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Facets of Job Satisfaction and Overall Job Satisfaction

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Facets of Job Satisfaction and Overall Job Satisfaction

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Abstract

Overall job satisfaction is likely to reflect the combination of partial satisfactions related to various features of one's job, such as pay, security, the work itself, working conditions, working hours, and the like. The level of overall job satisfaction emerges as the weighted outcome of the individual's job satisfaction with each of these facets. The purpose of this study is to determine the extent and importance of partial satisfactions in affecting and explaining overall job satisfaction. Using the European Community Household Panel (ECHP) a two layer model is estimated which proposes that job satisfaction with different facets of jobs are interrelated and the individual's reported overall job satisfaction depends on the weight that the individual allocates to each of these facets. For each of the ten countries examined, satisfaction with the intrinsic aspects of the job is the main criterion which workers use to evaluate their job and this is true for both the short and the long term.

JEL classification: C23, C25, I31

Keywords: Overall job satisfaction; earnings; working conditions; working time; job security; type of work.

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1.Introduction

Job satisfaction is an important, readily available measure of the worker's utility derived from the job. It allows the identification of those characteristics which have a differential impact on the worker's utility. This is important since higher job satisfaction is likely to result in higher performance at work, decreased absenteeism and tardiness (Lawler & Porter, 1967; Locke, 1969; Hamermesh, 1977; Freeman, 1978; Borjas, 1979).

There are a number of empirical studies which investigate the effect of individual and job characteristics on job satisfaction¹ although the effect of any individual or job characteristic on workers' job satisfaction is also dependent on a number of features like institutions or social norms (Sousa-Poza & Sousa-Poza, 2000)². Clark and Oswald (1996) and Groot and Van de Brink (1999) establish that there is a U-shaped relationship between age and job satisfaction. Studies show that job satisfaction increases with wage (Lydon & Chevalier, 2002). The effect of gender on job satisfaction is not unambiguous. Clark (1997) reports that British females are more satisfied than their male counterparts and Bender *et. al.* (2006) show that this is due to the fact that female workers are able to be in jobs that offer flexibility. Yet, Kaiser (2002) and Moguerou (2002) report that females appear to be more satisfied than their male counterparts in a number of continental European countries and in the U.S. Clark & Oswald, (1996) and Drakopoulos & Theodossiou (1997) show that the level of job satisfaction diminishes as the number of working hours increases. Drakopoulos & Theodossiou (1997) and Sloane & Williams (2000) show that

¹ Recent studies include Sousa-Poza & Henerger (2000), Sousa-Poza & Sousa-Poza (2000a,b), Blanchflower et al.(2001), Huang & Vliert (2003a, 2003b, 2004), Medgyesi & Robert (2003), Stier & Lewin-Epstein (2003), Ahn & Garcia (2004), Bokerman (2004), Deloffre & Rioux (2004), De Witte et al (2004), Hui at al. (2004), Sweeney & McFarlin (2004), Clark (2005) Clark & Senik (2005), Clark & Postel-Vinay (2004), Green & Tsitsianis (2005), Kaiser (2006), Pouliakas & Theodossiou (2005), Bender et al. (2006) Diaz & Vieiri (2005) and Davoine & Erhel (2006).

² Sousa-Poza and Sousa-Poza (2000) analysed job satisfaction on the assumption that it depends on the balance between work-role inputs (education, working time, effort) and work-role outputs (wages, fringe benefits, status, working conditions, intrinsic aspects). Thus, if work work-role outputs ("pleasures") increase relative to work-role inputs ("pains"), then job satisfaction will increase.

workers who work in small firms report higher job satisfaction levels compared to those working in large firms. This implies that working in a small unit offers more job control and less repetitive tasks. However, satisfaction with job security increases with firm size (Idson, 1996; Lang & Johnson, 1994). Kaiser (2002) shows that the effect of occupational hierarchy on job satisfaction is country-specific. Davoine (2006) finds that the effect of education on job satisfaction is also country specific.

The fundamental assumption of the literature reviewed above is that individuals make a judgement about their job as a whole. Yet, research has shown that job satisfaction also depends on the intrinsic and extrinsic aspects involved in the job tasks (Warr, 1999). Intrinsic aspects, for example, include the opportunity for personal control, the possibility of utilizing one's skills, the variety of job tasks, whether there is supportive or controlling supervision and opportunities for personal contracts (Frey & Stutzer, 2002). Thus, like other emotional feelings, job satisfaction arises from a variety of feelings related to the intrinsic and extrinsic characteristics of the job, like feelings about the working conditions, about the level of earnings, about the risk of losing the job, about the opportunity for personal control and so on. Satisfaction with the level of earnings is not the same as satisfaction with job security, which is not the same as satisfaction with working conditions, but all are forms of satisfaction that occupy different points on the scale of satisfaction. Hence, overall job satisfaction can be viewed as a weighted outcome of the individual's satisfaction with each one of the aspects or facets of the job. This is similar to Lancaster's theory of consumption behaviour (Lancaster, 1966, 1971) where the utility that is derived from consuming a given good depends on the utilities that are associated with its characteristics. This view postulates that individuals do not simply make a judgement about their job as a whole but rather that their level of overall job satisfaction is a combination of different levels of satisfaction with the different characteristics of the job. This implies that there is the possibility that individuals may value differently the different aspects of the job, intrinsic of

extrinsic, so an individual may remain equally satisfied with her or his job when certain aspects of job satisfaction change, provided that there is an accompanied compensating change of other aspect or aspects of the job. Hence, the same stated job satisfaction level can be obtained through different combinations of job facets reflecting satisfaction with intrinsic and extrinsic features of the job.

In this view, each job is thought to have a number of aspects or facets from which utility is derived. The different mix of such aspects leads to a differentiated job. Thus, two different mixes of characteristics for the same job may be viewed by the worker as equally attractive, provided that a low content in one desirable aspect is compensated by an increase in another. By considering the mix of properties, the intrinsic qualities of individual jobs can be incorporated into the analysis. The same stated job satisfaction level can be obtained through different combinations of job facets reflecting intrinsic and extrinsic features of the job. This approach to investigating job satisfaction is better suited to address a number of important issues such as the effects of the major changes of work organisation that firms have experienced during the last three decades on job satisfaction. These changes have had an impact on pay practices, job contents, working conditions and environment and job security (Lindbeck & Snower, 1996; Blanchflower & Oswald, 1999; Aarason & Sullivan, 1998; Nickell *et al*, 2002). Further, this approach offers a new perspective in terms of human resource management policies. For instance, in human resource management there is an emphasis on policies which increase overall job satisfaction in order to succeed in reducing labour turnover and/or in raising labour productivity. However, if satisfaction with a particular facet of the job is what really drives labour turnover or productivity then overall job satisfaction is a noisy proxy. This implies that human resource managers should be more concerned in targeting the satisfaction with the relevant facets of a job rather than the overall job satisfaction.

This paper explores the relationship between overall job satisfaction and satisfaction with

important aspects of the work environment which are linked to organisational changes in the workplace. Hence, it does not focus on evaluating the effect of different individual and job characteristics on the individual's satisfaction with the different aspects of the job or identifying the national differences. This is dealt with by the plethora of studies some of which are reviewed above. This paper evaluates the effect of satisfaction of intrinsic aspects such as satisfaction with the type of work, and extrinsic aspects such as satisfaction with working conditions, with working time, with job insecurity and with earnings on the overall job satisfaction. It develops a two-layer model³ where job satisfaction is viewed as an aggregate concept consisting of different components or facets. The results show that satisfaction with different facets of jobs are interrelated and the reported overall job satisfaction depends on the weight which is attached to each of these facets by the individual worker. The econometric methodology accounts for unobserved sources of individual heterogeneity and for time-specific effects. The remainder of the paper is organised as follows: Section 2 discusses the estimation methodology; section 3 discusses the data used in this study; section 4 presents the results and their interpretation; and section 5 concludes.

2. The Empirical Model

Let S denote overall job satisfaction. Let s^j , $j = 1, \dots, J$, denote satisfaction with respect to the j^{th} facet of one's job. It is assumed that S can be explained by the satisfaction levels, s^j with respect to all job facets, $j = 1, \dots, J$. Suppose that the researcher observes a set of K individual and job characteristics x_k , $k = 1, \dots, K$ that are potential determinants of the facet of job satisfaction levels s^j , $j = 1, \dots, J$.

³ This is similar to Van Praag *et al* (2002) and Van Praag & Ferrer-i-Carbonell (2004).

The modelling strategy should account for this interdependence since an individual's level of overall job satisfaction depends on her/his level of satisfaction with each of the job facets which in turn depends on a number of exogenous explanatory variables. This can be done within a two-layer model framework of the type:

$$S = \phi(s^1, s^2, \dots, s^J) \quad (1)$$

$$s^j = \gamma(x_1, x_2, \dots, x_K), \quad j = 1, 2, \dots, J \quad (2)$$

which is a $J+1$ -equation model. It should be expected that satisfaction levels with respect to different facets of a job interact. For instance, the satisfaction level that an individual might report with respect to working conditions is likely to be conditional on how satisfied she/he is with respect to earnings and *vice versa*. Therefore, the two-layer model (1)-(2) is a reduced-form model from which all such relationships have been eliminated. Furthermore, no matter how large is the set of explanatory variables x_k , $k = 1, \dots, K$, the model cannot account for all the determinants of one's level of satisfaction. Let y_h , $h = 1, \dots, H$ denote the set of satisfaction determinants which one does not observe. Some of these determinants explain the level of satisfaction with respect to some job facets and hence the overall job satisfaction. Given the above, the model can be written as:

$$S = f(s^1, s^2, \dots, s^J, y_1, y_2, \dots, y_H) \quad (3)$$

$$s^j = g(x_1, x_2, \dots, x_K, y_1, y_2, \dots, y_H), \quad j = 1, 2, \dots, J \quad (4)$$

The qualitative nature of the dependent variables and the simultaneous nature of the equation (3) with the auxiliary ones (4) complicate the estimation procedure. The approach chosen in this study to deal with these issues is as follows: First, equation (3) has ordered qualitative variables on both sides of the equality. Though this poses no particular econometric problem, it implies that

there should be a large number of dummy variables on the right-hand side.⁴ This makes equation (3) computationally unattractive and it yields results that are not easily interpretable. For this reason, following Freeman (1978), transformed versions of the facet satisfaction variables s^j , $j = 1, \dots, J$ are used which can be obtained by rescaling the variable according to the standard normal distribution. With this unit transformation, partial job satisfactions are z-scores measuring the number of standard deviations between a given response and the mean. Second, the explanatory variables s^j , $j = 1, \dots, J$, in equation (3) are correlated with the unobserved variables y_h , $h = 1, \dots, H$. Hence, if these variables are left in the error term in equation (3), any estimate of the effect of partial satisfaction levels on the overall job satisfaction would suffer from endogeneity bias. To overcome this problem the methodology of Van Praag *et al* (2002) is used. First the J auxiliary equations in (4) are estimated and the corresponding residuals are calculated in order to estimate the part attributable to the variables y_h , $h = 1, \dots, H$; that is, the part common to all the residuals. This is defined as the first principal component of the $J \times J$ error covariance matrix of the residuals retrieved after estimating the auxiliary equations (4). The idea is that after inclusion of the latter variable in equation (3), one can reasonably assume that the remaining error in equation (3) is no longer correlated with the partial satisfaction variables s^j , $j = 1, \dots, J$.

The longitudinal dimension of the data is exploited in two ways. First, equations (3)-(4) are estimated by individual random effects by controlling for time fixed effects through a set of year dummies. However, this may be problematic since the individual random effect model may overlook the potential correlation between individual random effects, such as innate ability, with some explanatory variable such as wage or household income. Hence, the Mundlak (1978)

⁴ If the number of satisfaction levels is, say, m , then the number of dummy variables that should be included is $J \times (m - 1)$.

methodology is applied by decomposing each of the disturbance terms into a sum of a zero-mean individual random effects term and a zero-mean pure error term.

Suppose one is to estimate the following random effect model:

$$z_{it} = a_t + \sum_{h=1}^H b_h v_{hit} + \alpha_i + \varepsilon_{it}, \quad i = 1, 2, \dots, N, \quad t = 1, 2, \dots, T \quad (5)$$

where the individual random effect, α_i is likely to be correlated with some, if not all the explanatory variables v_h . Suppose that the correlation takes place only through the long run components of the v_h variables and that these can be captured via the average, \bar{v}_{hi} , of these variables over time. Then, instead of estimating (5), one could rather estimate the following specification:

$$z_{it} = a_t + \sum_{h=1}^H b_h v_{hit} + \sum_{h=1}^H c_h \bar{v}_{hi} + \eta_i + \varepsilon_{it}, \quad i = 1, 2, \dots, N, \quad t = 1, 2, \dots, T \quad (6)$$

where $\eta_i = \alpha_i - \sum_{h=1}^H c_h \bar{v}_{hi}$ is such that $E(\eta_i v_{hi}) = 0$, $h = 1, \dots, H$. This is applicable to the explanatory variables which show significant variability over time

The above procedure introduces some dynamics in the model by distinguishing between permanent and transitory effects for important explanatory variables x_k , $k = 1, \dots, K$, in each of the auxiliary equations (4), and for the partial satisfaction variables s^j , $j = 1, \dots, J$, in equation (3). To illustrate, consider a variable which has significant variability over time and across individuals. Following Van Praag *et al* (2002), for any exogenous variable, say x_k , including $b_k x_{kit} + c_k \bar{x}_{ki}$ in the right-hand side of the estimated equation is equivalent to including $b_k (x_{kit} - \bar{x}_{ki}) + (b_k + c_k) \bar{x}_{ki}$. This allows explicit decomposition of the effect of a variable x_k into two distinct effects. Differences across individuals in the averages \bar{x}_{ki} measure *between*

effects and the individual deviations from the averages per individual, $x_{kit} - \bar{x}_{ki}$, measure *within* effects. The coefficients, b_k , reflect shock or transitory effects and the coefficients $b_k + c_k$ measure level or permanent effects.

3. The Data

This study uses the eight waves (1994-2001) of the European Community Household Panel (ECHP) which has a unique structure since it offers data for the European Union countries derived from identical questionnaires across counties. The ECHP provides information on a variety of socio-demographic and job characteristics of the respondents. Crucially for the purpose of this study it offers information on the individual's evaluation about his or her work environment based on job satisfaction ratings. Indicators of the "overall job satisfaction" and of the satisfaction with five job facets are derived from the following questions:

- 1) *How satisfied are you with your work or main activity?*
- 2) *How satisfied are you with your present job in terms of earnings?*
- 3) *How satisfied are you with your present job in terms of job security?*
- 4) *How satisfied are you with your present job in terms of type of work?*
- 5) *How satisfied are you with you present job in terms of working times (day time, night time, shifts etc)?*
- 6) *How satisfied are you with your present job in terms of working conditions/environment?*

The answers are ranked in 6-level scale from 1 (completely dissatisfied) to 6 (completely satisfied).

Due to data limitations the analysis is restricted to ten countries (Austria, Belgium, Denmark, Finland, France, Greece, Italy, Netherlands, Portugal and Spain). The self-employed are excluded and the sample is restricted to employees of working age (17 to 65).

The ten European countries are studied separately in order to identify potential national similarities and differences for the effect of each facet of job satisfaction on the overall job satisfaction. However, in doing so, the facets of job satisfaction (in equation (4) above) first need to be estimated. Hence, a number of key variables identified in the literature are used to explain partial job satisfactions. In particular, along with a set of personal characteristics (such as gender, marital status, experience, education, health and past unemployment experience), the establishment size, private / public sector, industrial sectors, occupation, the type of contract (permanent and temporary), the personal labour income and the equivalised household income⁵ are used as regressors. Appendix Table 1 details the definitions of these variables.

Appendix Table 2 reports the means of the Overall Job Satisfaction and the Facet Satisfactions of the eight waves of the ECHP (1994-2001) for the ten European countries⁶. Comparing the unweighted averages across countries, workers in northern Europe report higher overall job satisfaction and for every single facet of job satisfaction than those living in the Mediterranean countries (Greece, Portugal, Italy and Spain). Workers in countries such as Denmark and Austria report a noticeably higher average on almost every partial job satisfaction compared to the remainder. Interestingly, the lowest scores are associated with satisfaction with earnings for every European country except in the Netherlands. These differences among European countries may reflect differences in the general macroeconomic environment or, as Deloffre and Rioux (2004) argue, such cross-national differences may reflect differences in cultural background. In this paper it is shown that an important part of these differences may be attributed to the different way that workers value the different facets of their jobs across countries.

⁵ The equivalised household income takes into account the family structure. It is used by several authors on the job satisfaction literature (for example van de Stand *et al*, 1985).

⁶ Note that Austria and Finland have entered the ECHP survey in 1995 and 1996, respectively.

4. The Relationship of Overall Job Satisfaction with the Satisfactions derived from the Job Facets

The estimation of the five auxiliary equations (4) corresponding to the five facets of job satisfaction (satisfaction with earnings, with job security, with the type of work, with working conditions and with working times) are reported in the Appendix Tables 3 to 7, but they are not discussed as they are auxiliary to the focus of this paper. Their specification is based on the literature reviewed in section 1 and the results are in line with this literature. As it is found in this literature, although there are important similarities across countries as to the role of some of the determinants of partial facets of job satisfaction, there are also notable differences⁷.

The Mundlak approach is not applied on all the regressors as not all of the explanatory variables show significant variability over time. Thus, when estimating auxiliary satisfaction equations (4), only log gross hourly wages and log gross equivalised household income are introduced in the way that the transitory and permanent effect can be captured.

Table 1 reports the results from the estimation of the relationship between overall job satisfaction and satisfaction with important aspects of the work environment which are linked to organisational changes in the workplace. The Mundlak approach is used on both the satisfaction levels with job facets and their time averages. The results show that, with the exception of the Netherlands and Spain, the instrumental variable (IV) is highly significant, suggesting that endogeneity is indeed a crucial issue⁸.

Satisfaction with each of the five job facets investigated in this study is a highly significant determinant of the overall satisfaction for all ten countries. In line with the usual interpretation of the Mundlak approach this finding suggests that the short run effect of the five partial satisfaction measures included in the model are important contributors to overall job

⁷ Yet, their interpretation is difficult in the absence of specific knowledge on the potential causes.

⁸ Recall that the instrument are derived as the first principal component of the residual vectors from the partial satisfaction equations (3). The first component explains 42% to 52% of the total variance depending on the country examined.

satisfaction. However, the mean satisfaction with the different aspects of the job which capture the long term effect of the respective facet on the overall satisfaction turn out not to be all statistically significant. It is worth noting that in the case of satisfaction with earnings and satisfaction with the type of work, both the short term and the long term effects turn out to be significant for all countries with the exception of Denmark and the Netherlands. This highlights the importance of these two aspects of the job in shaping the individual's overall job satisfaction in both the short and in the long run. In contrast, the long run effect of the satisfaction with the other job facets on the overall satisfaction does not appear to be as important for all countries studied. In particular, the coefficients on mean satisfaction with job security are significant only in France, the Netherlands and Spain, on mean satisfaction with working times only in Greece, Italy and Spain and on mean satisfaction with working conditions are significant only in Finland and Greece. In general, the coefficients on the satisfaction with partial satisfactions are much larger than those on the respective mean, indicating that in most cases the important effects are mainly short term effects.

The short run effects of satisfaction with earnings and of satisfaction with the type of work are systematically higher than the corresponding long run effects. In addition, the sign of the coefficients show that higher satisfaction with earnings and/or higher satisfaction with the type of work will yield higher overall job satisfaction both in the long and in the short run. This is not the case of satisfaction with the other job characteristics. The effects of satisfaction with job security, working conditions and working times on overall job satisfaction are systematically positive whereas their respective long run effects are negative when they are statistically significant. This implies that although in the short run the effect of satisfaction with the above facets contribute positively to overall job satisfaction, in the long run these aspects of the job deteriorate with time in the workplace. Hence the workers become dissatisfied in the long run. The results suggest that this occurs in some countries but not in others with respect to satisfaction

with job security, working conditions and/or working times. This, in turn, implies that in some countries these aspects of work deteriorate. The results show that long run satisfaction with working times declines in Greece, Italy and Spain and satisfaction with working conditions declines in Greece and Finland in the long run.

All in all, the above findings suggest that, jobs appear not to be one-dimensional or homogeneous. Overall job Satisfaction is a multi-dimensional space compatible with the view that there are forms of satisfaction that occupy different points on the scale of satisfaction. The overall job satisfaction or utility derived from a job is an aggregation of these forms of satisfaction arising from different aspects of the job. Different mix of facets of the job may generate forms of satisfactions that generate the same overall level of job satisfaction.

Table 2 reports the average cumulative short and long run effects of satisfaction with each facet on the overall job satisfaction. These average cumulative effects are obtained by summing up the short and long run coefficients of each satisfaction facets. The numbers in parentheses report the ranking of the satisfaction with the specific job facet within each country, according to the importance in terms of satisfaction that individuals attach to this facet as reflected in the corresponding cumulative effect. It is shown that there are differences regarding the weight that workers attach to each of the five studied job facets across countries. This suggests that cross-country differences in the overall job satisfaction levels are formed from the way that workers value the various characteristics of their job in different economic, institutional and cultural environment.

The most striking feature of Table 2 is that satisfaction with the type of work is revealed to be the most important determinant of overall job satisfaction. This is a consistent results for all ten countries. It highlights the value which workers attach to the intrinsic attributes of the job. Clearly, the pecuniary aspects of the job do not rank as having the highest importance in forming

individuals' job satisfaction in any of the ten countries. It reflects the view of occupational psychologists who argue that workers are concerned with the type of work which they are contracted to perform (Frey & Stutzer, 2002; Ryan *et al.*, 1996; Bender, 2006). Workers are interested in the intrinsic, non-monetary features of the job such as autonomy, the degree of skill utilization, the challenge in performing job tasks and the like. The intrinsic aspects of a job increase workers' utility more than extrinsic aspects. Lawler & Porter (1967) argue that satisfaction with extrinsic characteristics satisfy mainly lower level needs whereas satisfaction with intrinsic characteristics satisfies higher order needs. According to Frey & Stutzer (2002), the fact that workers value satisfaction with the work itself so highly can also explain why many people undertake unpaid work (volunteer work and charity).

An interesting issue that Table 2 identifies is that although earnings are not ranked first in any of the countries, they are ranked second in most, except in Greece where they are ranked third and in the Netherlands and France where they are ranked fourth. Furthermore, in the southern Europe countries (Spain, Portugal, Italy, and Greece) satisfaction with job security in terms of low risk of job loss is ranked higher compared to the Northern countries reflecting either the higher likelihood of job loss in the former countries or most likely the nature of the welfare institutions in the latter countries which provide a more compensative safety net for the unemployed individuals or that protect individuals when in unemployment. Thus, in Greece, satisfaction with earnings comes third after satisfaction with job security, a result that mirrors the importance which individuals attach to having a job in a country with relatively high unemployment rates and a narrow safety net. In contrast, in France, satisfaction with working conditions and with working schedules ranks higher compared to satisfaction with earnings, but job security appears to be the least important job facet reflecting the fact that France although is a country with relatively high unemployment rates where employment security has decreased between 1985-1995 (OECD, 1997), it is also as country with relatively very stringent

employment protection practices which largely mitigate the feeling of job insecurity (Deloffre & Rioux, 2004).

The results of this study show that, in line with Lancaster's model, jobs are not one-dimensional or homogenous. Hence, it may be expected that a worker may be willing to accept a job involving less of a given desirable facet if he or she is compensated with more of another desirable attribute. The assumed utility model implies a multi-characteristic space compatible with the existence of a number of sub-utilities associated with different characteristics. Thus, the overall utility of a job is the result of an aggregation of all sub-utilities related to a different mix of the job characteristics.

In line with the above, Table 2 also allows the estimation of the "marginal rates of substitution" or "trade off ratios" between satisfaction with different job facets. This is done by taking the ratio of two coefficients associated with two different job facets within the same country. Thus, in order for workers to remain equally satisfied with their jobs when satisfaction with one of the job facets declines, the satisfaction with some other job aspect has to be improved. For instance, if Greek workers are to remain equally satisfied after a decrease in their satisfaction with job security, satisfaction with earnings should increase by a factor $0.490 / 0.470 = 1.04$ whereas if they are to remain equally satisfied after a decrease in their satisfaction with the type of work, satisfaction with earnings should increase by a factor $0.765 / 0.470 = 1.62$. This can be compared to the case of Denmark, for instance. Thus, if Danish workers are to remain equally satisfied after a decrease in their satisfaction with job security, satisfaction with earnings should increase by a factor $0.096 / 0.199 = 0.48$ whereas if they are to remain equally satisfied after a decrease in their satisfaction with the type of work, satisfaction with earnings should increase by a factor $0.879 / 0.199 = 4.41$. Thus, one is able to evaluate whether a change in the satisfaction of a given job characteristic or facet requires more or less than proportional

compensation in the satisfaction of other job characteristics or facets to keep workers in a given country equally satisfied with their jobs.

5. Concluding remarks

This paper differs from the conventional approach in investigating the effect of job characteristics on job satisfaction in that it assumes that jobs are evaluated by workers through a vector of sub-utilities derived from separate job characteristics. Therefore, it is the judgment that individuals make about each of these characteristics which determines their level of overall job satisfaction. Overall job satisfaction is assumed to be the aggregate outcome of partial satisfactions with different job facets. This approach requires the estimation of a two-layer model comprising a set of partial satisfaction equations and an overall job satisfaction equation.

Scitovsky (1976) argued that the most cherished values are priceless and are not for sale and that, furthermore, intrinsic work enjoyment yields greater satisfaction than pay. He proposed that “the difference between liking and disliking one’s work may well be more important than the differences in economic satisfaction that the disparities in our income lead to” (p.103). This study supports this view. For each of the ten countries examined, satisfaction with the type of work is the main criterion which workers use to evaluate their job and this is true for both the short and the long term. In addition, the results clearly show that satisfaction with each of the five job facets is a highly significant contributor to the overall job satisfaction.

The results of this study are important in terms of human resources management. Workers value highly the intrinsic characteristics offered by the job task which they perform. Thus, much attention should be given to the design of the job tasks which lead to the fulfillment of some important intrinsic needs of the workers. In most jobs, the employers can only monitor their employees very partially (Holmstrom & Milgrom, 1991) and hence it is essential for the employers to find ways to enhance the employee’s intrinsic job satisfaction. The organizational

environment which offers to the workers high intrinsic work satisfaction is more likely to be conducive to a situation where employees are successfully engaged in their job tasks and hence constitute a productive workforce.

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Table 1: Overall Job Satisfaction (Ordered probit technique with individual random effect and fixed time effects)

	Austria	Belgium	Denmark	Finland	France	Greece	Italy	Netherlan	Portugal	Spain
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
Satisfaction with Earnings	0.371***	0.252***	0.191***	0.304***	0.285***	0.430***	0.386***	0.130***	0.314***	0.273***
Satisfaction with Job security	0.228***	0.100***	0.079***	0.082***	0.222***	0.456***	0.270***	0.076***	0.363***	0.201***
Satisfaction with Type of work	0.536***	0.570***	0.573***	0.509***	0.480***	0.596***	0.801***	0.351***	0.732***	0.658***
Satisfaction with Working conditions	0.384***	0.362***	0.150***	0.222***	0.324***	0.255***	0.213***	0.168***	0.288***	0.137**
Satisfaction with Working times	0.210***	0.155***	0.103***	0.096***	0.438***	0.173***	0.127***	0.134***	0.089***	0.158***
Mean satisfaction with Earnings	0.070***	0.134***	0.008	0.058**	0.048***	0.040*	0.040**	0.023	0.126***	0.050***
Mean satisfaction with Job security	-0.008	0.043	0.017	-0.003	-0.026	0.034	0.011	0.039**	0.013	-0.037**
Mean satisfaction with Type of work	0.258***	0.362***	0.306***	0.369***	0.331***	0.169***	0.344***	0.178***	0.272***	0.238***
Mean satisfaction with Working times	0.003	0.002	-0.026	0.010	-0.040**	-0.064***	-0.056***	0.043**	0.009	-0.052***
Mean satisfaction with Working conditions	0.025	-0.005	0.028	-0.083***	0.021	-0.060***	-0.022	0.045**	0.038*	0.021
<i>Year dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
IV	-0.180***	-0.154***	0.097***	0.080***	-0.186***	-0.104***	-0.147***	0.040	-0.240***	0.010
Log Likelihood	-17,346	-15,358	-19,840	-17,404	-27,680	-22,258	-42,721	-26,381	-29,931	-40,996
Observations	18,154	13,350	20,338	17,504	27,021	20,040	36,750	25890	33,419	34,438

Note: *, **, *** indicate significant improvement at 10, 5, 1 percent levels, respectively.

Table 2: Level Effects of Satisfaction with Job Facets on Overall Job Satisfaction										
Country	Satisfaction with									
	Earnings	(Rank)	Job security	(Rank)	Type of work	(Rank)	Working conditions	(Rank)	Working times	(Rank)
Austria	0.441	(2)	0.22	(4)	0.794	(1)	0.409	(3)	0.213	(5)
Belgium	0.386	(2)	0.143	(5)	0.932	(1)	0.357	(3)	0.157	(4)
Denmark	0.199	(2)	0.096	(4)	0.879	(1)	0.178	(3)	0.077	(5)
Finland	0.362	(2)	0.079	(5)	0.878	(1)	0.139	(3)	0.106	(4)
France	0.333	(4)	0.196	(5)	0.811	(1)	0.345	(3)	0.398	(2)
Greece	0.470	(3)	0.490	(2)	0.765	(1)	0.195	(4)	0.109	(5)
Italy	0.426	(2)	0.281	(3)	1.145	(1)	0.191	(4)	0.071	(5)
Netherlands	0.153	(4)	0.115	(5)	0.529	(1)	0.213	(2)	0.177	(3)
Portugal	0.44	(2)	0.376	(3)	1.004	(1)	0.326	(4)	0.098	(5)
Spain	0.323	(2)	0.164	(3)	0.896	(1)	0.158	(4)	0.106	(5)

Note: Ranks in parentheses

Appendix Table 1: Definitions of the variables used

Variables	Definitions
Job satisfaction	Standardized score of satisfaction with the job or main activity.
Satisfaction with earnings	Standardized score of satisfaction with earnings
Satisfaction with job security	Standardized score satisfaction with job security
Satisfaction with working conditions/environment	Standardized score of satisfaction with working conditions or environment
Satisfaction with type of work	Standardized score of satisfaction with the type of work
Satisfaction with working times	Standardized score of satisfaction with working times
Male	Dummy variable with value 1 for male workers
Married	Dummy variable with value 1 for married workers
Lower_sec	Dummy variable with value 1 for workers whose highest qualification is from primary or lower secondary education
Upper_sec	Dummy variable with value 1 for workers whose highest qualification is from upper secondary education
Tertiary	Dummy variable with value 1 for workers whose highest qualification is from tertiary education
Experience	Potential labour market experience
Supervisor	Dummy variable with value 1 if the respondent has a supervisory position
Intermediate	Dummy variable with value 1 if the respondent has an intermediate position
Non-supervisory position	Dummy variable with value 1 if the respondent has a non-supervisory position
Manager	Dummy variable with value 1 for managers, legislators and senior officials
Professional	Dummy variable with value 1 for Professionals
Technicians	Dummy variable with value 1 for Technicians and Associate Professionals
Clerks	Dummy variable with value 1 for Clerks
Salesworkers	Dummy variable with value 1 for Service, Shop and Market Sales Workers
Agriculture	Dummy variable with value 1 for Skilled Agricultural and Fishery workers
Craft	Dummy variable with value 1 for Craft and related Trades workers
Machine_oper	Dummy variable with value 1 for Plant and machine operators
Element	Dummy variable with value 1 for Elementary occupations
Private	Dummy variable with value 1 for private sector employees
Fsize_20	Dummy variable with value 1 if employer size is less than 20 regular paid employees
Fsize_100	Dummy variable with value 1 if employer size is greater than 20 and less than 100 regular paid employees
Fsize_500	Dummy variable with value 1 employer size is greater than 100 and less than 500 regular paid employees
Fsize_more	Dummy variable with value 1 employer size is greater than 500 regular paid employees
Agriculture	Dummy variable with value 1 for workers in the agricultural sector
Manufacturing	Dummy variable with value 1 for workers in the industrial sector
Services	Dummy variable with value 1 for workers in the sector of services
P_contract	Dummy variable with value 1 for workers with a permanent contract
F_contract	Dummy variable with value 1 for workers with a fixed-term contract
Good_health	Dummy variable with value 1 if the respondent has reported a <i>good</i> or a <i>very good</i> health status
Unemp_spell	Number of unemployment spells during the five years before the individual joined the survey
Lnwage	Log of CPI-deflated wage
Ln housinc	Log of CPI-deflated equivalised household income
Mean_wage	Mean wage over the eight survey years
Mean_income	Mean household income over the eight survey years

Note: The frequencies of the above variables appear in Appendix Table 8.

Appendix Table 2: Means of Overall and Partial Job Satisfaction in ECHP (1994-2001)

	France	Greece	Netherlands	Spain	Denmark	Belgium	Italy	Portugal	Austria	Finland
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Overall Job Satisfaction	<i>4.40</i>	<i>3.88</i>	<i>4.75</i>	<i>4.26</i>	<i>4.96</i>	<i>4.49</i>	<i>4.05</i>	<i>3.95</i>	<i>4.48</i>	<i>4.58</i>
Satisfaction with earnings	<i>3.54</i>	<i>3.26</i>	<i>4.39</i>	<i>3.25</i>	<i>4.33</i>	<i>3.94</i>	<i>3.31</i>	<i>3.23</i>	<i>4.10</i>	<i>3.92</i>
Satisfaction with security	<i>4.17</i>	<i>4.03</i>	<i>4.65</i>	<i>4.14</i>	<i>4.79</i>	<i>4.42</i>	<i>4.08</i>	<i>3.99</i>	<i>4.94</i>	<i>4.40</i>
Satisfaction with type of work	<i>4.58</i>	<i>4.03</i>	<i>4.84</i>	<i>4.34</i>	<i>4.9</i>	<i>4.65</i>	<i>4.24</i>	<i>4.17</i>	<i>5.09</i>	<i>4.49</i>
Satisfaction with working times	<i>4.32</i>	<i>4.03</i>	<i>4.84</i>	<i>4.13</i>	<i>5.00</i>	<i>4.61</i>	<i>3.99</i>	<i>4.05</i>	<i>4.99</i>	<i>4.61</i>
Satisfaction with working conditions	<i>4.23</i>	<i>3.92</i>	<i>4.33</i>	<i>4.23</i>	<i>4.81</i>	<i>4.43</i>	<i>4.02</i>	<i>4.18</i>	<i>5.05</i>	<i>4.47</i>

Appendix Table 3: Satisfaction with earnings (GLS zscore with individual random effect and fixed time effects)										
	Austria	Belgium	Denmark	Finland	France	Greece	Italy	Netherlands	Portugal	Spain
	Coef.	Coef	Coef	Coef	Coef	Coef	Coef	Coef	Coef	Coef
Male	-0.166***	-0.164***	-0.010	-0.070***	-0.134***	-0.133***	-0.162***	-0.182***	0.024	-0.149***
Lower_sec	0.150***	0.074**	0.201***	0.142***	0.030	0.000	0.254***	0.019	0.126***	0.148***
Upper_sec	0.077*	0.059**	0.106***	0.073***	-0.003	0.019	0.216***	0.011	0.066**	0.045**
Private	-0.078***	-0.028	0.120***	0.132***	-0.106***	-0.108***	-0.070***	-0.008	-0.078***	-0.065***
Fsize_100	-0.037**	-0.014	-0.072***	0.012	-0.064**	0.063***	0.029**	-0.013	-0.032**	-0.021
Fsize_500	-0.020	0.027	0.001	0.013	0.020	0.016	0.060***	0.003	-0.065***	-0.022
Fsize_more	0.012	0.011	-0.004	0.043	0.010	-0.128***	-0.021	0.040*	-0.089***	-0.033*
Lnwage	0.440***	0.568***	0.648***	0.535***	0.289***	0.910***	0.957***	0.526***	0.740***	0.669***
Mean_wage	-0.142***	-0.066	-0.346***	-0.004	0.072*	0.049	-0.055	-0.058	-0.182***	-0.058*
Ln housinc	0.184***	0.146***	0.093***	0.076***	0.196***	0.235***	0.112***	0.106***	0.118***	0.124***
Mean_income	0.181***	-0.064	0.102**	0.078*	0.030	-0.049	0.175***	0.082**	-0.042	0.062**
Intercept	-6.1748***	-5.914***	-4.7051***	-6.050***	-4.6119***	-13.666***	-14.87***	-4.738***	-7.009***	-9.173***
R ² : within	0.030	0.024	0.0337	0.033	0.023	0.110	0.059	0.023	0.062	0.049
R ² : between	0.107	0.087	0.102	0.112	0.128	0.342	0.227	0.100	0.176	0.182
R ² : overall	0.098	0.068	0.086	0.103	0.116	0.259	0.177	0.078	0.135	0.140
N. Obs.	18,154	13,487	20,484	17,504	27,033	20,048	36,790	25,896	33,443	34,540

Note: *, **, *** indicate significant improvement at 10, 5, 1 percent levels, respectively.

Additional variables included in the regression are: experience, experience square, 2 occupational status dummies, 7 year dummies, 8 occupational dummies, 2 industry dummies, 1 marital status dummy, 1 dummy for being in good health, 1 for number of unemployment spells and 1 dummy for having a fixed term contract

Appendix Table 4 : Satisfaction with job security (GLS zscore with individual random effect and fixed time effects)										
	Austria	Belgium	Denmark	Finland	France	Greece	Italy	Netherlands	Portugal	Spain
	coef	coef	coef	coef	coef	coef	coef	coef	coef	coef
Male	-0.009	-0.069	0.007	0.004	-0.014	-0.046**	0.072***	-0.05**	0.017	-0.030*
Lower_sec	0.093**	-0.057	0.035	0.005	-0.010	0.009	0.129***	0.059	-0.059*	0.110***
Upper_sec	0.103**	0.028	-0.002	0.009	-0.055**	0.013	0.120***	0.047	-0.063*	0.036**
Private	-0.303***	-0.088**	-0.054**	-0.024	-0.416***	-0.383***	0.283***	-0.087***	-0.120***	-0.112***
Fsize_100	-0.065***	-0.051	-0.067**	0.022	-0.042*	0.044***	0.055***	-0.066***	0.029**	-0.048***
Fsize_500	-0.052**	-0.061	-0.055**	0.024	-0.002	0.022	0.086***	-0.053**	0.022	-0.052***
Fsize_more	-0.023	-0.053	-0.024	0.075***	-0.001	0.077***	0.075***	-0.088***	0.089***	-0.030*
Lnwage	0.066**	0.086	-0.043	-0.025	0.059**	0.237***	0.341***	0.155***	0.199***	0.198***
Mean_wage	0.013	0.163*	0.017	0.135***	0.138***	0.240***	0.046	-0.102**	0.016	-0.016
Ln housinc	0.035	-0.017	-0.006	0.070***	0.042**	0.115***	0.091***	0.030	0.081***	0.051***
Mean_income	0.101**	0.110	0.101**	0.042	0.052	0.029	0.215***	0.092**	-0.006	0.048*
Intercept	-1.8715***	1.1867	-0.39	-1.709***	-2.188***	-7.439***	-7.82***	-1.105***	-3.257***	-3.231***
R ² : within	0.016	0.0259	0.063	0.096	0.055	0.081	0.034	0.049	0.064	0.087
R ² : between	0.171	0.111	0.192	0.261	0.318	0.530	0.344	0.142	0.234	0.359
R ² : overall	0.112	0.084	0.141	0.208	0.229	0.430	0.246	0.089	0.169	0.290
N. Obs.	18,154	13,496	20,487	17,504	27,050	20,049	36,804	25,952	33,440	34,567

Note: *, **, *** indicate significant improvement at 10, 5, 1 percent levels, respectively.

Additional variables included in the regression are: experience, experience square, 2 occupational status dummies, 7 year dummies, 8 occupational dummies, 2 industry dummies, 1 marital status dummy, 1 dummy for being in good health, 1 for number of unemployment spells and 1 dummy for having a fixed term contract

Appendix Table 5 : Satisfaction with type of work (GLS zscore with individual random effect and fixed time effects)										
	Austria	Belgium	Denmark	Finland	France	Greece	Italy	Netherlands	Portugal	Spain
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
Male	-0.024	-0.128***	0.010	-0.069**	-0.031	-0.051**	-0.013	-0.099***	0.015	-0.029
Lower_sec	0.130**	0.017	0.052*	0.097***	0.071**	-0.132***	-0.017	0.196***	0.009	0.119***
Upper_sec	0.115**	0.046	-0.003	0.002	0.031	-0.059***	0.004	0.156***	0.038	0.034*
Private	-0.117***	-0.057*	-0.057**	-0.051**	-0.066**	-0.165***	-0.142***	-0.049**	-0.098***	-0.133***
Fsize_100	-0.105***	-0.029	-0.073***	-0.091***	-0.099***	0.039**	-0.012	-0.076***	0.051***	-0.063***
Fsize_500	-0.100***	-0.050	-0.086***	-0.102***	-0.116***	0.073***	0.013	-0.108***	0.027	-0.051***
Fsize_more	-0.132***	-0.093***	-0.196***	-0.057*	-0.146***	0.110***	-0.032	-0.106***	0.076***	-0.059***
Lnwage	0.042	0.121**	0.118***	0.040	0.086***	0.154***	0.223***	0.141***	0.239***	0.185***
Mean_wage	0.010	-0.075	-0.149***	0.173***	0.015	0.117***	0.020	0.000	0.015	-0.011
Lnhousing	0.044	-0.041	-0.014	0.035	0.018	0.183***	0.041**	0.065***	0.062***	0.048**
Mean_income	0.093*	-0.017	0.017	0.020	-0.169	0.214	0.160***	-0.121***	-0.031	-0.813***
Intercept	-2.019***	4.719***	0.224	-2.424***	-0.840***	-5.5967***	-4.980***	-0.856***	-3.173***	-1.712***
R ² : within	0.0104	0.012	0.016	0.013	0.031	0.025	0.013	0.017	0.016	0.015
R ² : between	0.095	0.065	0.078	0.100	0.092	0.344	0.200	0.054	0.155	0.162
R ² : overall	0.061	0.049	0.044	0.071	0.068	0.249	0.133	0.035	0.095	0.103
N. Obs.	18,154	13,496	20,487	17,504	27,050	20,049	36,804	25,952	33,440	34,567

Note: *, **, *** indicate significant improvement at 10, 5, 1 percent levels, respectively.

Additional variables included in the regression are: experience, experience square, 2 occupational status dummies, 7 year dummies, 8 occupational dummies, 2 industry dummies, 1 marital status dummy, 1 dummy for being in good health, 1 for number of unemployment spells and 1 dummy for having a fixed term contract

Appendix Table 6: Satisfaction with working conditions (GLS zscore with individual random effect and fixed time effects)										
	Austria	Belgium	Denmark	Finland	France	Greece	Italy	Netherlands	Portugal	Spain
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
Male	0.001	-0.096***	0.020	-0.046*	-0.050**	-0.187***	-0.074***	0.005	-0.007	-0.088***
Lower_sec	0.032	0.009	0.056*	0.057*	-0.006	-0.107***	-0.107***	0.022	0.029	0.046**
Upper_sec	0.052	-0.019	0.011	0.006	-0.025	-0.009	-0.054*	0.025	0.032	0.008
Private	-0.022	0.068*	0.007	-0.006	-0.007	-0.044**	-0.078***	0.022	-0.050**	-0.026
Fsize_100	-0.087***	-0.050	-0.048*	-0.027	-0.136***	0.017	-0.019	-0.075***	-0.007	-0.061***
Fsize_500	-0.141***	-0.025	0.012	0.003	-0.101***	0.000	-0.006	-0.067***	-0.012	-0.076***
Fsize_more	-0.148***	-0.075*	0.003	0.029	-0.082**	0.073**	-0.043*	-0.099***	0.036	-0.077***
Lnwage	-0.017	-0.074	0.087**	-0.046	-0.053*	0.041	0.072**	0.012	0.143***	0.056**
Mean_wage	-0.084*	0.055	-0.091**	0.045	0.043	0.006	-0.132***	-0.016	-0.117***	-0.118***
Ln housinc	0.032	0.000	-0.038	0.039	0.001	0.121***	0.029	0.042**	0.056***	0.027
Mean_income	0.123**	-0.076	0.039	0.046	0.029	0.092***	-0.074***	-0.068*	0.030	-0.012
Intercept	-0.668	5.418***	-0.018	-0.641*	-0.101	-2.8788***	-0.552	0.376	-1.253***	0.556*
R ² : within	0.004	0.008	0.008	0.004	0.012	0.014	0.008	0.010	0.006	0.005
R ² : between	0.055	0.048	0.054	0.068	0.062	0.252	0.114	0.040	0.042	0.078
R ² : overall	0.038	0.036	0.038	0.050	0.046	0.168	0.072	0.023	0.0255	0.047
N. Obs.	18,154	13,496	20,487	17,504	27,050	20,049	36,804	25,952	33,440	34,567

Note: *, **, *** indicate significant improvement at 10, 5, 1 percent levels, respectively.

Additional variables included in the regression are: experience, experience square, 2 occupational status dummies 7 year dummies, 8 occupational dummies, 2 industry dummies, 1 marital status dummy, 1 dummy for being in good health, 1 for number of unemployment spells and 1 dummy for having a fixed term contract

Appendix Table 7 : Satisfaction with working times (GLS zscore with individual random effect and fixed time effects)										
	Austria	Belgium	Denmark	Finland	France	Greece	Italy	Netherlands	Portugal	Spain
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
Male	-0.014	-0.075**	-0.031	-0.062**	-0.020	-0.048**	-0.035*	-0.036	-0.045**	-0.034*
Lower_sec	-0.014	-0.152***	0.048*	-0.007	-0.001	-0.126***	-0.003	-0.050	-0.015	0.036*
Upper_sec	-0.057	-0.118***	-0.033	-0.041*	-0.003	-0.066***	0.017	-0.060**	-0.047	-0.008
Private	-0.118***	-0.115***	-0.164***	-0.013	-0.183***	-0.275***	-0.215***	-0.128***	-0.167***	-0.256***
Fsize_100	-0.033	0.015	0.028	-0.011	-0.009	0.003	0.017	-0.017	0.028*	-0.004
Fsize_500	-0.037	-0.020	0.021	-0.009	0.073**	-0.083***	0.041**	0.013	0.005	-0.024
Fsize_more	-0.043*	-0.018	-0.078**	-0.004	-0.048	0.032	-0.023	0.017	-0.021	-0.011
Lnwage	-0.108***	-0.076	0.001	-0.107***	-0.011	0.037	0.053*	-0.160***	0.121***	0.042*
Mean_wage	0.067	0.094	0.028	0.079*	-0.005	-0.116**	-0.133***	0.104**	-0.051	-0.038
Ln housinc	0.017	0.025	-0.014	0.041	-0.013	0.106***	-0.006	-0.029	0.070***	0.026
Mean_income	0.139***	-0.058	0.084*	-0.027	0.043	0.068*	0.228***	0.015	-0.040	0.042
Intercept	-1.217***	0.265	-0.980***	0.223	-0.2332	-1.080***	-0.530	0.625**	-1.030***	-0.629**
R ² : within	0.005	0.005	0.008	0.007	0.034	0.013	0.004	0.008	0.006	0.003
R ² : between	0.054	0.046	0.084	0.067	0.059	0.186	0.107	0.033	0.050	0.063
R ² : overall	0.036	0.034	0.045	0.056	0.054	0.136	0.070	0.025	0.030	0.044
N. Obs.	18,154	13,496	20,487	17,504	27,050	20,049	36,804	25,952	33,440	34,567

Note: *, **, *** indicate significant improvement at 10, 5, 1 percent levels, respectively.

Additional variables included in the regression are: experience, experience square, 2 occupational status dummies, 7 year dummies, 8 occupational dummies, 2 industry dummies, 1 marital status dummy, 1 dummy for being in good health, 1 for number of unemployment spells and 1 dummy for having a fixed term contract

Appendix Table 8: Frequencies of variables (%)

	France	Greece	Netherlands	Spain	Denmark	Belgium	Italy	Portugal	Austria	Finland
Male	56.31	62.01	61.14	65.51	53.21	55.87	63.51	58.04	57.96	49.88
Married	59.86	65.56	67.68	64.33	57.75	67.65	69.37	68.96	61.03	66.04
Low_educate	41.94	32.81	18.26	52.25	19.05	21.21	46.47	79.64	20.04	20.75
Mid_educate	32.45	36.83	57.55	20.07	46.09	34.40	42.34	12.29	71.82	42.49
High_educate	25.62	30.37	24.18	27.68	34.86	44.40	11.19	8.08	8.13	36.76
Supervisor	12.59	6.14	12.93	5.81	13.18	10.06	5.88	2.85	8.55	12.12
Intermediate	20.22	7.26	16.06	13.60	12.92	17.62	11.45	4.19	20.14	13.61
Non_supervis	67.19	85.74	68.18	57.78	62.46	56.25	54.15	64.41	52.63	53.42
Private	69.58	61.52	70.71	80.49	61.05	66.55	71.93	80.40	75.39	65.53
Manager	4.79	2.27	11.12	7.97	6.29	4.87	3.21	5.78	6.48	9.19
Professionals	8.30	16.42	18.35	11.68	15.18	17.37	9.36	5.70	4.60	17.85
Technicians	19.22	8.08	21.45	9.84	18.44	12.11	10.91	7.96	15.71	15.46
Clerks	83.43	17.73	13.70	8.82	11.92	16.39	17.81	8.69	14.22	8.72
Sales worke	12.74	13.67	9.41	14.39	11.72	7.49	13.04	13.93	15.39	11.05
Agricultural	1.35	1.11	1.38	5.30	2.01	0.99	3.96	12.51	10.74	9.67
Craft	13.48	18.20	9.94	18.24	10.39	7.33	19.47	20.54	18.44	10.43
Machine_ope	12.91	9.66	6.43	9.00	7.03	4.54	6.89	8.26	6.69	6.56
Elementary o	8.5	9.39	4.44	13.24	7.71	7.84	10.66	14.60	7.73	5.13
Firmsi: 1-19	24.12	53.66	16.91	53.28	31.47	25.41	54.27	60.69	46.02	50.96
Firmsi: 20-99	18.07	23.36	21.32	19.44	20.95	16.56	17.81	18.72	24.89	24.91
Firm:100-499	12.84	5.87	22.64	9.96	13.33	12.21	9.58	9.08	15.51	15.56
Firmsi: 500+	10.21	4.75	28.99	10.57	10.77	15.53	7.08	4.45	13.58	8.55
Agriculture	1.39	1.36	1.35	7.45	3.17	1.48	6.53	15.05	11.20	9.05
Manufacture	29.25	29.34	21.72	30.62	22.12	20.48	31.35	31.28	31.46	19.09
Services	69.36	69.30	67.75	61.93	61.65	56.67	62.13	53.66	57.34	48.58
Perman_cont	74.72	65.26	77.07	42.55	66.38	63.58	53.70	50.36	75.20	66.76
Fixed contra	9.85	19.45	6.47	23.64	8.68	7.73	8.05	12.37	6.29	12.39
Health: very good	69.90	93.49	84.49	81.93	87.89	84.86	72.00	62.68	85.27	74.04
Experience (mean)	19,2 years	16,5 years	20,4 years	20,1years	21,8 years	18,3 years	18,5 years	21,5 years	20,7 years	22,1 years
Wage (in national currency)	10,136	176,831	2,670	132,743	16,972	39,543	1,090	66,654	13,358	5,562
Income (in nat. currency)	8,328	165,169	2,436	124,381	11,646	45,716	1,510	88,251	17,163	7,270