



**Life Satisfaction among Spanish Workers:  
Importance of Intangible Job Characteristics\***

**by**

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**Abstract:** Using the data from the Spanish survey on life quality at work, we examine the factors which affect Spanish workers' life satisfaction. Our analysis shows that on workers' life satisfaction, the combined effect of intangible job characteristics such as flexibility, independence, social usefulness, pleasant work environment, pride, stress and the perception of receiving an adequate wage, is several times larger than that of objective job characteristics such as wage and hours of work. Some evidence for the difficulties in work-life balance, especially among female workers, is also shown as we observe significant negative effects of dependent children, long hours of work, commuting time to work and inflexible jobs on life satisfaction.

Key words: life satisfaction, income, wage, hours of work, intangible job characteristics.

**Resumen:** Examinamos los determinantes de la satisfacción vital de los trabajadores españoles utilizando datos de la Encuesta de Calidad de Vida en el Trabajo. Nuestro análisis muestra que a la hora de determinar la satisfacción vital de los trabajadores, el efecto del conjunto de las características intangibles del puesto de trabajo, como la percepción de un salario adecuado, un emparejamiento laboral óptimo, la flexibilidad, la independencia, el orgullo en el trabajo, su utilidad social, el entorno laboral, la estabilidad, las relaciones con compañeros o el nivel de estrés en el trabajo, es varias veces más grande que el efecto de las características objetivas como el salario y horas de trabajo. Observamos también algunas evidencias de la dificultad a la hora de compaginar el empleo y la familia, especialmente para mujeres, a través del efecto negativo de la presencia de hijos dependientes, largas horas de trabajo, el tiempo de desplazamiento al trabajo e la falta de flexibilidad en los días de trabajo.

## 1. Introduction

Individual well-being (or happiness) depends on many things, ranging from income, labor market status, job characteristics, health, family, social relationships, to security, liberty, moral values, religious faith and many others (above all personality). It is only very recent that economists have taken up the issue.<sup>1</sup> Usually, the context of happiness analyzed depends on the available survey questions. Most often, overall happiness (or satisfaction) with life is asked, and in some surveys, job satisfaction is asked. Oswald (1997) and Frey and Stutzer (2002) survey the literature on general happiness, job satisfaction and some specific indicators (such as stress and suicide) of life satisfaction.

Although it is well established that employment is an important factor in happiness among the working-age population, it is not so much studied how various job characteristics affect workers' well-being. Studies on workers' life satisfaction mostly examined the effect of wage (See for example, Warr 1999; Frey and Stutzer 2002). Some have examined the effect on job satisfaction of some important job characteristics, such as occupation, hours of work, job security, trade union affiliation and commuting time to work (for example, Oswald 2002). However, there are no studies which examine the effect of subjective job characteristics, such as flexibility, work environment, independence, social usefulness, stress, relationships within workplace, pride, job match quality, etc on overall happiness of workers.

In this paper, we highlight the effect of subjective as well as objective job characteristics on life satisfaction relative to that of wage and income. We examine self-reported life satisfaction levels using the Spanish survey of life quality at work (*Encuesta de Calidad de Vida en el Trabajo*). The survey includes detailed information on individual and job characteristics as well as life satisfaction, therefore enabling the examination of the effects of different individual and job characteristics on life satisfaction. We highlight the effect of intangible job characteristics relative to wage, household income and other objective job characteristics on life satisfaction.

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<sup>1</sup> Exceptions that we are aware of are the work by Easterlin (1974) and Layard (1980).

## 2. Data and Descriptive Results

Research on life satisfaction or happiness in Spain has been scarce mainly due to the lack of data. Eurobarometer surveys are often used but the sample size for each country is rather small (1000 each year) and the covariates included are limited to carry out any robust analyses. Recently European Community Household Panel Survey has become available but it contains information on several life domain satisfactions but not on general life satisfaction (Ahn et al. 2004).

The only available Spanish data with a reasonable sample size which include information on life satisfaction are Spanish survey of life quality at work (hereafter ECVT). The survey is conducted on about 6000 Spanish workers each year starting from 1999. We have 6 cross-sections of the survey for the years 1999-2004. The survey is not longitudinal, therefore unable to examine the factors affecting transitions in happiness level or to control for fixed individual effects.

At the outset, it is important that one understands well the survey questions we analyze. The respondents in the ECVT were asked “How satisfied are you with your current life?” with 10 possible response categories ranging from ‘very dissatisfied’ (=1) to ‘very satisfied’ (=10).

The satisfaction question is based entirely on individuals’ own perception. The question asked is not concrete in terms of comparison groups or in the description of each category of satisfaction levels<sup>2</sup>, therefore leaving large rooms for interpretation heterogeneity across interviewees. Second, the possible responses are ordered qualitatively.<sup>3</sup> Comparing the responses between groups of people is not straightforward. We begin with simple “averages” of the responses in the questionnaire. The simple average provides a satisfaction index (the bigger the average, the happier) which is comparable across populations if we are willing to assume linearity across the responses.

Table 1 presents the satisfaction score distribution, average and standard deviation by gender. As it can be seen, there are few people reporting satisfaction level lower than 5, only 6% of men and 8.5% of women. Both the median and the mode are situated at 7. It can also be seen

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<sup>2</sup> The categories (2, 3, 4, ..., 9) between the worst (=1) and the best (=10) have no words attached to them.

<sup>3</sup> To the extent that respondents consider the response numbers (1 to 10) as cardinal measures of their happiness (for example, the response 10 means twice happier than the response 5) the reported values may be used as a cardinal measure of satisfaction.

that there is a high concentration in the satisfaction scores between six and eight, 68% of men and 65% of women. Therefore, it seems that Spanish workers are in general quite happy with their lives. By gender we observe a small difference favoring men by 0.06 points in a 1 to 10 satisfaction scale.

**Table 1: Distribution (%) of Life Satisfaction Score**

Score	Men	Women	Total
1	0,56	0,82	0,66
2	0,77	1,33	0,98
3	1,60	2,59	1,97
4	3,14	3,84	3,40
5	11,59	11,59	11,59
6	18,40	15,76	17,40
7	26,62	26,06	26,41
8	23,32	23,04	23,22
9	7,89	8,94	8,29
10	6,12	6,03	6,09
Average	6,93	6,87	6,91
SD	1,63	1,77	1,69
N	22347	11875	34222

Table 2 compares the life satisfaction levels by some individual and job characteristics. Also reported is the number of observation for each category to be considered in evaluating the importance of the differences across categories. Although these univariate comparisons should not be considered as true effects due to the possibility of confounding the effects of other correlated variables, they serve as the first approximation to the potential factors which determine individual well-being and as an indirect test of data reliability. If the results are different from our reasonable conjecture or from the findings of other studies, we should question the data quality.

**2a: Individual Characteristics**

	<b>Avg. Satisfaction</b>		<b>Observations</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
<b>Age</b>				
16-19	7,11	7,28	358	181
20-29	7,04	7,01	4200	3018
30-39	6,89	6,89	6805	3655
40-49	6,82	6,71	5980	3084
50-59	6,96	6,82	4130	1677
60-64	6,96	6,59	1007	344
<b>Marital status</b>				
Single	6,92	6,89	5,901	3,895
Married	6,96	7,02	15,752	6,589
Seperated-div.	6,36	6,13	543	1,001
Widowed	6,13	6,20	127	395
<b>Education</b>				
<Primary	6,44	6,31	1213	450
Primary	6,70	6,58	4478	1578
Secondary	6,94	6,74	6142	2694
Fp-bup-cou	7,00	6,92	6475	3759
University	7,22	7,12	3766	3207

**2b: Household Characteristics**

	<b>Avg. Satisfaction</b>		<b>Observations</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
<b>Spouse's labor market status</b>				
Work	7,12	7,12	4534	5137
Unemployed	6,79	6,33	892	522
Retired	7,11	6,98	55	515
Others	6,90	6,70	10271	415
<b>Household income (monthly in euros)</b>				
<500	5,66	6,02	328	331
500-999	6,62	6,35	4,886	2,022
1000-1499	6,96	6,81	4,672	2,184
1500-1999	7,22	7,25	2,631	1,662
2000-2499	7,34	7,36	1,156	762
2500-2999	7,41	7,26	589	389
3000+	7,45	7,65	503	287
<b>Domestic work (principal housekeeper)</b>				
Myself	6,58	6,68	1773	5495
Shared	7,06	7,04	5795	4695
Others	6,92	6,98	14724	1693
<b>Dependent children?</b>				
No	6,94	6,92	9985	5958
Yes	6,92	6,81	12495	6001

**2c: Job Characteristics**

	<b>Avg. Satisfaction</b>		<b>Observations</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
<b>Sector and contract type</b>				
Priv-perm	7,02	6,88	9830	4566
Priv-temp	6,57	6,62	4157	2477
Pub-perm	7,25	7,18	2742	2050
Pub-temp	7,06	6,88	492	601
Self-employed	6,90	6,85	5110	2108
<b>Hours of work per week</b>				
20-29	7,10	6,83	459	1418
30-39	7,16	7,15	2960	2920
40-49	6,99	6,87	13651	6243
50-59	6,72	6,27	3537	859
60-69	6,43	6,21	1301	344
70+	6,25	5,70	557	166
<b>Work hours desired</b>				
More hours	6,79	6,60	5398	2715
Same	7,11	7,08	13446	7287
Fewer hours	6,52	6,53	1571	855
<b>Wage (monthly in euros)</b>				
<500	6,47	6,62	1,065	2,237
500-999	6,79	6,81	9,646	5,240
1000-1499	7,19	7,34	4,953	1,557
1500-1999	7,36	7,46	1,294	315
2000-2499	7,24	7,03	458	73
2500-2999	7,60	7,83	181	26
3000+	7,29	6,67	153	18
<b>Wage adequate?</b>				
Lower	6,51	6,41	5630	3183
Adequate	7,15	7,12	13168	6614
Higher	7,37	7,23	688	364
<b>Commuting time to work</b>				
<15 minutes	7,00	6,98	10374	5957
16-30	6,98	6,90	7851	4028
31-45	6,78	6,62	2267	1129
46-60	6,75	6,53	101	500
60-90	6,67	6,48	546	263
90+	6,16	6,20	299	55

### *Individual Characteristics*

First, by age, we observe the lowest life satisfaction in their 40s among male workers and those over 60 among the female workers. The satisfaction variation by age is larger among women than among men. In particular, the female workers less than 20 years old report the highest levels of satisfaction while those in their 60s report the lowest levels, with the difference of 0.7 points between the two groups.

Marital status shows substantial effects on life satisfaction. For both genders, the widowed, separated or divorced report substantially lower life satisfaction scores than singles or married persons. This is consistent with previous studies.

Higher education levels are clearly associated with higher life satisfaction, with a difference of 0.8 satisfaction point between the lowest and the highest education levels. However, as it will be shown in the section of multivariate analysis, the effect of education turns out to be due to other correlated characteristics such as income and job characteristics.

### *Household Characteristics*

Among the household characteristics, we have information on the spouse's labor market status, household income and the principal caretaker of domestic chores. Among the married persons, having an unemployed spouse reduces the satisfaction level considerably, especially among the married women. This negative effect, in addition to the negative effect of unemployment on the unemployed person (see for example Ahn et al, 2004), indicates that the overall effect of unemployment should also include the effects on other family members' well-being.

Household income affects strongly on the individual's life satisfaction. The effect is strongest at low levels of income. For example, those living in a household with the monthly income less than 500 euros report satisfaction level substantially lower than those who have household income between 500 and 999. The further increase of 500 euros also increases substantially the satisfaction level. However, the effect almost disappears above the monthly income over 2000 euros.

For both genders those who declare himself or herself as the principal homemaker report lower life satisfaction. Both men and women who share housekeeping with other persons report higher life satisfaction than those who are themselves the principal housekeeper. Having

dependent children does not show any difference in satisfaction among men, while it is associated with slightly lower life satisfaction among women.

### *Job Characteristics*

The sector and the contract type of jobs also seem to affect life satisfaction. As expected, permanent contracts and public sector jobs provide higher life satisfaction. Public sector workers with a permanent contract enjoy about 0.6 points higher satisfaction than private sector temporary contract holders.

Hours of work also affect substantially life satisfaction. Those working 30-39 hours report the highest life satisfaction while those working more than 50 hours per week report substantially lower satisfaction levels. Combining actual working hours and preferred ones we can measure the satisfaction penalty due to working hour inflexibility. Naturally, those who are working more or fewer hours than the preferred ones (especially those working more) report much lower satisfaction levels.

Individual labor income is associated positively with life satisfaction. The effect is strong at low levels of income but disappears beyond 1500 euros per month. The effect is stronger for men than women. Another related variable with labor income is the opinion about the wage adequacy posed in the question “What do you think about your wage compared to the market wage for the type of work that you undertake?” with possible responses ‘lower’, ‘adequate’ and ‘higher’. The comparison by the response to this question shows clearly that those who consider their wage under the market wage are much less satisfied than others. What is interesting is that those who think they receive higher wages than the market wage are happier than those who consider their wage in line with market wage but the difference is much smaller than between the first two groups. Furthermore, there are about eight times more workers who consider their wage below the market wage than those who consider the opposite.

Another job characteristic that seems to affect life satisfaction is commuting time to work. There is a small effect for the commuting time below 30 minutes. Beyond that there is a substantial reduction in satisfaction.

### **3. Multivariate Results**

Although most of the descriptive results in the previous section seem reasonable and in line with previous findings, they are likely to be biased due to the confounding effects of other correlated characteristics. To establish true effect net of other correlated variables we run regressions including all relevant variables which may affect workers' life satisfaction. As will be seen below, the effects of some variables change substantially as more variables are added. We have run three OLS regressions for each gender. The first regression includes only demographic variables, both individual and household. The second regression adds job characteristics which are mostly objective, and the third regression adds further job characteristics which are mostly subjective evaluation (or intangible characteristics) of their job. The sample includes paid employees aged 16-64 and working at least 20 hours per week. Sample means are reported in Appendix.

**Table 3: OLS Regression (1=very dissatisfied; ...; 10= very satisfied) of Life Satisfaction (bold face:  $|t|>2$ )**

	Mostly demographic variables		+ Job characteristics		+ Intangible Job characteristics	
	Men	Women	Men	Women	Men	Women
<b>Observations</b>	4381	2472	4381	2472	4381	2472
<b>R-square</b>	0,037	0,066	0,097	0,124	0,176	0,203
<b>Variables</b>	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
<i>Income (in logarithm)</i>						
- Household			<b>0,486</b>	<b>0,512</b>	<b>0,424</b>	<b>0,446</b>
- Individual Labor			<b>0,194</b>	0,184	-0,041	-0,035
Age	<b>-0,085</b>	-0,046	<b>-0,089</b>	<b>-0,062</b>	<b>-0,068</b>	<b>-0,055</b>
Age sq.	<b>0,001</b>	0,001	<b>0,001</b>	0,001	<b>0,001</b>	0,000
<i>Marital Status and Spouse's labor market status (re: Married &amp; Spouse work)</i>						
- Sp-unemp	-0,151	<b>-0,887</b>	0,054	<b>-0,465</b>	0,084	<b>-0,397</b>
- Sp-retired	0,023	0,362	0,078	<b>0,531</b>	0,202	0,407
- Sp-other	<b>-0,155</b>	<b>-0,488</b>	0,017	-0,136	-0,018	-0,124
- Single	<b>-0,274</b>	<b>-0,500</b>	<b>-0,230</b>	<b>-0,247</b>	<b>-0,251</b>	<b>-0,266</b>
- Sep-Div.	<b>-0,619</b>	<b>-0,914</b>	<b>-0,454</b>	<b>-0,533</b>	<b>-0,494</b>	<b>-0,478</b>
- Widowed	-0,696	<b>-0,746</b>	-0,624	-0,434	<b>-0,724</b>	<b>-0,430</b>
<i>Education Level (re: less than primary)</i>						
- Primary	0,166	0,177	-0,005	0,079	-0,011	-0,003
- Secondary	<b>0,332</b>	0,261	0,057	0,002	0,018	-0,042
- FP/Bup/Cou	<b>0,365</b>	0,287	-0,037	-0,123	-0,056	-0,165
- University	<b>0,634</b>	<b>0,513</b>	-0,018	-0,156	-0,061	-0,184
Moved since 16	-0,067	-0,133	-0,018	-0,037	-0,022	-0,010
Dependent child	0,049	-0,123	-0,034	-0,144	-0,041	-0,164
<i>Principal Housekeeper (re: myself)</i>						
- Shared	<b>0,366</b>	<b>0,246</b>	0,181	<b>0,188</b>	0,133	<b>0,166</b>
- Others	<b>0,289</b>	0,199	0,147	0,057	0,074	0,052
<i>Association with social club</i>						
- Sport club	<b>0,481</b>	<b>0,315</b>	<b>0,366</b>	0,130	<b>0,351</b>	0,158
- Voluntary organ.	0,036	0,273	0,014	0,276	0,027	0,294
<i>Hours of work (re: 40-49)</i>						
- 20-29 hrs			0,163	<b>0,287</b>	0,109	0,078
- 30-39 hrs			0,096	<b>0,226</b>	0,103	<b>0,167</b>
- 50-59 hrs			<b>-0,342</b>	<b>-0,550</b>	<b>-0,288</b>	<b>-0,518</b>
- 60-69 hrs			<b>-0,524</b>	-0,030	<b>-0,493</b>	-0,047
- 70+			<b>-0,598</b>	-0,672	<b>-0,584</b>	-0,750
<i>Sector and contract type (re: Private permanent)</i>						
- Priv-temp			<b>-0,328</b>	<b>-0,206</b>	-0,021	0,034
- Pub-perm			0,075	0,126	0,038	0,167
- Pub-temp			-0,045	0,018	0,174	0,072
Fringe Benefit			<b>0,062</b>	0,065	<b>0,062</b>	0,065
Commuting time			<b>-0,098</b>	<b>-0,165</b>	<b>-0,049</b>	<b>-0,134</b>
Night Shift			-0,035	<b>-0,243</b>	0,067	-0,034
<i>Hours preferred (re: same as now)</i>						
- More hours			<b>-0,247</b>	<b>-0,290</b>	<b>-0,171</b>	<b>-0,184</b>
- Fewer hours			<b>-0,494</b>	<b>-0,423</b>	<b>-0,314</b>	<b>-0,243</b>
<i>Wage adequacy (re: adequate)</i>						
- lower					<b>-0,150</b>	<b>-0,260</b>
- higher					-0,086	-0,173
<i>Other intangible job characteristics</i>						
- Flexible					<b>0,133</b>	<b>0,279</b>
- Job match					<b>0,142</b>	0,000
- Independent					<b>0,056</b>	<b>0,067</b>
- Socially useful					<b>0,059</b>	<b>0,087</b>
- Stable					<b>0,129</b>	0,039
- Pleasant environ					<b>0,097</b>	<b>0,142</b>
- Decide task					-0,005	0,028
- Physical effort					-0,020	-0,026
- Stress					<b>-0,095</b>	<b>-0,101</b>
- Relation -vertical					<b>0,105</b>	<b>0,102</b>
- Relation horizontal					<b>0,102</b>	-0,009
- Pride					<b>0,086</b>	<b>0,086</b>
Constant	<b>8,025</b>	<b>8,141</b>	<b>5,642</b>	<b>5,735</b>	<b>4,488</b>	<b>5,233</b>

Note: In all regressions, dummy variables representing each year and each region are included.

The OLS regressions assume that the dependent variable (life satisfaction in our case) is continuous. Although this assumption is questionable, we carry on with it due to its interpretation easiness and the findings that provide evidence of qualitatively similar results between OLS and more sophisticated estimation methods (see for example Ferrer-i-Carbonell and Frijters, 2004).

### *Income*

We first discuss the effect of income variables so that we can evaluate the effect of other variables in reference to the income effect. We included income in logarithm, therefore the estimated coefficient measuring the effect of doubling income on life satisfaction score. Income, both household and individual labor, increases substantially individual life satisfaction when subjective job evaluation variables are not included. The effect is larger for household income than individual labor income. Doubling the household income increases life satisfaction by 0.4 points for both men and women. The magnitude of income effect, 0.4 points in a 1-to-10 satisfaction scale, may be considered large or small depending on the satisfaction variation across population and the magnitude of the effects of other variables.

Individual labor income loses its effect when we include intangible job characteristics. Obviously, there is a strong positive correlation between the two types of income as personal labor income is a part of household income. However, the correlation is not so strong (correlation coefficient of 0.63) to invalidate the estimated coefficients. Therefore, we may interpret that what matters is household income rather than personal labor income in individual life satisfaction. For example, two workers, one with labor earnings only the half of the other but the difference is compensated by other household income, are equally satisfied.

### *Individual and Household Characteristics*

Life satisfaction decreases with age until around 50, then increases for male workers, while it decreases at all ages for female workers. However, the age effect is small; for example, satisfaction decreases by mere 0.1 points as age increases from 20 to 50. Marital status and the spouse's labor market status among the married have some effects. For both men and women, the widowed and the divorced suffer a reduction in life satisfaction by about 0.5 point relative to those married with an employed spouse. Singles also are less satisfied than the married with a working spouse.

Among the married women, their husband's labor market status is important. If the husband is unemployed, the wife's life satisfaction decreases by 0.42 points, a similar magnitude as in the case of widowhood or divorce (see Clark, 1994, for the effect of unemployment on own happiness). This, in combination with insignificant effects of wife's unemployment on the husband's life satisfaction, suggests that Spanish society still maintains the traditional male breadwinner mentality.

Education has significant and positive effects when job characteristics are not included as shown in the earlier descriptive section. The effects, however, disappear when job characteristics are included, suggesting that education affects life satisfaction mostly through its correlation with job characteristics. A similar result was found in job satisfaction in that the inclusion of wage and other job characteristics makes education effect disappear (Ahn and García, 2004) or become negative (Clark and Oswald, 1996).

Spanish population is known to value highly their family ties and friendship. Having moved residence since age 16 may serve as a proxy for this variable. The result shows that there is no effect although we have to be aware of endogeneity bias in that those who value family ties less are more likely to move to other regions. Dependent children seem to affect negatively women's life satisfaction while no effect is shown on men.

One of the important socio-political issues related with population well-being and low fertility rate in Spain is family-work conciliation. One of the reasons for low fertility in Spain is considered to be the little cooperation from men in housekeeping. Many career oriented women renounce to have children or stop at a low parity to be able to pursue their labor market career. Information on the principal housekeeper is therefore relevant in determining individual well-being among the workers (remember that our sample includes only those who work at least 20 hours per week). Our results suggest that housekeeping reduces worker's life satisfaction.

It is a well established fact that social interaction is an important part of happiness for most people (see a survey by Myers, 1999). We have included some variables which capture individuals' social relations. Affiliations to various leisure, social and political organizations are included. We find some interesting results. An affiliation to a sports club increases substantially men's life satisfaction while a similar effect is observed for women in the case of the affiliation to voluntary work organizations (similar results in Argyle, 1996). This suggests the different

nature between men and women in obtaining life satisfaction. Affiliations to other than sports club and voluntary work organization turned out insignificant.

### *Job Characteristics*

Hours of work over 50 hours decrease substantially individual well-being even when we include other job characteristics. The magnitude is quite substantial. An increase of 10 hours from 40-49 hours to 50-59 hours has almost the same effect as reducing into a half household income for women. The harmful effect of long hours of work seems to be larger among women than men, an indication of a greater difficulty of work-life balance among working women than men.

Sector and contract type have different effects by gender and depending on the inclusion of other job characteristics. Some positive effects of permanent contract in public sector are observed among women. Temporary contract holders in the private sector show lower satisfaction but its effect disappears when intangible job characteristics are included. Receiving some kind of fringe benefit has positive effect but its effect is small.

Commuting time to work decreases significantly life satisfaction for both men and women. The effect is larger among women, suggesting a greater opportunity costs or a greater difficulty of work-life balance among working women than men.

### *Intangible Job Characteristics*

Some variables which capture intangible job characteristics or subjective evaluation of jobs are included. First, working fewer or longer hours than the desired reduces substantially life satisfaction, with a larger reduction in the case of longer hours. Again, the effect is larger for women than men. This result is consistent with the problem of work-life balance as expressed in many countries (Oswald, 2002). Second, on the wage adequacy, those who consider their wages lower than the market wage are substantially less satisfied than others. This result is consistent with the comparison income hypothesis (Clark and Oswald, 1996) or market wage hypothesis (Cappelli and Sherer, 1988), both of which find evidence for the negative effect of comparison income (or market wage) given own income (wage) on job satisfaction. One interesting result is that those who consider their wage higher than the market wage are not much happier than those who receive wage in line with the market wage.

Flexibility is measured by the possibility of workers to be able to take a day off without losing their wages. It shows a large positive effect for both men and women. The effect is especially large for women, which suggests its importance in work-life balance for working women. Right job match also increases life satisfaction substantially for male workers but no significant effect is shown for female workers.

Other subjective job evaluation variables are in scales from 1 (=least) to 5 (=most). As these variables are treated as continuous, the estimated coefficient represents the effect of each variable when its value increases by one unit. First, we observe some gender differences in the magnitude and statistical significance of the estimated coefficients. The statistical significance is in general lower for women partly due to their smaller sample size. The results are in general reasonable. Higher life satisfaction is achieved in jobs when workers perceive higher work independence, greater job stability, greater social usefulness and more pleasant work environment. Workers also feel more satisfied when they have better horizontal and vertical relationships at work, and when they feel proud of their job. On the other hand, greater stress at work reduces life satisfaction substantially for both men and women.

In summary, the magnitude of the effects of intangible job characteristics is quite large if we consider that the estimated coefficients measure the satisfaction change due to one unit increase in these variables which range from 1 to 5. For example, moving from the stress level one to five means the satisfaction loss of 0.4 points, which are equivalent to that of doubling household income.

**Table 4: Satisfaction Premium**

	<b>Characteristics</b>		<b>Satisfaction premium</b> <b>Good relative to bad</b>	
<b>Intangible</b>				
<b>Job Characteristics</b>	<b>Good</b>	<b>Bad</b>	<b>Men</b>	<b>Women</b>
Hours preferred	Same	Fewer	0,31	0,24
Wage adequacy	Adequate	Lower	0,15	0,26
Flexible	Yes	No	0,13	0,28
Good match	Yes	No	0,28	0
Independence	Level 4	Level 2	0,12	0,14
Socially useful	Level 4	Level 2	0,12	0,18
Stable	Level 4	Level 2	0,26	0,08
Environment	Level 4	Level 2	0,20	0,28
Pride	Level 4	Level 2	0,17	0,17
Vertical relation	Level 4	Level 2	0,21	0,20
Horizontal relation	Level 4	Level 2	0,20	0
Stress	Level 2	Level 4	0,19	0,20
<b>Subtotal</b>			<b>2,14</b>	<b>2,03</b>
<b>Objective</b>				
<b>Job Characteristics</b>	<b>Good</b>	<b>Bad</b>	<b>Men</b>	<b>Women</b>
Wage	Twice that	Of the bad	0	0
Hours of work	40-49	50-59	0,29	0,52
Sector and type	Pub-Perm	Priv-Temp	0	0
Fringe benefits	Yes	No	0,06	0,06
Commuting time	16-30	46-60	0,10	0,27
<b>Subtotal</b>			<b>0,45</b>	<b>0,85</b>

If we consider various intangible job characteristics at the same time and compare good jobs and bad jobs, the satisfaction difference between them is large. For example, if we compare the workers with a job with flexibility, an adequate wage and preferred hours, of a good match and relatively high scores (4 in a 1-to5 scale) in independence, pride, social usefulness, work environment amenity, job stability, vertical and horizontal relationships and a low level (2) of stress with those with a job with

opposite job characteristics, that is, inflexible, wages under market wage, working more hours than desired, bad match, relatively low scores (2 in a 1-to-5 scale) in others except for stress level (here 4), the satisfaction difference is larger than 2 points for both men and women (Table 4). On the other hand, objective job characteristics, such as wage, hours of work, sector and contract type, fringe benefit and commuting time, have much smaller effects on the workers' life satisfaction. This illustrates the importance of intangible job characteristics in workers' life satisfaction.

#### **4. Concluding Remarks**

Life satisfaction among the Spanish workers is in general high, with average around 7 in a scale ranging from 1 (very dissatisfied) to 10 (very satisfied). Some individual and household characteristics turn out important. The widowed and the divorced are least happy for both men and women. For a married woman, the husband's unemployment reduces substantially her life satisfaction. Education, on the other hand, affects life satisfaction only through its contribution to job characteristics. Household income affects positively individuals' life satisfaction while individual labor income loses its effect when other job characteristics (especially intangible) are included. Doubling household income increases by 0.4 points life satisfaction.

The most distinguishable result is that substantial effects are observed in most intangible job characteristics, such as flexibility, independence, social usefulness, pleasant work environment and pride in their work, stress and the perception of receiving adequate wages. Combined effects of intangible job characteristics are several times larger than that of doubling household income or that of objective job characteristics such as wage and hours of work.

Some evidence for the difficulties in work-life balance, especially among female workers, is shown as in the negative effect of dependent children or the negative effect of long hours of work and commuting time to work.

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**Appendix: Sample Means**

Variable	Men	Women
Number of observations	4381	2472
Life satisfaction <sup>1</sup>	7,04	7,00
Age	38,47	37,04
Marital status & Spouse's labor market status		
Spouse work	0,22	0,46
Spouse unemployed	0,04	0,04
Spouse retired	0,00	0,03
Spouse inactive	0,44	0,03
Single	0,26	0,31
Separated-Divorced	0,02	0,10
Widowed	0,00	0,03
Education level		
< Primary	0,05	0,02
Primary	0,18	0,10
Secondary	0,28	0,20
FP-Bup-Cou	0,31	0,34
University	0,18	0,33
Moved since age 16	0,32	0,32
Dependent children	0,54	0,51
Principal Homekeeper		
Myself	0,07	0,45
Shared	0,29	0,42
Others	0,64	0,13
Sports club	0,13	0,07
Voluntary org.	0,03	0,04
Income (in logarithm)		
Household	5,37	5,43
Individual labor	5,07	4,82
Hours of work		
20-29	0,02	0,10
30-39	0,14	0,31
40-49	0,65	0,51
50-59	0,13	0,06
60-69	0,05	0,01
70+	0,01	0,00
Sector and contract type		
Private permanent	0,57	0,49
Private temporary	0,25	0,21
Public permanent	0,15	0,24
Public temporary	0,03	0,06
Fringe benefits	0,60	0,65
Commuting time <sup>2</sup>	1,95	1,94
Preferred Hours of work		
Fewer hours than actual	0,29	0,23
Same hours as actual	0,63	0,69
More hours than actual	0,08	0,08

Night shift	0,23	0,16
Wage relative to market wage		
Lower	0,30	0,33
Similar	0,66	0,64
Higher	0,04	0,03
Job match		
Good	0,80	0,76
Not good	0,20	0,24
Other intangible job characteristics <sup>3</sup>		
Flexible	0,48	0,46
Independent	3,48	3,41
Socially useful	4,03	4,07
Stable	3,88	3,83
Pleasant environment	3,80	3,92
Decide task	3,38	3,37
Physical effort	2,59	2,01
Stressful	3,00	2,98
Good vertical relationship	3,82	3,79
Good horizontal relationship	4,23	4,21
Proud	3,75	3,66

1: Life satisfaction is measured between 1 (=very dissatisfied) and 10 (=very satisfied).

2: Commuting time is measured by 1 (less than 15 minutes), 2 (16-30), 3 (31-45), 4 (46-60), 5 (61-90) and 6 (more than 90 minutes).

3: All variables except for “flexible” are measured by a value between 1 (=least) and 5 (=most). “Flexible” is one if one can take a day off without penalty and zero otherwise.

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