a union member is consistently associated with lower job satisfaction. This latter result agrees with the usual finding that unionised workers are less satisfied than non-unionised workers

(Freeman, 1978; Borjas, 1979), although recent studies –commented on previously- have found that union status does not affect job satisfaction either because union membership was previously confounded with place of employment (Gordon and Denisi, 1995; Bender and Sloane, 1998) or because of the endogenous sorting of dissatisfied individuals into membership, so the observed differential reflects spurious correlation due to unobserved individual characteristics (Bryson et al., 2004).

Finally, women exhibit significantly higher overall job satisfaction and satisfaction with pay than their male counterparts (Clark, 1997, investigates the gender differential in more detail). Furthermore, there is no evidence that longer hours of work are associated with lower job satisfaction (save for the measure of satisfaction with pay).

6. Job satisfaction and exits from firms

In this section, we investigate the potential relationship between job satisfaction and exits from firms. Dissatisfaction with work may result in workers deciding to leave their current firm. If working life means that workers suffer poor job content, physical or mental distress, no opportunities for promotion, etc., workers may look for better alternative opportunities outside. Thus, more dissatisfied individuals (those facing worse working conditions) will be less likely to remain in the workplace and more likely to exit. If observed wage differences by firm size are due to differences in working conditions, then observed wage differentials should be utility-equalizing, and no systematic differences in worker mobility across firm-size classes should be observed (Idson and Oi, 1999). Moreover, conditional on the worker's wage, lower job satisfaction in larger firms should induce higher on-the-job search activities and mobility in larger workplaces than in smaller ones.

Therefore, further insight into differentials of working conditions and job satisfaction by firm size-classes can be gained by looking at revealed behaviour of workers. By her decision to look for a new job, the worker reveals information about her job satisfaction. As we explained in section three, the database we use contains one question related to the expectation to leave the current job within the next twelve months. I have used workers' answers to this question to construct a variable on the probability to leave: it takes value one if the worker is likely to exit the firm, and zero otherwise.

Since the dependent variable takes two values, I estimate binomial probit models. Controls include personal, job and firm characteristics. I have run four specifications of the models, depending on whether wages and job satisfaction measures are included or not. Table 4 provides the estimate results for these models (the coefficients of the firm size classes, the wage categories and the satisfaction measure). The job satisfaction measure is the more general one. The results are virtually the same when I use any of the other four measures used throughout the paper (available from the author) but are not reported for the sake of brevity.

The results show that, irrespective of conditioning on the current wage, employees working in larger firms are not significantly less likely to expect leaving their jobs within one year. Controlling for the wage (model 2) does not alter this finding. Note that the worker's wage has a significant, negative impact on the expected probability to exit. Furthermore, the inclusion of a job satisfaction measure (models 3 and 4) does not change the general picture (although it reduces somehow the magnitude of the wage effect). The estimated coefficients on the job satisfaction indicator are negative and statistically significant, reflecting that employees suffering poorer working conditions and reporting lower levels of satisfaction at work are more likely to leave their current jobs, once we control for other workplace, job and personal attributes. Hence, poor working life acts as an impeller for workers to look for better opportunities outside their current firm.

Therefore, our findings of no differences in workers' expected exit across firm-size categories should be interpreted as if observed wage differentials are utility-equalizing, so higher wages in larger firms compensate for worse working conditions. Winter-Ebmer and Zweimüller (1999), using data for Switzerland, do not find evidence supporting the compensating wage differential story.

7. Conclusions

This paper has empirically investigated the relationship between firm size and working conditions, and the extent to which firm size differences in workers' job satisfaction can be accounted for by differences in their work environment. For that purpose, I have drawn on a survey directed to workers that provides detailed information on the structure of work, job satisfaction measures, and personal, job and firm attributes.

The findings are as follows. First, the analysis of working conditions points out that workers in larger firms fare worse in nearly all the work environment indicators. Employees in firms with at least 500 workers appear to be the group facing the worst working environment. Since a wide set of characteristics are controlled for in the estimation procedure, these results does not simply reflect the distribution of jobs across different size workplaces. Therefore, they can be taken as providing evidence that workers in larger firms have a significantly lower level of autonomy and participation on the type of work they do and, in general, face worse working conditions, since the attributes included in the estimations do not completely explain why there is a "firm size" differential in the structure of work.

Second, working in large firms (500 employees or more) significantly reduces job satisfaction when no controls for working conditions and the structure of work are included in the multivariate analysis. The effect is particularly strong in the case of satisfaction with firms' work organization. However, controlling for these factors substantially alters the results, since differentials across size categories become statistically insignificant (there are two exceptions: the strong association between working in large firms and having low levels of satisfaction with firms' work organization remains and workers in medium-sized firms -100-499 employees- show significantly higher levels of job satisfaction due to their higher satisfaction with jobs' environment). Overall, these results provide strong support for the hypothesis that lower levels of worker satisfaction in larger firm may be largely attributed to the greater rigidity in the structure of the working environment.

Third, the analysis of the relationship between job satisfaction and expected exits from firms has revealed that no systematic differences exist in worker mobility across firm-size categories, irrespective of conditioning on the current wage. This finding seems to reflect that observed wage differentials by employer size are utility-equalizing, so they compensate differences in working conditions.

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Table 1. Means (and standard deviations) of job satisfaction measures, objective indicators on working conditions, and proportion of workers likely to exit within one year, by employer size. Spain: ECVT (2000-2003).

	Employer size					
	1-9	10-49	50-99	100-499	500+	Total
Job satisfaction measures						
Overall	7.10	7.14	7.03	7.10	7.09	7.10
	(1.96)	(1.90)	(1.96)	(1.87)	(1.91)	(1.92)
With organization	3.79	3.68	3.58	3.59	3.46	3.64
	(0.88)	(0.91)	(1.00)	(0.93)	(0.99)	(0.93)
With environment	3.90	3.84	3.73	3.79	3.76	3.82
	(0.80)	(0.82)	(0.92)	(0.85)	(0.90)	(0.85)
With security	3.95	3.83	3.75	3.75	3.71	3.82
	(0.83)	(0.88)	(0.94)	(0.97)	(1.00)	(0.92)
With pay	3.23	3.24	3.20	3.25	3.26	3.24
	(0.98)	(0.99)	(1.01)	(1.00)	(1.01)	(0.99)
Working conditions indicators						
General conditions	6.29	6.10	6.01	5.71	5.91	6.05
	(1.58)	(1.72)	(1.79)	(1.88)	(1.84)	(1.75)
Pride	6.33	6.34	6.23	6.26	6.70	6.39
	(3.10)	(3.03)	(3.04)	(2.98)	(2.83)	(3.01)
No alienation	8.04	7.93	7.84	7.77	8.12	7.97
	(2.05)	(2.17)	(2.23)	(2.25)	(2.05)	(2.13)
Participation	4.19	4.09	4.01	4.13	4.40	4.18
	(2.71)	(2.77)	(2.73)	(2.85)	(2.78)	(2.77)
Integration	2.78	2.84	2.93	3.11	3.47	3.00
	(2.58)	(2.65)	(2.58)	(2.60)	(2.54)	(2.61)
Autonomy	4.50	4.25	4.19	4.24	4.63	4.39
	(2.69)	(2.70)	(2.69)	(2.74)	(2.61)	(2.69)
% Expected exit	0.116	0.096	0.081	0.090	0.060	0.092
	(0.321)	(0.295)	(0.273)	(0.287)	(0.238)	(0.289)
Distribution	*0.275*	*0.286*	*0.180*	*0.099*	*0.161*	*1.000*

Table 2. Estimates of ordered probit models on working conditions indicators. Spain: ECVT (2000-2003).

	General conditions		Pride		No alienation		Participation		Integration		Autonomy	
	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
Employer size												
1-9 employees (&)												
10-49 employees	-0.120	**	-0.123	**	-0.233	**	-0.203	**	-0.209	**	-0.269	**
50-99 employees	-0.206	**	-0.229	**	-0.344	**	-0.341	**	-0.315	**	-0.383	**
100-499 employees	-0.399	**	-0.239	**	-0.441	**	-0.345	**	-0.347	**	-0.401	**
500+ employees	-0.441	**	-0.280	**	-0.499	**	-0.417	**	-0.407	**	-0.465	**
Differences												
(10-49 employees) – (50-99 employees)	0.086	*	0.106	**	0.111	**	0.139	**	0.106	**	0.114	**
(10-49 employees) – (100-499 employees)	0.279	**	0.116	**	0.208	**	0.143	**	0.138	**	0.132	**
(10-49 employees) – (500+ employees)	0.312	**	0.157	**	0.266	**	0.215	**	0.198	**	0.196	**
(50-99 employees) – (100-499 employees)	0.193	**	0.010		0.097	*	0.004		0.033		0.018	
(50-99 employees) – (500+ employees)	0.235	**	0.051		0.156	**	0.076	*	0.092	*	0.082	*
(100-499 employees) – (500+ employees)	0.041		0.041		0.059		0.072	*	0.059		0.064	*
Personal controls	Yes		Yes		Yes		Yes		Yes		Yes	
Region controls	Yes		Yes		Yes		Yes		Yes		Yes	
Job and firm controls	Yes		Yes		Yes		Yes		Yes		Yes	
Log likelihood	-22,814.1		-19,800.4		-20,754.4		-20,544.0		-21,019.3		-25,493.7	

Notes:
- Control variables include: gender, marital status, children, educational attainment, region, size of the municipality, labour market experience, occupational group, type of job, contract type, working time, union status, institutional sector, industry, and type of collective bargaining, and yearly dummy variables (see Table A.2).
- Number of observations: 12,241.
- (&) indicates the base category.
- Asterisks indicate significance at, respectively, 5 per cent (*) and 1 per cent (**).

Table 3. Estimates of ordered probit models on job satisfaction measures. Spain: ECVT (2000-2003).

	Overall job satisfaction				Satisfaction with work organization				Satisfaction with job environment				Satisfaction with security at work				Satisfaction with pay			
	(1)		(2)		(1)		(2)		(1)		(2)		(1)		(2)		(1)		(2)	
	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
Employer size																				
1-9 employees (&)																				
10-49 employees	-0.095	**	0.045		-0.153	**	-0.042		-0.073	**	0.050		-0.117	**	-0.014		-0.103	**	-0.018	
50-99 employees	-0.200	**	0.020		-0.251	**	-0.068		-0.206	**	-0.018		-0.211	**	-0.043		-0.183	**	-0.046	
100-499 employees	-0.193	**	0.085	*	-0.253	**	-0.015		-0.140	**	0.110	**	-0.184	**	0.044		-0.148	**	0.028	
500+ employees	-0.290	**	0.028		-0.400	**	-0.131	**	-0.221	**	0.068		-0.274	**	-0.006		-0.213	**	-0.007	
Differences																				
(10-49 empl.) – (50-99 empl.)	0.104	**	0.025		0.097	**	0.026		0.133	**	0.067		0.095	**	0.029		0.080	*	0.028	
(10-49 empl.) – (100-499 empl.)	0.097	**	-0.040		0.100	**	-0.027		0.068	*	-0.060		0.068	*	-0.058		0.046		-0.046	
(10-49 empl.) – (500+ empl.)	0.195	**	0.017		0.246	**	0.089	**	0.149	**	-0.018		0.157	**	-0.008		0.111	**	-0.011	
(50-99 empl.) – (100-499 empl.)	-0.007		-0.066		0.003		-0.053		-0.066		-0.128	**	-0.027		-0.087	*	-0.035		-0.075	
(50-99 empl.) – (500+ empl.)	0.091	*	-0.008		0.149	**	0.063		0.015		-0.086	*	0.062		-0.036		0.030		-0.039	
(100-499 empl.) – (500+ empl.)	0.098	**	0.057		0.147	**	0.116	**	0.081	*	0.042		0.089	**	0.050		0.065		0.035	
Personal controls	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Region controls	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Job and firm controls	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Working conditions controls	No		Yes		No		Yes		No		Yes		No		Yes		No		Yes	
Log-likelihood	-23,552.3		-21,818.0		-14,973.5		-13,609.9		-13,699.8		-12,629.0		-14,308.9		-13,366.9		-15,516.0		-14,871.4	

Notes:
- Control variables include: gender, marital status, children, educational attainment, region, size of the municipality, labour market experience, occupational group, wage, type of job, contract type, working time, union status, institutional sector, industry, type of collective bargaining, training status, and yearly dummy variables (see Table A.3).
- Number of observations: 12,241.
- (&) indicates the base category.
- Asterisks indicate significance at, respectively, 5 per cent (*) and 1 per cent (**).

Table 4. Estimates of binomial probit models on expected exit from job within one year. Spain: ECVT (2000-2003).

	(1)		(2)		(3)		(4)	
	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.
Employer size								
1-9 employees (&)								
10-49 employees	0.034		0.051		0.016		0.029	
50-99 employees	-0.025		-0.004		-0.067		-0.052	
100-499 employees	0.094		0.118		0.057		0.075	
500+ employees	0.009		0.034		-0.050		-0.033	
Monthly wages								
<450 (&)								
450-600	-		-0.138		-		-0.113	
600-900	-		-0.242	**	-		-0.199	*
900-1,200	-		-0.376	**	-		-0.283	**
1,200-2,400	-		-0.467	**	-		-0.344	**
>2,400	-		-0.287	*	-		-0.155	
Without information	-		-0.374	**	-		-0.306	**
Satisfaction measure	-		-		-0.149	**	-0.146	**
Log-likelihood	-3,092.9		-3,077.3		-2,947.1		-2,938.2	

Notes:
- Control variables include: gender, marital status, children, educational attainment, region, size of the municipality, labour market experience, occupational group, wage, type of job, contract type, job tenure, working time, union status, institutional sector, industry, type of collective bargaining, training status, and yearly dummy variables (see Table A.3).
- Number of observations: 12,241.
- (&) indicates the base category.
- Asterisks indicate significance at, respectively, 5 per cent (*) and 1 per cent (**).

Appendix

Description of the working conditions indicators:

- *General working conditions*. It incorporates information on a wide array of variables regarding the type of job: lack of subordination of worker's tasks to the pace of a machine; working in a team base; not doing night-work/shift-work; less than 45 minutes to commute; not being bored at work; not finishing the working day too much tired or stressed; not working under dangerous conditions; and not performing a strong physical effort at work.
- *Pride*. This indicator is constructed using workers' answers to questions about: the utility of their work to help people; the profit of their work to society; the pride of being working in their current firms; the pride in their work; and the identification of workers with the problems faced by the firms where they are currently working.
- *No alienation*. It contains information on the following variables: workers' interest in changing their current jobs; lack of boredom in the working place; lack of distraction during the working time; working activity with either interest or attraction; participation on decisions related to job tasks; possibility to give an opinion about their work; consideration of workers' suggestions from their heads; and workers' knowledge on the structure and the objectives of the firms where they are currently working.
- *Participation*. This indicator resumes information about workers' participation on decisions related to: the performance of their work; the possibility to give an opinion in relation to their working activity; workers' perception of the consideration of their suggestions from their heads; the existence of a stimulating working environment; and the participation on company-provided training and firm profits.
- *Integration*. It contains information on the following aspects regarding integration in the workplace: workers' knowledge about the structure and the objectives of the firms where they are currently working; workers' knowledge about firms' collective agreements; workers' knowledge about firms' supply of company-based training activities to their workforce; workers' personal relations with their co-workers and their heads; and workers' attitude towards working harder to favour firms' objectives.
- *Autonomy*. This indicator is built using information related to four facets: creativity (workers' perception of their work as interesting and workers' participation on decisions affecting their job), participation (possibility to give an opinion in relation to their work activity and consideration of workers' suggestions from their heads),

integration (workers' knowledge of the structure and the objectives of the firms where they are working) and flexibility (workers' decision on the moment of starting and ending their ordinary working day, possibility to enjoy a rest during the working day, and possibility to take a day off if needed without necessarily making it up later).

The majority of the variables included in the indicators take values 0-1 (corresponding to possible answers 'no'/'yes'). Some of them are ranked on a five-point scale (1-5) but they have been reduced to a 0-1 variable. All of them are considered equally important. The indicators are normalized in order to range from 0 to 10. This is done using the following formula:

$$I = 10 * \sum_{i=1}^{n} x_i / n$$

where I is the corresponding indicator, x_i is the set of variables related to the working conditions questions responded by employees, and n is the total number of these variables included in each indicator. The mean levels of the six indicators for the whole sample and broken down by workplace-size categories are provided in Table 1.

Table A.1. Distribution of the variables used in the empirical analysis. Spain: ECVT (2000-2003).

GENDER	
Man	0.644
Woman	0.356
MARITAL STATUS	
Single	0.332
Married	0.604
Other	0.064
CHILDREN	
No	0.408
1 child	0.196
2 children	0.290
3+ children	0.106
EDUCATIONAL ATTAINMENT	
Less than compulsory secondary	0.177
Compulsory secondary	0.253
Non-compulsory secondary	0.130
Vocational training	0.205
University	0.235
L.M. EXPERIENCE (years)	19.0
REGION	
Andalucia	0.099
Aragón	0.054
Asturias	0.048
Baleares	0.042
Canarias	0.042
Cantabria	0.038
Castilla La Mancha	0.049
Castilla León	0.055
Cataluña	0.109
Com. Valenciana	0.069
Extremadura	0.034
Galicia	0.067
Madrid	0.105
Murcia	0.047
Navarra	0.042
País Vasco	0.067
La Rioja	0.033
SIZE OF THE MUNICIPALITY	
<10 thousand	0.227
10-100 thousand	0.344
100-250 thousand	0.182
>250 thousand	0.246
TYPE OF CONTRACT	
Open-ended	0.756
Fixed-term	0.244
NET MONTHLY WAGE (euros)	
<450	0.048
450-600	0.081
600-900	0.290
900-1,200	0.242
1,200-2,400	0.179

>2,400	0.056
No answer	0.104
OCCUPATION	
White collar high skilled	0.297
White collar low skilled	0.244
Blue collar high skilled	0.269
Blue collar low skilled	0.190
TYPE OF JOB	
Manager/Supervisor	0.178
Simple employee	0.822
JOB TENURE (years)	10.4
WORKING HOURS	
Full-time	0.915
Part-time	0.085
SECTOR	
Public	0.217
Private	0.783
EMPLOYER SIZE	0.000
1-9 workers	0.275
10-49 workers	0.286
50-99 workers	0.089
100-499 workers	0.143
500+ workers	0.208
INDUSTRY	
Agriculture	0.034
Building	0.115
Energy, metals and chemicals	0.088
Machinery and equipment	0.041
Other manufacturing	0.104
Traditional services	0.222
Productive services	0.115
Social services	0.153
Personal services	0.040
Public services	0.089
TRAINING STATUS	
Firm does not provide	0.576
Firm provides-Worker participates	0.318
Firm provides-Worker does not participate	0.106
UNION AFFILIATION	
No	0.787
Yes	0.213
COLLECTIVE BARGAINING	
Higher-level	0.539
Firm-level	0.461
YEAR	
2000	0.209
2001	0.273
2002	0.259
2003	0.259
OBSERVATIONS	12,241

Table A.2. Estimates of ordered probit models on working conditions indicators. Spain: ECVT (2000-2003).

	General conditions		Pride		No alienation		Participation		Integration		Autonomy	
	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat
Woman	0.202	8.8	-0.137	-5.8	-0.139	-5.8	-0.046	-2.0	-0.070	-3.0	-0.183	-8.0
Ed: Compulsory secondary	0.137	4.6	0.056	1.8	0.130	4.2	0.127	4.1	0.082	2.6	0.126	4.2
Ed: Non-compulsory secondary	0.164	4.3	-0.057	-1.4	0.173	4.4	0.142	3.6	0.216	5.4	0.231	6.0
Ed: Vocational training	0.065	1.9	-0.022	-0.6	0.259	7.4	0.186	5.4	0.140	4.0	0.219	6.5
Ed: University	0.247	6.1	-0.125	-3.0	0.252	6.0	0.218	5.3	0.225	5.4	0.316	7.8
Labour market experience	-0.002	-0.5	0.001	0.2	0.000	-0.1	0.004	1.3	-0.002	-0.6	0.008	2.6
LME squared	0.020	3.0	0.016	2.3	0.016	2.3	0.003	0.4	0.013	1.9	-0.005	-0.7
Occ: White-collar high-skilled	0.695	19.4	0.393	10.7	0.766	20.5	0.497	13.6	0.322	8.8	0.680	19.0
Occ: White-collar low-skilled	0.295	9.3	0.263	8.0	0.404	12.4	0.257	7.9	0.202	6.1	0.331	10.4
Occ: Blue-collar high-skilled	0.026	0.8	0.104	3.3	0.254	8.1	0.134	4.3	0.022	0.7	0.101	3.3
Managerial/Supervision tasks	0.170	6.4	0.341	12.4	0.438	15.2	0.532	19.8	0.375	14.0	0.681	25.5
Fixed-term	-0.007	-0.3	-0.130	-5.2	-0.257	-10.3	-0.163	-6.6	-0.138	-5.4	-0.190	-7.8
Part-time	0.302	8.5	-0.108	-3.0	-0.042	-1.1	0.085	2.4	0.049	1.3	0.084	2.4
Private sector	0.040	1.1	-0.047	-1.2	-0.063	-1.6	0.186	4.9	0.111	2.9	0.105	2.8
Ind: Construction	-0.162	-2.7	0.188	3.1	0.320	5.3	0.184	3.0	-0.002	0.0	0.176	3.0
Ind: Energy, metals and chemicals	-0.418	-6.7	0.053	0.8	0.216	3.4	0.078	1.2	-0.056	-0.9	0.062	1.0
Ind: Machinery and equipment	-0.152	-2.1	0.089	1.2	0.212	2.9	0.166	2.3	-0.053	-0.7	0.083	1.2
Ind: Other manufacturing	-0.156	-2.6	0.072	1.2	0.205	3.3	0.150	2.4	0.012	0.2	0.182	3.0
Ind: Traditional services	-0.226	-3.9	0.182	3.0	0.283	4.8	0.243	4.0	0.008	0.1	0.203	3.4
Ind: Productive services	-0.002	0.0	0.148	2.3	0.223	3.5	0.196	3.1	-0.054	-0.8	0.152	2.4
Ind: Social services	-0.233	-3.6	0.653	9.7	0.516	7.6	0.326	4.8	0.107	1.6	0.364	5.5
Ind: Personal services	-0.105	-1.5	0.255	3.5	0.420	5.7	0.328	4.4	0.018	0.2	0.433	6.0
Ind: Public services	0.024	0.3	0.328	4.5	0.225	3.0	0.126	1.7	0.069	0.9	0.321	4.5
Firm-level bargaining	-0.030	-1.5	0.061	2.9	0.094	4.4	0.004	0.2	0.119	5.6	0.021	1.0
Union member	-0.122	-5.1	-0.056	-2.3	-0.105	-4.1	-0.098	-4.0	-0.017	-0.7	-0.093	-3.9

Control variables (base category): gender (man), marital status (single), children (no children), educational attainment (no studies/primary studies), region (Andalucia), size of the municipality (<10,000), labour market experience, occupational group (blue-collar low-skilled), type of job (employee), contract type (open-ended), working time (full-time), union status (non-member), institutional sector (public), industry (agriculture), firm size (1-9 workers), type of collective bargaining (sectoral/regional agreement) and yearly dummy variables (2000). The table does not provide the results for the whole set of variables. These are available from the author upon request.

Table A.3. Estimates of ordered probit models on job satisfaction measures. Spain: ECVT (2000-2003).

	Overall job satisfaction				With work organization				With job environment				With security at work				With pay			
	(1)		(2)		(1)		(2)		(1)		(2)		(1)		(2)		(1)		(2)	
	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat	Coeff.	z-stat
Woman	0.094	4.0	0.103	4.3	0.050	2.0	0.036	1.4	0.033	1.3	0.014	0.5	0.035	1.4	0.001	0.0	0.146	5.9	0.144	5.7
Ed: Compulsory secondary	0.000	0.0	-0.075	-2.5	-0.019	-0.6	-0.089	-2.7	0.055	1.7	-0.003	-0.1	0.041	1.3	-0.019	-0.6	0.032	1.0	-0.010	-0.3
Ed: Non-compulsory secondary	-0.177	-4.6	-0.257	-6.6	-0.141	-3.4	-0.211	-5.0	0.019	0.5	-0.032	-0.8	0.016	0.4	-0.047	-1.1	-0.025	-0.6	-0.055	-1.3
Ed: Vocational training	-0.063	-1.8	-0.158	-4.6	-0.086	-2.4	-0.176	-4.8	-0.005	-0.2	-0.070	-1.9	-0.032	-0.9	-0.100	-2.7	-0.072	-2.0	-0.127	-3.5
Ed: University	-0.235	-5.7	-0.319	-7.6	-0.153	-3.5	-0.217	-4.9	-0.058	-1.3	-0.118	-2.6	-0.073	-1.7	-0.150	-3.3	-0.129	-3.0	-0.167	-3.8
Labour market experience	-0.016	-4.9	-0.016	-4.9	-0.022	-6.3	-0.022	-6.2	-0.009	-2.6	-0.008	-2.3	-0.016	-4.6	-0.016	-4.4	-0.019	-5.6	-0.018	-5.4
LME squared	0.041	6.0	0.033	4.8	0.052	7.2	0.045	6.1	0.031	4.2	0.022	2.9	0.044	6.1	0.037	5.0	0.035	5.0	0.029	4.0
Occ: White-collar high-skilled	0.205	5.7	-0.175	-4.7	0.039	1.0	-0.291	-7.2	0.250	6.4	-0.058	-1.4	0.322	8.3	0.041	1.0	0.076	2.0	-0.158	-4.0
Occ: White-collar low-skilled	0.113	3.5	-0.126	-3.9	0.037	1.1	-0.173	-5.0	0.236	6.8	0.061	1.7	0.255	7.4	0.098	2.8	0.033	1.0	-0.113	-3.3
Occ: Blue-collar high-skilled	0.099	3.2	-0.003	-0.1	-0.020	-0.6	-0.124	-3.7	0.019	0.6	-0.060	-1.8	0.028	0.8	-0.035	-1.1	0.030	0.9	-0.040	-1.2
Managerial/Supervision tasks	0.126	4.6	-0.094	-3.4	0.118	4.1	-0.077	-2.6	0.084	2.9	-0.111	-3.6	0.095	3.3	-0.077	-2.5	0.025	0.9	-0.110	-3.7
Fixed-term	-0.137	-5.6	-0.047	-1.9	-0.120	-4.6	-0.039	-1.5	-0.055	-2.1	0.026	1.0	-0.116	-4.4	-0.055	-2.1	-0.049	-1.9	0.014	0.5
Part-time	0.041	1.0	-0.032	-0.8	0.081	1.9	0.024	0.6	0.109	2.5	0.050	1.1	0.064	1.5	-0.008	-0.2	0.218	5.2	0.185	4.3
Wage: 450-600 euros	0.109	1.9	0.154	2.7	0.009	0.2	0.048	0.8	-0.008	-0.1	0.030	0.5	-0.006	-0.1	0.037	0.6	0.197	3.3	0.231	3.9
Wage: 600-900 euros	0.189	3.5	0.182	3.3	0.063	1.1	0.057	1.0	0.006	0.1	0.003	0.0	-0.012	-0.2	-0.002	0.0	0.420	7.4	0.433	7.6
Wage: 900-1,200 euros	0.378	6.6	0.274	4.8	0.174	2.9	0.062	1.0	0.067	1.1	-0.029	-0.5	0.029	0.5	-0.037	-0.6	0.831	13.9	0.793	13.1
Wage: 1,200-2,400 euros	0.477	7.8	0.278	4.5	0.292	4.5	0.092	1.4	0.165	2.5	-0.015	-0.2	0.129	2.0	-0.009	-0.1	1.239	19.3	1.159	17.8
Wage: >2,400 euros	0.565	7.8	0.310	4.2	0.372	4.8	0.135	1.7	0.275	3.5	0.038	0.5	0.211	2.7	0.010	0.1	1.605	20.7	1.513	19.3
Wage: Without information	0.388	6.5	0.299	5.0	0.266	4.2	0.173	2.7	0.135	2.1	0.061	0.9	0.069	1.1	0.015	0.2	0.887	14.2	0.854	13.5
Private sector	-0.057	-1.5	-0.103	-2.7	0.129	3.2	0.091	2.2	0.108	2.7	0.070	1.7	0.260	6.4	0.234	5.7	0.008	0.2	-0.025	-0.6
Ind: Construction	0.179	3.0	0.103	1.7	0.036	0.6	-0.039	-0.6	-0.073	-1.1	-0.138	-2.1	0.107	1.7	0.089	1.4	0.031	0.5	-0.031	-0.5
Ind: Energy, metals and chemicals	0.106	1.7	0.144	2.3	-0.107	-1.6	-0.098	-1.4	-0.213	-3.1	-0.186	-2.7	-0.013	-0.2	0.061	0.9	-0.017	-0.3	-0.009	-0.1
Ind: Machinery and equipment	0.139	1.9	0.115	1.6	-0.012	-0.2	-0.056	-0.7	-0.006	-0.1	-0.026	-0.3	0.243	3.2	0.267	3.4	0.041	0.5	0.008	0.1
Ind: Other manufacturing	0.094	1.6	0.047	0.8	-0.080	-1.2	-0.138	-2.1	-0.057	-0.9	-0.091	-1.4	0.144	2.2	0.149	2.3	-0.021	-0.3	-0.059	-0.9
Ind: Traditional services	0.183	3.1	0.099	1.7	0.042	0.7	-0.049	-0.8	-0.014	-0.2	-0.079	-1.2	0.226	3.6	0.217	3.4	-0.026	-0.4	-0.097	-1.6
Ind: Productive services	0.118	1.9	0.037	0.6	-0.019	-0.3	-0.102	-1.5	0.002	0.0	-0.063	-0.9	0.212	3.2	0.187	2.8	-0.046	-0.7	-0.112	-1.7
Ind: Social services	0.339	5.1	0.121	1.8	0.120	1.7	-0.082	-1.1	0.089	1.2	-0.079	-1.1	0.297	4.2	0.217	3.0	-0.019	-0.3	-0.170	-2.4
Ind: Personal services	0.245	3.4	0.085	1.2	0.061	0.8	-0.074	-0.9	0.143	1.8	0.038	0.5	0.439	5.6	0.407	5.1	-0.061	-0.8	-0.178	-2.3

Ind: Public services	0.203	2.8	0.090	1.2	0.034	0.5	-0.055	-0.7	0.036	0.5	-0.058	-0.7	0.174	2.3	0.128	1.7	-0.089	-1.2	-0.165	-2.2
Training: Firm provides & worker participates	0.214	8.9	-0.124	-4.5	0.111	4.4	-0.350	-11.9	0.123	4.7	-0.255	-8.6	0.189	7.3	-0.174	-5.9	0.049	1.9	-0.225	-7.8
Training: Firm provides & worker does not participate	0.194	5.8	0.075	2.2	0.092	2.6	-0.090	-2.4	0.150	4.2	-0.013	-0.4	0.181	5.1	0.022	0.6	0.093	2.7	-0.002	-0.1
Firm-level bargaining	0.053	2.6	0.029	1.4	0.017	0.8	-0.018	-0.8	-0.020	-0.9	-0.055	-2.4	-0.035	-1.6	-0.063	-2.8	0.001	0.1	-0.020	-0.9
Union member	-0.090	-3.7	-0.027	-1.1	-0.112	-4.4	-0.065	-2.5	-0.099	-3.8	-0.048	-1.8	-0.188	-7.2	-0.149	-5.7	-0.097	-3.8	-0.057	-2.2
General working conditions			0.091	14.8			0.071	10.8			0.099	14.8			0.121	18.2			0.054	8.4
Pride			0.071	18.6			0.056	13.6			0.051	12.1			0.032	7.9			0.032	8.1
No alienation			0.143	23.3			0.112	17.3			0.080	12.2			0.063	9.6			0.087	13.7
Participation			0.100	16.1			0.148	22.0			0.101	14.8			0.102	15.2			0.092	14.1
Integration			0.025	4.8			0.071	12.4			0.066	11.3			0.071	12.4			0.026	4.7
Autonomy			-0.030	-4.0			-0.091	-11.4			-0.044	-5.4			-0.052	-6.5			-0.050	-6.4

Control variables (base category): gender (man), marital status (single), children (no children), educational attainment (no studies/primary studies), region (Andalucía), size of the municipality (<10,000), labour market experience, occupational group (blue-collar low-skilled), monthly wages (<450 euros per month), type of job (employee), contract type (open-ended), working time (full-time), union status (non-member), institutional sector (public), industry (agriculture), firm size (1-9 workers), type of collective bargaining (sectoral/regional agreement), training status (firm does not provide training) and yearly dummy variables (2000). The table does not provide the results for the whole set of variables. These are available from the author upon request.