# Comparing Levels of Job Satisfaction in the Countries of Western and Eastern Europe

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**Abstract**

Against the plethora of studies of the factors influencing job satisfaction, this paper makes three contributions. First, in contrast to most studies of job satisfaction which are country-specific, the scope of this paper extends to 33 different countries. Comparing different countries on the basis of their mean job satisfaction scores ignores inequality in the distribution of scores between the countries' individual respondents: the paper's second contribution is to construct "equity-sensitive" job satisfaction scores for each country and, using these indicators, to compare their achievements with respect to job satisfaction. The third purpose of the paper is to answer the question posed in the title. The reason that West European countries have higher levels of job satisfaction compared to East European countries could, in part, be because they are better endowed with the "attributes" that promote job satisfaction; it could also, in part, be due to the "responses" of workers in West European countries, to a given set of attributes, being more conducive to job satisfaction than the corresponding responses of workers in East European countries. In this paper we estimate the relative importance of attributes and coefficients in determining differences in levels of job satisfaction between the two sets of countries. We do this by using the estimates from an ordered logit model to decompose the probability of being at a particular level of satisfaction into its "attributes" and "coefficients" parts. The empirical foundation for the study is provided by data for over 20,000 employed respondents, pertaining to the year 2000, obtained from the *1999-2002 Values Survey Integrated Data File*.

**Keywords: Job satisfaction; inequality; ordered logit; decomposition analysis.**

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# Why are Levels of Job Satisfaction Higher in West, Compared to East, European Countries?

**Abstract**

Against the plethora of studies of the factors influencing job satisfaction, this paper makes three contributions. First, in contrast to most studies of job satisfaction which are country-specific, the scope of this paper extends to 33 different countries. Comparing different countries on the basis of their mean job satisfaction scores ignores inequality in the distribution of scores between the countries' individual respondents: the paper's second contribution is to construct "equity-sensitive" job satisfaction scores for each country and, using these indicators, to compare their achievements with respect to job satisfaction. The third purpose of the paper is to answer the question posed in the title. The reason that West European countries have higher levels of job satisfaction compared to East European countries could, in part, be because they are better endowed with the "attributes" that promote job satisfaction; it could also, in part, be due to the "responses" of workers in West European countries, to a given set of attributes, being more conducive to job satisfaction than the corresponding responses of workers in East European countries. In this paper we estimate the relative importance of attributes and coefficients in determining differences in levels of job satisfaction between the two sets of countries. We do this by using the estimates from an ordered logit model to decompose the probability of being at a particular level of satisfaction into its "attributes" and "coefficients" parts. The empirical foundation for the study is provided by data for over 20,000 employed respondents, pertaining to the year 2000, obtained from the *1999-2002.*

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## 1. Introduction

There are murmurings of discontent - both from economists and non-economists - that, in identifying welfare exclusively with money income, the subject has missed a trick or two and, perhaps, even somewhat lost its way. Since this welfare-income identity is also subscribed to by many, if not most, people in public life, its concomitant is an undue concentration of both public and private resources on raising national income: "undue", because making people richer does not necessarily make them happier or, at any rate, not by enough to justify the outlay of resources in raising income. In other words, public policy, with its focus on raising national income, may not be giving people what they want – which is, to be happy – and, for this reason, there is a growing restlessness among social scientists about the wisdom of harnessing economic policy to the yoke of economic performance (Frank, 1997, 1999; Layard, 2006).

Within the context of happiness, there is a distinction between "context-free", and "context-specific", happiness. Context-free well-being covers feelings in *any* setting while context-specific well-being covers feelings within a *specific* setting. One such setting is the workplace. Given that paid employment is central to the lives of many individuals, and that many persons spend a substantial part of their lives in paid employment, an understanding of people's feelings of well-being in the workplace or, equivalently, their levels of "job satisfaction", is of paramount importance to public policy.[1] Warr (1999) provides a comprehensive survey of the issues surrounding job satisfaction.

[1] As Hammersh (2001, p.2) wrote: "only one measure, the satisfaction that workers derive from their jobs, might be viewed as reflecting how they react to the entire panoply of job characteristics…it can be viewed as a single metric that allows the worker to compare the current job to other labour market opportunities"

Several studies have examined the role of socio-demographic (age, gender, country, marital status) and job-related (union membership, racial harassment, on-the-job training) factors in affecting job satisfaction: Rodriguez-Pose and Vilalta-Bufi (2005), Vila and Garcia-Moran (2005), Belfield and Harris (2002), and Clark and Oswald (1996) have investigated the role of education in determining job satisfaction; Bender *et. al.* (2005), Donohue and Heywood (2004), Sousa-Poza and Sousa-Poza (2003), Clark (1997) have looked at gender and job satisfaction; the role of union membership in determining job satisfaction has been examined by Bryson *et.al*. (2004) and Renaud (2002); the effect of wages on job satisfaction is the province of Grund and Sliwka (2003) and Chevalier and Lydon (2002); Luchak and Gellatly (2002) have examined the role of pension accruals on job satisfaction; and Jurges (2003), Birdi *et. al*., (1995) and Clark *et. al.* (1996) have looked at the effects of worker age on job satisfaction. In addition, there have been several sector-specific and country-specific studies of job satisfaction which overlap with the studies cited above. [2]

Against this plethora of studies of the factors influencing job satisfaction, this paper makes three contributions. First, most studies of job satisfaction are country-specific though a notable exception to this is Sousa-Poza and Sousa-Poza's (2000) study of the levels and determinants of job satisfaction in 21 countries. However, in contrast to their study, the scope of this paper, which extends to 33 different countries, listed in Table 1, is unambiguously concerned with comparing job satisfaction in the established market economies of Western Europe with that in the newly emerging economies of

[2] Brown and McIntosh (2003) have analysed job satisfaction in the low wage service sector, particularly the retail and hotel sectors ; Shields and Price (2002) have looked at the nursing profession; Bellamy et. al. (2003) and Oshagbemi (2003) have studied the university sector. Long (2005) has examined job satisfaction in Australia; Rose (2005) and Clark (1996) for Britain; Green and Tsitsianis (2005) for Britain and Germany; Lovett *et.al.* (2004) for Mexico; Linz (2003) for Russia.

Eastern Europe. The empirical foundation for the study is provided by data for nearly 22,000 employed respondents, pertaining to the year 2000, obtained from the *1999-2002 Values Survey Integrated Data File* (hereafter referred to as the Values Survey) described in Ingelhart *et. al.* (2004).[3] The Values Survey asked each respondent to place his/her level of "job satisfaction" on a scale of 1 (maximum dissatisfaction) to 10 (maximum satisfaction).[4] From these replies we computed the mean scores for each of the 33 countries; these are shown in Table 1 for each country and also for two groups of countries: West European countries and East European countries.

The choice of countries was dictated by the fact that the 33 countries shown in Table 1 were the *only* countries for which data on job satisfaction was available from the Values Survey.[5] In total, there were 12,151 respondents to this question from West European countries and 9,240 respondents from East European countries yielding a total of 21,391 respondents. The number of respondents in the individual countries, shown in Table 1, was smallest for Turkey (395), Bulgaria (434), Romania (437), Hungary (443), Portugal (451), and Malta (478). In terms of language, a master questionnaire was prepared in English and was translated into the various national languages. In most countries the translated questionnaire was pre-tested to help identify questions, or concepts, for which translation was problematic (Ingelhart *et. al.* 2004, p. 399).

Comparing different countries on the basis of their mean job satisfaction scores ignores, however, inequality in the distribution of scores between the countries' individual respondents. Sen (1998) showed that if $\mu$ is the mean level of achievement,

[3] And also downloadable from http://www.worldvaluessurvey.org.
[4] The precise wording of the question was: "Overall, how satisfied or dissatisfied are you with your job?" (Inglehart *et. al*., 2004, p. 450) and it was asked only of those answered the question "Are you yourself employed or not?" in the affirmative.
[5] That is, missing values were recorded against this question for the other countries.

and *I* the degree of inequality in its distribution, then the level of social welfare, *W*, may be represented as $W = \mu(1-I)$ : "this has the intuitive interpretation as the size of the pie ( $\mu$ ) corrected downwards by the extent of inequality (*1-I*)" (p. 129). Pursuing this line of reasoning, Anand and Sen (1997) argued that a country's achievement with respect to a particular outcome should not be judged exclusively by its mean level of achievement (for example, by the average literacy rate for a country) but rather by the mean level *adjusted to take account of inter-group or inter-personal differences in achievements*. In the light of this advice, the paper's second contribution is to construct "equity-sensitive" job satisfaction scores for each country and, using these indicators, to compare their achievements with respect to job satisfaction.

The third purpose of the paper is to answer the question posed in the title. The reason that West European countries have higher levels of job satisfaction, compared to East European countries could, in part, be because they are better endowed with the "attributes" that promote job satisfaction; it could also, in part, be due to the "coefficient responses" of workers in West European countries, to a given set of attributes, being more conducive to job satisfaction than the corresponding responses of workers in East European countries. In this paper we estimate the relative importance of attributes and coefficients in determining differences in levels of job satisfaction between the two sets of countries. We do this by using the estimates from an ordered logit model – whose dependent variable is defined in terms of different levels of job satisfaction - to decompose the probability of being at a particular level of satisfaction into its "attributes" and "coefficients" parts.

## 2. Equity-Sensitive Job Satisfaction Levels

In economics, we are often faced with the dilemma of choosing between a larger cake which is unequally distributed between the mouths gathered around the table and a smaller cake which is more equally distributed. The dilemma arises because, although we value size, we also know that "size isn't everything": distribution also matters. In consequence, there may well be a trade-off between size and distribution and we may be prepared to sacrifice size in order to get more equality. Although this notion of a size-distribution trade-off is most often applied to income inequality, it can be applied as well to other fields. For example, Anand and Sen (1997) compared the Honduras (with an average literacy rate of 75%, distributed between men and women as 78%, 73%) with China (with an average literacy rate of 80%, distributed between men and women as 92%, 68%) and asked which country should be regarded as having the "better" achievement with regard to literacy: China with a higher overall rate or the Honduras with greater gender equality? A similar argument, as shown below, can be made with respect to job satisfaction.

Suppose that there are $N$ persons in paid employment in a country, with $X_i$ being the job satisfaction score of person $i$, $X_i=1\ldots K,\ i=1\ldots N$ and $\overline{X} = \sum_{i=1}^{N} X_i / N$ representing the average level of job satisfaction. We know that the average job satisfaction of a country is not achieved by all its employed citizens. In other words, there is inequality in the distribution of job satisfaction between individuals. Therefore, in assessing the "job

satisfaction achievement" of a country, by how much should we reduce its average job satisfaction level to take account of inequality in job satisfaction?[6]

The answer to this question depends on how averse we are to inequality. In his seminal paper on income inequality, Atkinson (1970) argued that we (society) would be prepared to accept a reduction in average income, *provided the lower income was equally distributed*, from a higher average income which was unequally distributed.[7] The size of this reduction depended upon our degree of "inequality aversion" which Atkinson (1970) measured by the value of a (inequality aversion) parameter, $\varepsilon \geq 0$. When $\varepsilon = 0$, we are not at all averse to inequality implying that we would not be prepared to accept even the smallest reduction in average income in order to secure an equitable distribution. The degree of inequality aversion increases with the value of $\varepsilon$: the higher the value of $\varepsilon$, the more averse we would be to inequality and, in order to secure an equitable distribution of income, the greater the reduction in average income we would find acceptable.

These ideas can, equally well, be applied to the measurement of job satisfaction. We can reduce the average job satisfaction, $\overline{X}$, of a country, by the amount of inter-person inequality in job satisfaction scores, to arrive at $X^e$, an "equity sensitive" level of job satisfaction for the country, $X^e \leq \overline{X}$. We refer to $X^e$ as the *equally distributed equivalent job satisfaction*: $X^e$, when it is the job satisfaction score of every person in paid employment, is welfare equivalent to $\overline{X}$.

The size of these reductions (as given by the differences: $\overline{X} - X^e$) depends upon our aversion to inequality: the lower our aversion to inequality, the smaller will be the

[6] Of course, if job satisfaction was entirely determined by income, then income inequality would perfectly reflect inequality in the distribution of job satisfaction.
[7] In the language of economics, the two situations would yield the same level of social welfare, i.e. be 'welfare equivalent'.

difference and, in the extreme case in which there is no aversion to inequality ($\varepsilon = 0$), there will be no difference between the average, and the equity sensitive, job satisfaction levels. Three special cases, contingent upon the value assumed by $\varepsilon$, may be distinguished:

1. When $\varepsilon = 0$ (no inequality aversion), $X^e$ is the *arithmetic mean* of the individual job satisfaction scores, $X_i$ and $X^e = \bar{X}$.
2. When $\varepsilon = 1$, $X^e$ is the *geometric mean* of the individual job satisfaction scores, $X_i$ and $X^e = \left[\prod_{i=1}^{N} (X_i)^N\right]^{1/N} < \bar{X}$.
3. When $\varepsilon = 2$, $X^e$ is the *harmonic mean*[8] of the individual job satisfaction scores, $X_i$ and $X^e = \left[\sum_{i=1}^{N} \frac{N}{X_i}\right]^{-1} < \bar{X}$.

Table 2 shows, for each country, the arithmetic, geometric and harmonic means of its respondents' job satisfaction scores. Also shown for each country is the value of the Gini coefficient (x 1000) as applied to the job satisfaction scores of its respondents. The values of the Gini coefficient give an indication of the amount of inequality that existed in each country in the distribution of job satisfaction scores. Apart from Turkey, which had the highest level of inequality, the next highest levels of inequality were recorded in Russia and the erstwhile communist countries of Eastern countries: the Baltic states, Belarus, Bulgaria, Croatia, Hungary, Poland, Romania, and the Ukraine. The average value of the Gini coefficient for the West European countries, at 135, was substantially below the average value of 205 for the East European countries. These findings mirror

[8] The harmonic mean is the number of variables divided by the sum of the reciprocals of the variables. The harmonic mean is one of the three Pythagorean means: harmonic, geometric, and arithmetic means. For given data: harmonic mean < geometric mean < arithmetic mean.

the considerable inequality in happiness scores in Russia and the countries of the erstwhile Soviet empire, reported in Borooah (2006).

If we were indifferent to inter-personal inequality in job satisfaction scores (i.e. $\varepsilon=0$), then the (arithmetic) mean of these scores, computed for each country, would reflect its "social achievement" with respect to this indicator (Table 1, column 2). In the absence of any aversion to inequality, the mean score for West European countries (7.6) was higher that for East European countries (6.6).[9] However, if we were averse to inequality between persons in their job satisfaction scores (i.e. $\varepsilon>0$), then, in order to reflect "social achievement", the (arithmetic) mean should be appropriately reduced by the degree of inter-personal inequality in scores. This downward adjustment is reflected in the values of the "equally distributed equivalent" job satisfaction scores under the columns headed "geometric mean ($\varepsilon=1$)" and "harmonic mean" ($\varepsilon=2$). The adjustment was smaller under the former than under the latter since $\varepsilon = 1$ represents a lower degree of inequality aversion than $\varepsilon = 2$.

When aversion to inequality was greatest ($\varepsilon=2$), the equity-sensitive job satisfaction level was 6.6 for West European countries and only 5.0 for East European countries: expressed differently, even under a high degree of inequality aversion, West European countries were able to achieve two-thirds of the maximum possible level of job satisfaction; on the other hand, East European countries could, on average, manage only half the maximum value and several East European countries (Turkey, Belarus, Russia, the Ukraine) could not even manage this.

[9] To reiterate, each respondent to the Values Survey marked his/her level of "job satisfaction" on a scale of 1 (maximum dissatisfaction) to 10 (maximum satisfaction).

The implications of this analysis for labour market economics are profound. One might interpret a worker's level of job satisfaction as his/her "psychic income" which adds to, or subtracts from, his/her wage income. If we were only concerned with *average* levels of job satisfaction (i.e. there was no aversion to inequality) then we might be unmoved by the fact that some people were very satisfied with their jobs, while others were highly dissatisfied, in much the same way that we might be indifferent towards inequality in the distribution of income. However, as our aversion to inequality increased, we might want to see job satisfaction ("psychic income) more equally distributed in much the same way that we might desire greater equality in the distribution of wage income.

## 3. Econometric Estimates of Job Satisfaction

We classed each of the 21,688 respondents, according to their job satisfaction scores,[10] which ranged from 1(maximum dissatisfaction) to 10 (maximum satisfaction), into three levels of job satisfaction: "low" (score 1-3); "medium" (4-7); and "high" (8-10).[11] Of these 21,688 respondents, 12,297 were from West European countries and 9,391 were from East European countries. Table 2 shows the percentages of respondents in every country – and in West European and East European countries in their entirety - at these levels of job satisfaction. There was a marked difference between West European and East European countries in the proportions of their respondents at different levels of satisfaction: 59 and 4 percent of West European respondents were at, respectively, high and low levels of satisfaction compared to 43 and 12 percent of East

[10] Note that this question was only asked of respondents who, at the time of survey, were employed, i.e. those who answered the question "Are you yourself employed or not?" in the affirmative.
[11] The use of more than three categories would have reduced the cell sizes for ordered logit estimation (see below) and, in our view, would not have added greatly to the interpretation.

European respondents.[12] The job satisfaction equations were estimated using the method of ordered logit, with a dependent variable which took the values 1, 2, and 3 for, respectively, low, medium, and high job satisfaction levels.

The explanatory variables for the equations could be grouped into four broad categories. The first category referred to items which might be regarded by workers as important attributes of a job: (1) good pay; (2) not too much pressure; (3) security; (4) respected job; (5) good hours; (6) opportunity to use initiative; (7) generous holidays; (8) opportunity to achieve; (9) a responsible job; (10) an interesting job; (11) meets one's abilities; (12) pleasant people to work with; (13) good chances of promotion; (14) useful for society; (15) opportunity for meeting people. The 15 variables relating to these items were assigned the value 1 if a respondent mentioned the item as important and the value 0 if it was not mentioned. Needless to say, the variables were not mutually exclusive: a respondent could mention good pay, generous holidays, and the opportunity of meeting people as all being important in a job.

The variables in the second group related to the respondents' social life and feelings: whether they spent time socially with work colleagues at least once a month; and if they were "unhappy".[13] The third group comprised the socio-demographic variables: sex; age; marital status; education[14]. The fourth group related to the

[12] At the extremes, 2.1 percent of respondents in West, and 6.5 percent in East, European countries were very dissatisfied (value 1 or 2), and 31.4 percent of respondents in West, and 23.8 percent in East, European countries were very satisfied (value 9 or 10), with their jobs.

[13] The Values Survey asked respondents if they were: "very happy"; "quite happy"; "not very happy"; "not at all happy" and we categorised a person as "unhappy" if their reply was "not very happy" or "not at all happy".

[14] The Values Survey recorded the highest educational attainment of respondents as "low" (inadequately completed elementary education/completed elementary education/inadequately completed secondary education), "medium" (completed secondary/university preparation) , and "high" (some university without degree or university with degree).

characteristics of the respondents' jobs: the *perceived* degree of job security[15]; the respondents' *perception* of their *household* income (both classified as low, medium, high), and the respondents' *perception* of the *type* of job which they performed.

The variables relating to job characteristics are worth further comment. First, although the income question was posed in terms of the income decile in which the respondents perceived their *household income* (counting all wages, salaries, pensions, and other incomes) to lie, this information was, firstly, country-specific and second not consistent across countries. Instead, the Values Survey recoded the raw income responses and presented these data to the user in terms of three categories in which respondents placed their households' income: "low", medium", and "high". This was the income variable used in this study. In so doing, we are conscious - without being able to alter the fact - that the data relate to the respondent's household income which may have little to do with the remuneration associated with the respondent's job. However, it is not unreasonable to suppose that belonging to a rich/poor household might be positively/negatively correlated with job satisfaction independently of whether the remuneration associated with the job was good/bad.

The Values Survey also gave information about the *type* of job the respondent did in two alternative forms. In the longer version, it presented the respondent with 13 choices: (i) employer/manager of establishment with 10+ employees; (ii) employer/manager of establishment with < 10 employees; (iii) professional worker; (iv) middle-level non-manual; (vi) junior-level non-manual; (vii) foreman and supervisor; (viii) skilled manual; (ix) semi-skilled manual; (x) unskilled manual; (xi) farmer,

[15] The Values Survey asked respondents to rate their satisfaction with job security on a scale of 1(maximum dissatisfaction) to 10 (maximum satisfaction): from these ratings we classed job security as: "low" (score 1-3); "medium" (4-7); and "high" (8-10).

employer; (xii) agricultural worker; (xiii) member of armed forces. In the shorter version, it asked the respondents to place themselves in one of four socio-economic classes: AB: upper/upper middle class; C1: middle, non-manual; C2: middle, manual; DE: manual unskilled. To achieve economy in the use of data, it was the socio-economic classes that were used in this paper as a descriptor of job type.

In addition, The Values Survey also gave information on whether the person was in part-time work (<30 hours per week), full-time work (>30 hours per week), or self-employment (unspecified hours). Information was also available on the total number of employees in the organisation: from this information we classed an organisation as "small" if it had 25 employees or fewer; as "medium-sized" for 26-250 employees; and as "large" if it had more than 250 employees.

Table 3 shows the values of the dependent variables for West European and East European countries in terms of the percentages of respondents who had the variables' attributes. Warr (1999) distinguished between "intrinsic" and "external" job satisfaction. The former covered features inherent in the job: for example, the opportunity to use one's initiative, a socially useful job, and opportunities to meet people. The latter comprised features which formed the backdrop to work activities: pay, holidays, hours, prospects for promotion. In terms of what employees thought were important in a job, Table 3 suggests that, compared to respondents in East European countries, those in West European countries placed relatively more emphasis on intrinsic, than on external, job satisfaction: for example, 77 percent of respondents in West European countries, compared to 90 percent in East European countries mentioned good pay as important in a job and 62 percent of respondents in West European countries, compared to 70 percent in

East European countries mentioned security as important in a job;[16] on the other hand, 50 percent of respondents in West European countries, compared to 40 percent in East European countries mentioned a "responsible" job as important and 56 percent of respondents in West European countries, compared to 47 percent in East European countries mentioned the "opportunity to use one's initiative" as important in a job.

In terms of job characteristics, 3 and 89 percent of respondents in West European countries regarded their jobs as, respectively, highly insecure and highly secure; in East European countries 15 percent of respondents thought they were in a highly insecure job and only 62 percent regarded their jobs as affording a high level of security. In terms of personal feelings, 8 percent of respondents in West European countries, compared to 29 percent in East European countries, described themselves as unhappy. The age profile of respondents was very similar in West European and East European countries but their educational profiles were very different: West European countries had a much higher proportion of respondents with "low" education (31 percent) compared to East European countries (19 percent) though their proportions of highly educated respondents were not dissimilar.[17]

Compared to West European countries, a larger proportion of the employed in Eastern European countries worked full-time (83 versus 73 percent), a smaller proportion worked part-tome (10 versus 16 percent), and a smaller proportion was self employed (7 versus 11 percent). Similarly, compared to West European countries, a smaller proportion of the employed in Eastern European countries worked in small organizations

[16] The relative importance attached to job security in East European countries may have much to do with the fact that, compared to West European countries, social security provisions in the Eastern Europe are much more rudimentary.

[17] This may have had to with the greater emphasis on public education by erstwhile communist regimes compared to governments of free market economies.

(11 versus 15 percent) and a larger proportion worked in large organizations (75 versus 73 percent).

The changes in the probabilities of the outcomes (in this case, "low", "medium", and "high" job satisfaction), following a change in the value of a variable, are the *marginal probabilities* associated with that variable. In an ordered logit model, the signs of the coefficient estimates associated with a variable do not predict a variable's marginal probabilities; these probabilities have to be separately calculated from the estimates.[18] For each variable, these probabilities sum to zero across the three outcomes and for discrete variables – as are all the explanatory variables used - the marginal probabilities refer to changes consequent upon a move from the default category for that variable to the category in question. For ease of exposition, the marginal probabilities, implied by the ordered logit estimates[19], are shown in Table 4 for two of the outcomes: "low" and "high" satisfaction levels and the discussion of the results is in terms of these marginal probabilities.

The results suggest that placing emphasis on the external aspects of a job *increased* the probability of low satisfaction and *reduced* the probability of high satisfaction while placing emphasis on the internal aspects of a job *reduced* the probability of low satisfaction and *increased* the probability of high satisfaction. For example, the marginal probabilities associated with good pay, not too much pressure,

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[18] If $\beta_k < 0$, then, in response to an increase in the value of the $k^{th}$ determining factor, $Pr(Y_i=1)$ will rise and $Pr(Y_i=3)$ will fall. However, since the change in probabilities across all three outcomes must sum to zero, it is not clear what would happen to the middle probability, $Pr(Y_i=2)$: it may rise or fall. Given a change in the value of a determining variable, it is impossible, therefore, to infer, from the sign of its coefficient estimate, the direction of change in *all* the probabilities. For this reason Greene (2000) cautions that "we must be very careful in interpreting the coefficients in this model...since it is the least obvious of the [discrete choice] models" (p. 878).

[19] For reasons of economy, the ordered logit estimates themselves are not shown but are available on request from the author.

good hours, generous holidays, good chances of promotion, were (significantly) *positive* for a low level of satisfaction and (significantly) *negative* for a high level of satisfaction. On the other hand, the marginal probabilities associated with a responsible job, a job which met one's abilities, was useful for society, and provided the opportunity to meet people were (significantly) *negative* for a low level of satisfaction and (significantly) *positive* for a high level of satisfaction.

The most important factor affecting job satisfaction was the amount of security embodied in a job: compared to a job with low security, Table 4 shows that a highly secure job reduced the probability of low job satisfaction by 8.8 percentage points in West European countries and by 15.1 points in East European countries; at the other of the spectrum, compared to a job with low security, a highly secure job increased the probability of high job satisfaction by 38.4 percentage points in West European countries and by 35.7 points in East European countries. Blanchflower and Oswald (1999) reported for the USA that "expectations of possible job loss have one of the largest discernible negative effects on reported job satisfaction". In comparison to the effects of job security, the other job characteristic – income levels – had a much smaller effect on satisfaction levels: compared to low income, a high level of income reduced the probability of low job satisfaction by 0.8 percentage points in West European countries and by 3.8 points in East European countries; at the other of the spectrum, compared to low income, high income increased the probability of being highly satisfied in one's job by 6.3 percentage points in West European countries and by 9.8 percentage points in East European countries.[20]

[20] However, note the caveats associated with the income measure, detailed earlier. In particular, income related to household income not to remuneration from the job.

People who spent time socially with their work colleagues were less likely to have low levels of satisfaction (by 0.7 percentage points in West European, and by 1.4 percentage points in East European, countries) and more likely to have high levels of satisfaction (by 5.5 percentage points in West European, and by 3.5 percentage points in East European, countries) than people who did not. However, general unhappiness was most corrosive of job satisfaction: compared to those who were "happy", "unhappy" persons were more likely to have low satisfaction levels (by 3.6 percentage points in West European, and by 7.7 percentage points in East European, countries) and less likely to have high satisfaction levels (by 21.4 percentage points in West European, and by 17.2 percentage points in East European, countries).

There is, of course, the possibility that general unhappiness and low levels of job satisfaction are mutually related: unhappy people are dissatisfied in their jobs but dissatisfaction in one's job could also make a person unhappy. Similar observations might apply to socializing with work colleagues: socialising with work colleagues could be both a cause and a consequence of being satisfied in one's job. However, the evidence would appear to suggest that the impact of life satisfaction on job satisfaction was larger than the effect of job satisfaction on life satisfaction (Judge and Watanabe, 1993): a person's general well-being strongly affects his/her job well-being, though job well-being also affects general feelings (Warr, 1999). In a similar vein, socialising with one's colleagues – through, for example, work football teams, outings, parties – was, arguably, more likely to the cause of job satisfaction rather than the consequence.

The effects of gender on job satisfaction were very different between West European and East European countries: in West European countries, there was no

significant difference between men women in their respective probabilities of being at low or high satisfaction levels;[21] by contrast, in East European countries, women were significantly *more* likely than men (by 3.3 percentage points) to be at a high level of job satisfaction and significantly *less* likely than men (by 1.3 percentage points) to be at a low level of job satisfaction.

In both West European and East European countries, young (15-29 years) and middle-aged (30-49 years) persons were more likely to have low levels of satisfaction, and less likely to have high levels of satisfaction, than those aged 50 years or above. This is consistent with the findings of Birdi *et. al.* (1995) who also found that older workers reported higher levels of job satisfaction than younger workers. This might be due to the fact that levels of life satisfaction are higher among older workers and this, in turn, impacts on their level of job satisfaction. We did not, however investigate whether the age-job satisfaction relation was curvilinear (Clark *et. al.*, 1996).

The econometric results suggested that, in West European countries, persons in social classes C1 (middle non-manual) and C2 (middle manual) were more likely to have low levels of satisfaction, and less likely to have high levels of satisfaction, than those in the lowest social class (D-E: unskilled manual). By contrast, in East European countries, persons in social classes A-B (upper/upper middle class), C1 (middle non-manual) and C2 (middle manual) were *less* likely to have low levels of satisfaction, and *more* likely to have high levels of satisfaction, than those in the lowest social class (unskilled manual).

In West European countries, employees – whether they worked full-time or part time – were more likely to have low levels of job satisfaction, and less likely to have high

[21] This finding for West European countries runs counter to the finding that, at least in Britain, women are more contented in their jobs than men (Clark, 1997; Bender *et. al.* 2005).

levels of job satisfaction, compared to the self employed: compared to a self employed person, the probability of a high level of job satisfaction was 11.4 points lower for a full-time employee and 16.7 points lower for a part-time employee. In East European countries, there was no significant difference between full-time employees, part-time employees, and the self employed in their respective probabilities of low and high levels of satisfaction.

In both West and East European countries the probability of a low level of job satisfaction *rose*, and the probability of a high level of job satisfaction *fell*, with an increase in the size of the organization. For example, in West and East European countries, workers in small organizations were more likely, by 11.1 and 10.2 points, respectively, to have a high job satisfaction level compared to workers in large organizations.

## 4. The Decomposition of Job Satisfaction

Table 2 shows that there was a difference of 16 percentage points in the proportions of respondents in West European countries (59 percent) and in East European countries (43 percent) who had a high level of job satisfaction. In part, this may be due to the fact that the coefficient responses, to a given set of values of the "satisfaction determining" variables (attribute vector), were different between West European and East European countries: Table 4 shows that the marginal probabilities – derived from the ordered logit estimates - were, for several variables, significantly different between the two groups of countries. Partly, also, this may be due to the fact that, as Table 3 showed, the values of the "satisfaction determining" variables (attribute vectors) were different between West European and East European countries. So, how much of the overall

difference in satisfaction levels between West European and East European countries was due to "coefficient differences" and how much was due to "attribute differences"? This section provides an answer.[22]

The column headed 'sample average' in Tables 5 shows that 59.7 percent of respondents from West European countries and 43.1 percent of respondents from East European countries obtained a high level of job satisfaction: a difference of 16.6 percentage points. So, compared to respondents from West European countries, respondents from East European countries suffered from a "satisfaction deficit".

Now we conduct an experiment: what if the attributes of East European respondents *had been evaluated at "West European" coefficients*? This would neutralise coefficient differences between the two groups of countries. Table 5 (top panel, column 2) shows that, under this experiment, 45.6 percent of respondents from East European countries would obtain a high level of job satisfaction which is 14.1 percentage points *below* the West European average proportion of 59.7 percent. In other words, applying Western coefficients to Eastern attributes narrowed the West-East gap by 2.5 points (16.6 – 14.1).[23] Consequently, of the overall difference of 16.6 percentage points between West European and East European countries in their proportions at high satisfaction levels, 15 percent (2.5 points out of 16.6) was due to coefficient differences, and 85 percent (14.1 points out of 16.6) was due to attribute differences, between respondents in West and East European countries.

[22] The methodology used is that of Oaxaca (1973) adapted to probabilistic models (Nielsen, 1998; Borooah and Iyer, 2005).
[23] Compared to the coefficient responses of East European respondents, the coefficient responses of West European respondents were more conducive to high levels of job satisfaction.

We could also have neutralised East-West coefficient differences by using East European coefficients: what if the attributes of West European respondents *had been evaluated at "East European" coefficients*? Table 5 (lower panel, column 2) shows that, under this experiment, 58.4 percent of respondents from West European countries would obtain a high level of job satisfaction: 15.3 percentage points *above* the East European average proportion of 43.1. After neutralising coefficient differences, the East-West gap would narrow by 1.3 points (16.6-15.3). Consequently, on this alternative decomposition, of the overall difference of 16.6 percentage points between West European and East European countries in their proportions at high satisfaction levels, 8 percent (1.3 points out of 16.6) was due to coefficient differences, and 92 percent (15.3 points out of 16.6) was due to attribute differences, between respondents in West and East European countries.

One of the problems with the above decomposition method is that it yields two answers: one when East European attributes are evaluated at West European coefficients (Table 5, top panel), the other when West European attributes are evaluated at East European coefficients (Table 5, bottom panel). To overcome this problem Borooah and Iyer (2005) suggested a more general decomposition method called the method of "recycled proportions". The essential idea behind this method is to ask what the mean outcome (probability of a high satisfaction level)) would be if *all* the respondents (respondents in West European *and* East European countries) were, first, treated as belonging to West European countries (i.e. *all* respondents had their attributes evaluated at West European coefficients) and, second, treated as belonging to East European countries (i.e. *all* respondents had their attributes evaluated at East European

coefficients). Since the *only* factor that was altered between these experiments is whether the respondents were evaluated at West or East European coefficients, one may identify the difference in outcomes between these experiments as being generated *entirely* by coefficient differences between the East and the West. The difference between the observed outcome for a group (average proportion of respondents in West European/East European countries who had high satisfaction levels) and its "experimental outcome" (the average probability of high satisfaction, computed over the entire sample, if everyone was treated as a West European/East European) may then, intuitively, be assigned to attribute differences between respondents in the two groups of countries.

Borooah and Iyer (2005) showed that the attribute contribution under this method was a weighted average of the two earlier attribute contributions, namely: (i) when East European attributes were evaluated at West European coefficients; (ii) when West European attributes were evaluated at East European coefficients. The weights were the sample shares of West European (56.7 percent), and East European (43.3 percent), respondents. Applying this method, of the total difference of 16.6 points in the proportions of West and East European respondents with high job satisfaction levels, 88 percent was due to attribute differences between the two groups of respondents[24], with 12 percent being the result of coefficient differences.

## 5. Conclusions

This paper examined differences in job satisfaction between West and East European countries. Compared to East European countries, job satisfaction levels were considerably higher in West European countries. Moreover, there was considerably

[24] 0.433*0.141+0.557*0.153=0.146; (0.146/0.166)*100=88.0; 100-88.0=12.0.

greater inequality in the distribution of job satisfaction in East European, compared to West European, countries. When these facts were combined to construct "equity-sensitive" job satisfaction averages, the gap between West European and East European countries was even greater than suggested by a comparison of average satisfaction levels.

This raised the question of why there was a difference in job satisfaction levels between these two sets of countries. An ordered logit model suggested that a number of factors were important for determining job satisfactions: attitudes towards a job; job characteristics; general life satisfaction; and socio-demographic characteristics. As this paper showed, there was considerable difference between West European and East European countries in their endowments of these attributes. However, when the equations were estimated separately for the West European and East European countries, the coefficient estimates associated with several variables were also markedly different between the two groups.

In order to estimate how much of the overall difference in satisfaction levels between West European and East European countries was due to "coefficient differences", and how much was due to "attribute differences", the paper decomposed the difference between West European and East European countries, in the proportion of their respondents who enjoyed high levels of job satisfaction, into the amounts engendered by attribute and coefficient differences. We concluded that the reason that West European countries had higher levels of job satisfaction than East European countries was largely because they were endowed with those attributes which promoted job satisfaction.

In a broader sense, the paper pointed to the fact that job satisfaction depended critically on the constellation of job-related attributes that employees regarded as being "important". The greater the weight that one placed on the external aspects of a job – pay, holidays, promotion chances etc. – the more likely one was to be dissatisfied. The greater the weight one placed on the internal aspects of a job – responsibility, usefulness, social interaction – the more likely one was to be satisfied. Why should this be so? One reason is that many of the external aspects of a job are competitive: the pleasure I derive from my (otherwise good) remuneration is greatly eroded when I learn that my colleague(s) are even better paid; I welcome the prospects for promotion, but not if these opportunities fall to others and I am overlooked. On the other hand, many of the internal aspects of a job are co-operative (social interactions) or, at least, non-competitive (responsibility, usefulness).

Many managerial innovations targeted at raising productivity – performance related pay, accelerated promotion, greater monitoring – may actually reduce job satisfaction. Does this mean that workers are happiest when they are not required to work? No. Our results suggest that workers are most satisfied when the quality of their work life is high through working in a non-competitive, and perhaps even co-operative, work environment.

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## Table 1: Equity-Adjusted Job Satisfaction Scores

| | Observations | Average Job Satisfaction Score | | |
|---|---|---|---|---|
| **West European Countries** | | **Arithmetic Mean** | **Geometric Mean** | **Harmonic Mean** |
| Austria *[138]* | 764 | 7.8 | 7.4 | 6.7 |
| Belgium *[127]* | 878 | 7.6 | 7.2 | 6.5 |
| Denmark *[116]* | 640 | 8.1 | 7.8 | 7.2 |
| Finland *[107]* | 556 | 7.7 | 7.4 | 7.1 |
| France *[142]* | 793 | 7.1 | 6.8 | 6.1 |
| Germany *[116}* | 925 | 7.7 | 7.4 | 6.9 |
| Greece *[167]* | 720 | 6.9 | 6.4 | 5.5 |
| Iceland *[107]* | 780 | 7.9 | 7.6 | 7.3 |
| Ireland *[139}* | 570 | 7.8 | 7.4 | 6.7 |
| Italy *[149}* | 1,109 | 7.3 | 6.9 | 6.1 |
| Luxembourg *[137]* | 660 | 7.5 | 7.2 | 6.6 |
| Malta *[102]* | 478 | 8.4 | 8.2 | 7.8 |
| Netherlands *[95]* | 651 | 7.5 | 7.3 | 6.9 |
| Portugal *[142]* | 451 | 7.5 | 7.2 | 6.7 |
| Spain *[144]* | 511 | 7.3 | 6.9 | 6.3 |
| Sweden *[136]* | 663 | 7.3 | 7.0 | 6.4 |
| Great Britain *[144]* | 516 | 7.2 | 6.9 | 6.4 |
| Northern Ireland *[157]* | 489 | 7.6 | 7.1 | 6.2 |
| **All West European Countries *[134]*** | **12,151** | **7.6** | **7.2** | **6.6** |
| | | **Average Job Satisfaction Score** | | |
| **East European Countries** | | **Arithmetic Mean** | **Geometric Mean** | **Harmonic Mean** |
| Bulgaria *[188]* | 434 | 7.2 | 6.6 | 5.6 |
| Belarus *[231]* | 637 | 5.5 | 4.9 | 4.2 |
| Croatia *[183]* | 523 | 6.9 | 6.4 | 5.5 |
| Czech Republic *[154]* | 1,033 | 7.4 | 6.9 | 6.2 |
| Estonia *[187]* | 594 | 6.7 | 6.2 | 5.3 |
| Hungary *[188]* | 443 | 6.8 | 6.3 | 5.5 |
| Latvia *[195]* | 477 | 6.7 | 6.1 | 5.1 |
| Lithuania *[196}* | 524 | 6.9 | 6.2 | 5.0 |
| Poland *[197]* | 509 | 6.6 | 6.0 | 5.1 |
| Romania *[214]* | 437 | 6.7 | 6.0 | 4.8 |
| Russia *[243]* | 1,134 | 6.2 | 5.4 | 4.3 |
| Slovakia *[163]* | 772 | 6.7 | 6.3 | 5.7 |
| Slovenia *[154]* | 555 | 7.2 | 6.8 | 6.2 |
| Turkey *[268]* | 395 | 6.1 | 5.1 | 3.8 |
| Ukraine *[254]* | 609 | 5.9 | 5.1 | 4.0 |
| **All East European Countries *[205]*** | **9,240** | **6.6** | **6.0** | **5.0** |

Figures in parentheses are values of the Gini coefficient x 1000

Arithmetic Mean = $\sum_{i=1}^{N} X_i / N$ ; Geometric Mean = $\left[\prod_{i=1}^{N} (X_i)^N\right]^{1/N}$ ; Harmonic Mean = $\left[\sum_{i=1}^{N} \frac{N}{X_i}\right]^{-1}$

**Table 2: Levels of Job Satisfaction by Country**

| | % of Employed Persons Whose Job Satisfaction Levels Were: | | |
|---|---|---|---|
| **West European Countries** | **Low (Score: 1-3)** | **Medium (Score: 4-7)** | **High (Score: 8-10)** |
| Austria | 4 | 32 | 64 |
| Belgium | 4 | 35 | 60 |
| Denmark | 3 | 25 | 72 |
| Finland | 3 | 33 | 64 |
| France | 5 | 47 | 48 |
| Germany | 2 | 36 | 62 |
| Greece | 7 | 48 | 45 |
| Iceland | 2 | 31 | 67 |
| Ireland | 3 | 35 | 62 |
| Italy | 6 | 40 | 54 |
| Luxembourg | 4 | 39 | 57 |
| Malta | 2 | 23 | 75 |
| Netherlands | 2 | 41 | 57 |
| Portugal | 3 | 42 | 55 |
| Spain | 5 | 43 | 52 |
| Sweden | 5 | 38 | 57 |
| Great Britain | 4 | 42 | 54 |
| Northern Ireland | 6 | 36 | 58 |
| **Average: all West European Countries** | 4 | 37 | 59 |
| | **% of Employed Persons Whose Job Satisfaction Levels Were:** | | |
| **East European Countries** | **Low (Score: 1-3)** | **Medium (Score: 4-7)** | **High (Score: 8-10)** |
| Bulgaria | 8 | 38 | 54 |
| Belarus | 21 | 57 | 22 |
| Croatia | 9 | 45 | 46 |
| Czech Republic | 6 | 37 | 57 |
| Estonia | 10 | 48 | 42 |
| Hungary | 8 | 49 | 43 |
| Latvia | 10 | 47 | 44 |
| Lithuania | 10 | 38 | 52 |
| Poland | 11 | 46 | 43 |
| Romania | 13 | 42 | 45 |
| Russia | 18 | 44 | 38 |
| Slovakia | 7 | 51 | 42 |
| Slovenia | 5 | 43 | 52 |
| Turkey | 21 | 37 | 42 |
| Ukraine | 19 | 45 | 36 |
| **Average: all East European Countries** | 12 | 45 | 43 |

**Table 3: The Distribution of Satisfaction-Determining Attributes**

| Atrributes | Percentage of Respondents who had Attribute: | |
|---|---|---|
| | West European Countries | East European Countries |
| ***Important in a Job:*** | | |
| Good pay | 77 | 90 |
| Not too much pressure | 35 | 37 |
| Security | 62 | 70 |
| Respected job | 43 | 49 |
| Good hours | 51 | 52 |
| Opportunity to use initiative | 56 | 47 |
| Generous holidays | 30 | 33 |
| Can achieve something | 61 | 55 |
| A responsible job | 50 | 40 |
| An interesting job | 69 | 68 |
| Meets one's abilities | 60 | 65 |
| Pleasant people to work with | 76 | 70 |
| Good chances of promotion | 38 | 41 |
| Useful for society | 41 | 42 |
| Meeting people | 52 | 48 |
| ***Job characteristics:*** | | |
| Low Security* | 3 | 15 |
| Moderately Secure | 11 | 23 |
| Very Secure | 89 | 62 |
| Low Incom* | 18 | 19 |
| Middle income | 38 | 36 |
| High income | 42 | 44 |
| ***Social Life and Feelings*** | | |
| Spends time socially with Work Colleagues | 47 | 53 |
| Unhappy | 8 | 29 |
| ***Socio-Demographic Variables*** | | |
| Female | 46 | 48 |
| Young (15-29) | 24 | 24 |
| Middle-aged (30-49) | 54 | 56 |
| Old (50+)* | 22 | 20 |
| Married | 59 | 67 |
| Single | 30 | 18 |
| Once Married* | 11 | 14 |
| Low Education* | 31 | 19 |
| Moderately well education | 43 | 57 |
| Highly educated | 26 | 24 |
| Social class: A-B (upper/upper-middle) | 12 | 4 |
| Social class: C1 (middle non-manual) | 22 | 16 |
| Social class: C2 (middle manual) | 18 | 16 |
| Social class: DE* (unskilled manual) | 48 | 64 |
| ***Hours of Work*** | | |
| Full-time | 73 | 83 |
| Part-time | 16 | 10 |
| Self employed | 11 | 7 |
| ***Organisation Size*** | | |

| | | |
|---|---|---|
| Small (25 or fewer employess) | 15 | 11 |
| Medium (26-250 employees) | 12 | 14 |
| Large (>250 employees) | 73 | 75 |

Notes to Table 3

1. Under “attributes important in a job”: 77 percent of respondents in West European countries mentioned good pay as important in a job, with 23 percent of respondents in West European countries not mentioning it as important.
2. * indicates that the variable is the residual category in the estimation results of Table 4.
3. The Values Survey asked respondents to rate their satisfaction with job security on a scale of 1(maximum dissatisfaction) to 10 (maximum satisfaction): from these ratings we classed job security as: “low” (score 1-3); “medium” (4-7); and “high” (8-10).
4. The Values Survey asked respondents if they were: “very happy”; “quite happy”; “not very happy”; “not at all happy” and we categorised a person as “unhappy” if their reply was “not very happy” or “not at all happy”.
5. The Values Survey recorded the reported incomes of respondents as “low”, “medium”, and “high”.
6. The Values Survey recorded the highest educational attainment of respondents as “low” (inadequately completed elementary education/completed elementary education/inadequately completed secondary education), “medium” (complete secondary/university preparation), and “high” (some university without degree or university with degree).
7. The Values Survey recorded social class as: AB, upper/upper middle class; C1, middle, non-manual; C2, middle, manual; DE, manual unskilled.

**Table 4: Marginal Probabilities from the Ordered Logit Models**

| | All Countries | | West European Countries | | East European Countries | |
|---|---|---|---|---|---|---|
| | Low Satisfaction | High Satisfaction | Low Satisfaction | High Satisfaction | Low Satisfaction | High Satisfaction |
| West European countries | -0.01*** | 0.046*** | | | | |
| ***Important in a Job:*** | | | | | | |
| Good pay | 0.008*** | -0.039*** | 0.004*** | -0.038*** | 0.014* | -0.038* |
| Not too much pressure | 0.005** | -0.025** | 0.003** | -0.028** | 0.015** | -0.038** |
| Security | -0.004* | 0.017* | -0.002 | 0.016 | -0.001 | 0.025* |
| Respected job | -0.001 | 0.006 | -0.002 | 0.014 | 0.004 | -0.009 |
| Good hours | 0.007*** | -0.034*** | 0.003* | -0.025* | 0.015** | -0.038** |
| Opportunity to use initiative | -0.002 | -0.009 | -0.002 | 0.014 | -0.003 | 0.007 |
| Generous holidays | 0.012*** | -0.054*** | 0.007*** | -0.0568** | 0.015** | -0.037** |
| Can achieve something | -0.000 | 0.001 | -0.003* | 0.024* | 0.011* | -0.029* |
| A responsible job | -0.011*** | 0.049*** | -0.003** | 0.027** | -0.031*** | 0.081*** |
| An interesting job | -0.004* | 0.020* | -0.001 | 0.007 | -0.013** | 0.031** |
| Meets one's abilities | -0.006** | 0.026** | -0.004** | 0.029** | -0.008 | 0.020 |
| Pleasant people to work with | -0.003 | 0.015 | -0.001 | 0.011 | -0.007 | 0.017 |
| Good chances of promotion | 0.008** | -0.036*** | 0.003* | -0.026* | 0.018*** | -0.045*** |
| Useful for society | -0.005** | 0.025*** | -0.003 | 0.021 | -0.010 | 0.024 |
| Meeting people | -0.011*** | 0.048*** | -0.007*** | 0.060*** | -0.013** | 0.032** |
| ***Job characteristics:*** | | | | | | |
| Moderately Secure | -0.042*** | 0.231*** | -0.020*** | 0.198*** | -0.077*** | 0.226*** |
| Very Secure | -0.122*** | 0.371*** | -0.088*** | 0.384*** | -0.151*** | 0.357*** |
| Middle income | -0.011*** | 0.049*** | -0.005*** | 0.039** | -0.017** | 0.045*** |
| High income | -0.019*** | 0.088*** | -0.008*** | 0.063*** | -0.038** | 0.098*** |
| ***Social Life and Feelings*** | | | | | | |
| Spends time socially with Work Colleagues | -0.010*** | 0.047*** | -0.007*** | 0.055*** | -0.014*** | 0.035*** |
| Unhappy | 0.060*** | -0.207*** | 0.036*** | -0.214*** | 0.077*** | -0.172*** |
| ***Socio-Demographic Variables*** | | | | | | |
| Female | -0.003 | 0.012 | 0.002 | -0.012 | -0.013** | 0.033* |
| Young (15-29) | 0.013*** | -0.055*** | 0.006** | -0.051*** | 0.016* | -0.039* |
| Middle-aged (30-49) | 0.013*** | -0.058*** | 0.007*** | -0.060*** | 0.013** | -0.035** |
| Married | 0.005* | -0.024** | 0.002 | -0.016 | 0.009 | -0.024 |
| Single | 0.010** | -0.043** | 0.006* | -0.045* | 0.014 | -0.035 |
| Has children | -0.007** | 0.031** | -0.005** | 0.041** | -0.008 | 0.021 |
| Moderately well educated | 0.004 | -0.019 | 0.001 | -0.007 | 0.005 | -0.012 |
| Highly educated | 0.001 | -0.006 | 0.001 | -0.011 | -0.005 | 0.013 |
| Social class: A-B | -0.009** | 0.045** | 0.001 | 0.011 | -0.048*** | 0.158*** |
| Social class: C1 | -0.005** | 0.025 | 0.003* | -0.028* | -0.040*** | 0.120*** |

| | | | | | | |
|---|---|---|---|---|---|---|
| Social class: C2 | -0.001 | 0.003 | 0.005** | -0.040** | -0.030*** | 0.089*** |
| ***Hours of work*** | | | | | | |
| Full time employee | 0.016*** | -0.078*** | 0.013*** | -0.114*** | -0.004 | 0.009 |
| Part time employee | 0.035*** | -0.133*** | 0.025*** | -0.167*** | 0.016 | -0.039 |
| ***Organisation Type*** | | | | | | |
| Small organisation | -0.021*** | 0.111*** | -0.012*** | 0.111*** | -0.035*** | 0.102*** |
| Medium organisation | -0.017*** | 0.084*** | -0.008*** | 0.072*** | -0.032*** | 0.093*** |

Notes to Table 4
1. The dependent variable in the original ordered logit model = 1, if level of job satisfaction is "low" (score: 1–3); = 2, if level is moderate (4–7); = 3, if level is high (8–10).
3. * significant at 10%; ** significant at 5%; *** significant at 1%
4. Residual categories are: (i) Male; (ii) Old (50+ years); (iii) Once married; (iv) Low level of education; (v) social class D–E (manual, unskilled); (vi) low income; (vii) self-employed; (viii) large organization.

**Table 5**
**The Decomposition of Differences between West (W) and East (E) European Countries in the Proportions of Their Respondents who had High Levels of Job Satisfaction**

| ***Sample Average*** $\bar{P}^{W} - \bar{P}^{NW}$ | ***East European attributes evaluated using West European coefficient estimates*** $P(\mathbf{X}^{W}, \hat{\boldsymbol{\beta}}^{W})$ $-P(\mathbf{X}^{E}, \hat{\boldsymbol{\beta}}^{W})$ | $P(\mathbf{X}^{E}, \hat{\boldsymbol{\beta}}^{W})$ $-P(\mathbf{X}^{E}, \hat{\boldsymbol{\beta}}^{E})$ |
|---|---|---|
| **0.597 - 0.431 = -0.166** | **0.597 - 0.456 = 0.141** | **0.456- 0.431 = -0.025** |
| ***Sample Average*** $\bar{P}^{W} - \bar{P}^{NW}$ | ***West European attributes evaluated using East European coefficient estimates*** $P(\mathbf{X}^{W}, \hat{\boldsymbol{\beta}}^{E})$ $-P(\mathbf{X}^{E}, \hat{\boldsymbol{\beta}}^{E})$ | $P(\mathbf{X}^{W}, \hat{\boldsymbol{\beta}}^{W})$ $-P(\mathbf{X}^{W}, \hat{\boldsymbol{\beta}}^{E})$ |
| **0.597 - 0.431 = -0.166** | **0.584-0.431=0.153** | **0.597-0.584=0.013** |