

# LABOUR MARKET AND HAPPINESS: a snapshot of the crisis in Spain

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## 1. INTRODUCTION

The greatest impact of the current global crisis in Spain is being manifested in the labour market. Job destruction and deteriorating working conditions for the workers who keep their jobs (with more facilities for entrepreneurs to lay workers off and modify working conditions, as well as a decrease in unemployment benefits) are some of the features that define the evolution of the labour market and labour relations framework.

To correct these imbalances, action in labour policies is a must. To this end, the search for appropriate policies must consider not only the results in the number of jobs, but also in its quality and satisfaction of workers with working life. In this respect, to achieve these objectives, it should be noted that job satisfaction is a crucial economic variable for understanding individual behaviour (Hammersmesh, 1977, Freeman, 1978 and Borjas, 1979). Of particular interest, therefore, is to know how employed workers are living the employment crisis in Spain.

The aim of this paper is to deepen the analysis on determinants of job satisfaction and the factors that influence it. This allows to adequately interpret this satisfaction and to design appropriate indicators to better understand their determinants. This study first examines the objective situation of workers in Spain before and during the crisis (2007 and 2010), through the analysis of employment by different variables. And secondly, this study examines the situation of these workers' job satisfaction for both years and its main determinants (objective and subjective), to try to understand which of these determinants have changed, in order to design appropriate policies.

Lastly, considering the results of the influence of working conditions and economic and labour context, the findings focus on adequate objectives and policies of employment, not only to improving efficiency in terms of generating jobs, but also about satisfaction and quality of life and work, which are crucial factors for individual's happiness.

## 2. THEORETICAL ANALYSIS AND METHODOLOGY

This analysis is framed under research of *economics of happiness*, an area of economic analysis that questions wealth as a primary explanatory variable of welfare and promotes the idea that economy exists conceived by and for the people, with the aim of improving levels of wellbeing, both individually and collectively. The empirical development of studies on the economics of happiness emphasizes the importance that

work has in the happiness of individuals, because of the implications for both interests and concerns of workers, as well as their behaviour in their social context.

The starting hypotheses based on the findings of Hammersmesh (1977), Freeman (1978) and Borjas (1979) shows that job satisfaction is a subjective economic variable key to understanding individual behaviour. Furthermore, researches of Argyle (1999), Clark and Oswald (1994), Kenny (1999) and Frey and Stutzer (1999) confirm the fact that job satisfaction is a good predictor of individual's happiness. The proposed analysis starts with the fact that job satisfaction affects individual's happiness, thus, to higher job satisfaction, greater happiness.

The literature indicates that happiness of employed workers is influenced by income, but also by the objective labour conditions (employment status, age, permanent or temporary contract, full-time or part-time employment), as established by authors such as Easterlin (1995, 2001), Clark and Oswald (1996), Hammersmesh (2001), Sloane and Ward (2001), Sloane and Williams (2000), Levy-Garboua and Montmarquette (2004), Clark (1996b) and De Santis and Durst (1996). A happiness that is also determined by the subjective perceptions of those objective working conditions, as established by authors Alvarez (2005), Gamero (2003) and Layard (2004).

With this conceptual framework, to develop this paper, there has been a cross-sectional analysis, with data for the years 2007 and 2010. The analytical strategy was based on a multiple regression method of a general linear model, through the OLS method, in order to detect which subjective determinants of job satisfaction have been affected by the current crisis in Spain and how objective working conditions have evolved into corresponding subjective determinants.

The aim is to test, first, that job satisfaction has a direct and positive effect on individual happiness, and second, that the happiness of those employed is determined by income, but also by objective working conditions such as professional status, time since job started, type of contract and full or part time employment. Thirdly, happiness of those employed is being influenced by income and objective working conditions, but also by subjective working conditions in which they perform their work.

With the objective to carry out these contrasts, is designed a model in which the selected dependent variable is the degree of satisfaction with personal life, understood as a *proxy* for individual happiness. Also two indexes were created from various original variables of the Survey of Quality of Life at Work<sup>1</sup>:

- The *Fulfilment* index, dependent of the following original variables: degree of satisfaction with the work done, with the workplace, with autonomy/ independence, with their personal development and with training.
- The *Time* index, dependent on the following original variables: degree of satisfaction with full or part time employment, with scheduling flexibility, with leisure time and with holidays and leaves.

Thus, subjective independent variables in the regression are: degree of satisfaction with salary, satisfaction with job security, satisfaction with health and safety, *Fulfilment* index and *Time* index.

For its part, the objective independent variables incorporated to the regression model are: employed by gender, age, educational level, professional status, type of contract, time since job started, full or part time employment and differentiating income levels. The latter, objective variables of the model are discussed in the next section.

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<sup>1</sup> For additional information see Cachón, E: (2013): *Crisis, employment and happiness: The case of employed workers in Spain in 2007 and 2010*. PhD thesis, Universidad Autónoma de Madrid, mimeo.

### 3. THE EVOLUTION OF EMPLOYMENT IN SPAIN DURING THE CRISIS

In Spain, the crisis that began in 2007 is having the greatest impact on the labour market. Job losses, along with the deterioration of working conditions for workers who remain in their jobs are some of the features that define the evolution of the labour market and labour relations framework.

Throughout the crisis period, loss of employment and quality of work suffered by workers in Spain is clearly shown. In response to two key dates in this stage, 2007 and 2010, one can see how occupation varies from almost the full employment level (with an unemployment rate of 8.3%) to an occupation loss and deterioration of working conditions, resulting in high levels of unemployment (the rate is -27% in the first quarter of 2013), as well as a lower satisfaction of workers, subjective character variable that will be discussed in the next section.

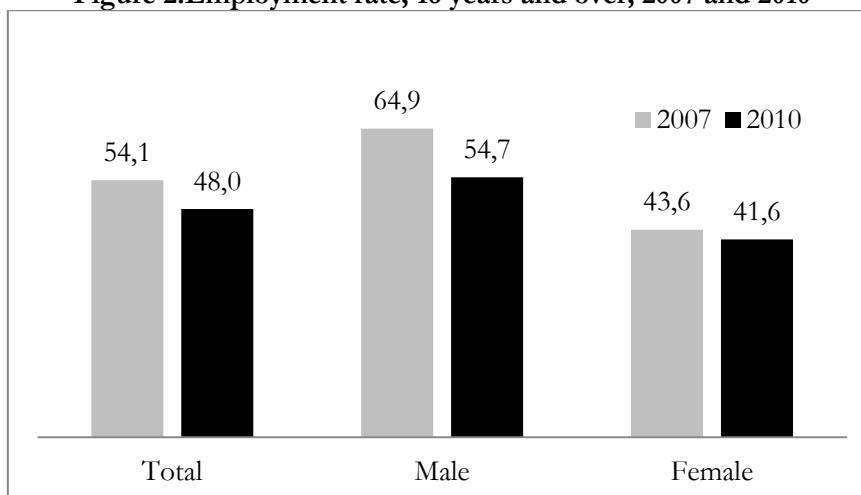
The unstoppable job destruction is evident in the employment data provided by the Labour Force Survey for the years 2007 and 2010.

The number of employees decreased in 9.3% between those years (see Figure 1), causing a fall in the employment rate above 6 points (see Figure 2). In the case of males, job loss is more pronounced, due to the characteristics of the economy and the recession in Spain, where the construction sector, employing mostly male, was the hardest hit. The male employment rate went under more than 10 points. Female employment, meanwhile, reflects a smaller decline (2.4%), accompanied by a lower decrease rate of 2 points.

**Figure 1. Number of employed workers in Spain, 2007 and 2010**

	2007	2010	% change
<b>Total</b>	20.356	18.457	-9,3
<b>Males</b>	11.987	10.290	-14,2
<b>Females</b>	8.369	8.167	-2,4

**Figure 2. Employment rate, 16 years and over, 2007 and 2010**



Source: Own elaboration from Labour Force Survey, National Institute of Statistics.

The extension of the analysis to other areas indicates that job destruction is widespread, with very few exceptions.

It is worth highlighting the youth employment crisis, with the lay-off of more than 1.5 million young people under 30 years. In the following age ranges (30-45 years) there were also job losses of more than half a million and timid positive numbers above that age limit. However, employment rates show a

decrease in all ranges, although visibly deep among those under 25 years (going from 42.9% for 2007 to 27.4% for 2010).

Considering the degree of education, employment reduction occurs at all levels, except in employed workers with approved first and second stage of tertiary education, level that keep their jobs.

The comparison between 2007 and 2010 in terms of employment behaviour in the public sector and the private sector shows that initially the adjustment took place in the latter, with a reduction in the number of employees close to 12% (representing 1.6 million fewer jobs in the private sector in those three years).

More recent figures indicate a decline in public employment, linked to cuts and austerity policies implemented in the country since 2010.

A similar situation is among the employees hired with a permanent contract or with a limited duration contract. At the beginning of the crisis the first adjustment reached to workers with temporary contracts. Almost a million and a half jobs were lost in between the two years (which implies a decrease of 28%), so that the temporary employment rate opens a gap of 31.7% to 24.9%. Meanwhile, between 2007 and 2010, workers hired with a permanent contract keep their jobs, but once the adjustment in temporary employment is done, starting for 2010 declines in permanent employment show, as exemplified by updated statistics.

**Figure 3. Number of employees by income level in Spain, 2007 and 2010**

	2007	2010	Absolute variation	Percentage change	Percentage of total 2007	Percentage of total 2010
<b>total</b>	<b>19.309.032</b>	<b>18.024.554</b>	<b>-1.284.478</b>	<b>-6,7</b>	<b>100,0</b>	<b>100,0</b>
from 0 to 0,5 SMW	2.988.181	3.420.302	432.121	14,5	15,5	19,0
from 0,5 to 1 SMW	2.214.084	2.206.732	-7.352	-0,3	11,5	12,2
from 1 to 1,5 SMW	2.492.418	2.215.265	-277.153	-11,1	12,9	12,3
from 1,5 to 2 SMW	3.169.274	2.592.342	-576.932	-18,2	16,4	14,4
from 2 to 2,5 SMW	2.317.613	1.979.233	-338.380	-14,6	12,0	11,0
from 2,5 to 3 SMW	1.527.810	1.388.532	-139.278	-9,1	7,9	7,7
from 3 to 3,5 SMW	1.108.566	1.059.131	-49.435	-4,5	5,7	5,9
from 3,5 to 4 SMW	874.787	823.209	-51.578	-5,9	4,5	4,6
from 4 to 4,5 SMW	677.170	641.255	-35.915	-5,3	3,5	3,6
from 4,5 to 5 SMW	511.227	456.283	-54.944	-10,7	2,6	2,5
from 5 to 7,5 SMW	958.288	850.657	-107.631	-11,2	5,0	4,7
from 7,5 to 10 SMW	275.817	235.614	-40.203	-14,6	1,4	1,3
more than 10 SMW	193.796	156.000	-37.796	-19,5	1,0	0,9

Statutory Minimum Wage (SMW) in 2007: 570,6 €/month. MW in 2010: 633,3 €/month.

Source: Own elaboration from Labour Market Statistics, National Tax Agency.

Closely linked to this phenomenon of temporary and permanent jobs, is the fact that the biggest adjustment has occurred between employees that were in the company for less than two years. Between 2007 and 2010 more than two million workers who had that time in the company (almost 34%) lose their jobs. Meanwhile, between the two years, there was an increase by 5.6% on the number of employees who remained in their jobs beyond the two years.

There is also a difference in the behaviour of employment by working hours: full-time employment fell by 10.9% in the period under review, compared to an increase in part-time employment of 2.1%.

Lastly, the study published by the Tax Agency for the years 2007 and 2010 (see Figure 3), indicates that increases the number of employees whose income is less than half the statutory minimum wage, while the number of employees located in the remaining salary ranges decreases. This causes an increase in weight of total low income: for 2007, 15.5% of employees received an income equal to or less than half of the statutory minimum wage; for 2010, the proportion rises to 19%.

#### **4. SATISFACTION AT WORK IN SPAIN DURING THE RECESSION**

Subjective variables are observed through the results of the Survey of Quality of Life at Work for 2007 and 2010.

It is drawn from Figure 4 that for 2007, seven in ten workers (70.6 %) appear as satisfied or very satisfied with their jobs, bringing the average level of job satisfaction, on a scale of 0-10 , by 7.2 points (see Figure 5), consolidating the trend reflected since 1999.

Above this overall mean, results show the average levels of satisfaction with the work performed, followed by the average levels of satisfaction with autonomy in the performance of such work, personal development, with the physical environment and the health and safety of his job.

Below this average level of overall satisfaction lies the satisfaction of workers with the organization of work, involvement on the tasks performed and how superiors value their work. Lastly, we find average levels of satisfaction with the training provided by the company and career advancement opportunities.

In relation to the different aspects of the employment contract, the highest average level of satisfaction is related to job security, followed by satisfaction with working hours and holiday arrangements and leaves. Below them are the average levels of satisfaction with flexible schedule, rest during the working day, with salary, with the collective bargaining and social welfare.

On the results of the Survey of Quality of Life at Work, it is shown that in 2010, 74.4% of employed workers say they are satisfied or very satisfied with their jobs (see Figure 4). The highest level of satisfaction is given to the activity performed, followed by personal development and the level of autonomy at work, as shown in Figure 5. After, there are the average levels of satisfaction with health and safety in the workplace, with the motivation and appreciation of their superiors, with the organization of work and participation in the tasks performed.

Average levels of satisfaction are lower with the training provided by the company and career advancement opportunities.

Meanwhile, in 2010 the average level of satisfaction with stability, holidays and leaves and full or part time employment is 7.1, followed by the average level of satisfaction with time-off during working hours, and well below are the average levels of satisfaction with schedule flexibility, with salary, with the collective bargaining and with social assistance.

Figure 4. Employed workers by labour satisfaction degree, by several variables

Percentage distribution	2007				2010			
	very dissatisfied / dissatisfied	neither satisfied nor dissatisfied	satisfied	very satisfied	very dissatisfied / dissatisfied	neither satisfied nor dissatisfied	satisfied	very satisfied
<b>total</b>	2,9	26,5	49,6	21,0	3,7	21,9	50,3	24,1
<b>gender</b>								
men	2,5	26,4	51,3	19,8	3,8	22,1	51,5	22,6
women	3,4	26,7	47,1	22,8	3,6	21,6	48,8	26,1
<b>age</b>								
16- 24 years	2,8	23,0	51,9	22,3	4,3	20,2	51,1	24,3
25- 29 years	2,6	30,2	48,9	18,3	2,9	22,2	52,3	22,5
30- 44 years	2,9	27,7	49,8	19,6	3,5	21,4	51,4	23,7
45- 54 years	3,2	23,9	49,7	23,2	4,3	23,1	49,2	23,4
55 years and more	2,5	25,3	47,3	24,8	3,5	21,9	46,2	28,4
<b>training level</b>								
unless primary studies	3,9	34,0	38,9	23,1	12,2	18,9	44,6	24,3
primary studies	4,5	31,0	44,2	20,3	7,0	26,0	42,6	24,3
high school	2,5	26,9	50,5	20,0	4,1	25,6	47,1	23,1
college	2,1	21,0	53,2	23,6	2,1	16,2	58,0	23,6
<b>professional status</b>								
employees	2,9	27,6	49,7	19,8	3,4	21,4	51,6	23,6
public sector	2,1	22,6	50,9	24,5	1,9	16,9	54,2	27,1
private sector	3,2	29,0	49,3	18,5	3,9	22,8	50,7	22,5
businessman or salaried professional	0,4	11,8	53,9	33,9	2,1	19,8	41,5	36,6
professional or self-employed without employees	3,6	25,8	46,9	23,7	5,8	25,9	45,5	22,8
family business workers, cooperatives and other	2,6	24,8	49,8	22,9	4,4	18,7	50,4	26,6
<b>time since job started</b>								
from 1 to 2 years	3,6	29,2	47,1	20,0	3,8	21,5	50,3	24,4
from 3 to 5 years	2,8	25,3	51,6	20,3	4,1	22,1	50,7	23,1
from 6 to 10 years	2,7	27,3	49,2	20,8	2,1	20,1	53,7	24,1
from 11 to 20 years	1,5	22,8	53,4	22,3	3,0	22,7	52,1	22,2
more than 20 years	2,7	24,7	49,3	23,3	4,7	20,2	48,2	26,9
<b>type of contract</b>								
permanent contract	2,3	24,5	52,0	21,2	2,6	19,5	53,4	24,5
temporary contract	4,4	35,0	44,0	16,6	6,0	27,0	46,1	20,9
<b>full/part time employment</b>								
full time	2,6	25,7	50,4	21,3	3,4	21,6	50,9	24,0
part time	4,4	32,0	44,1	19,5	5,1	23,2	46,9	24,8
<b>income level</b>								
up to 600 Euros	6,1	38,6	35,9	19,4	8,2	28,5	37,4	26,0
from 600 to 1.000 Euros	4,5	33,2	44,6	17,7	5,7	28,4	43,6	22,3
from 1.001 to 1.200 Euros	2,2	26,4	51,6	19,7	3,9	22,9	49,9	23,4
from 1.2001 to 1.600 Euros	1,7	22,3	53,3	22,7	1,7	21,4	54,5	22,5
from 1.601 to 2.100 Euros	1,4	20,2	57,0	21,4	2,4	13,8	57,5	26,3
from 2.101 to 3.000 Euros	1,1	13,4	56,4	29,0	1,2	11,0	58,9	28,8
more than 3.000 Euros	-	9,9	50,2	39,9	2,1	12,5	53,4	32,0

Source: Own elaboration from Survey of Quality of Life at Work, Ministry of Employment and Social Security.

**Figure 5. Average level of satisfaction with different working conditions, by gender**

Rating 0-10	2007			2010		
	total	men	women	total	men	women
work organization	6,7	6,7	6,8	7,1	7,1	7,1
activity performed	7,7	7,7	7,6	7,8	7,6	7,5
autonomy/ independence	7,3	7,3	7,2	7,5	7,6	7,5
personal development	7,3	7,4	7,2	7,6	7,6	7,6
task involving	6,6	6,6	6,6	6,9	7,0	6,9
assessment of their superiors	6,9	6,9	7,1	7,2	7,2	7,2
possibility of promotion	5,1	5,2	4,8	5,2	5,5	4,9
training	5,6	5,6	5,4	6,0	6,1	5,9
health and safety	7,3	7,3	7,4	7,4	7,4	7,4
salary	6,2	6,2	6,1	5,8	5,8	5,7
social assistance	4,2	4,3	4,0	3,1	3,2	2,9
full/part time employment	6,9	6,8	7,1	7,1	7,1	7,1
flexible schedule	6,6	6,5	6,6	6,5	6,5	6,4
time off in the day	6,4	6,5	6,2	6,7	6,8	6,6
holidays and leaves	6,9	7,0	6,9	7,1	7,1	7,2
stability	7,3	7,3	7,2	7,1	7,1	7,2
collective agreement	5,8	5,9	5,7	5,8	5,9	5,7

Source: Own elaboration from Survey of Quality of Life at Work, Ministry of Employment and Social Security.

In Figure 6, satisfaction levels are analyzed in greater detail, according to different variables. It is worth noting, for both years, the highest satisfaction ratings given by women, by tertiary education workers, by self-employed workers with employees, by full time staff, and those whose income levels are superior.

In contrast, lower satisfaction values is seen in male employees with lower education levels, private sector employees, self-employed workers, temporary workers, part-time workers and those in the minimum wage levels.

**Figure 6. Average level of satisfaction of the employed workers, by gender, by several variables**

Rating scale 0 -10	2007			2010		
	total	men	women	total	men	women
<b>total</b>	7,2	7,2	7,2	7,4	7,3	7,4
<b>age</b>						
16- 24 years	7,4	7,4	7,3	7,3	7,3	7,3
25- 29 years	7,1	7,0	7,1	7,4	7,2	7,6
30- 44 years	7,1	7,1	7,2	7,4	7,3	7,4
45- 54 years	7,3	7,3	7,2	7,3	7,3	7,3
55 years and more	7,3	7,4	7,3	7,4	7,4	7,5
<b>training level</b>						
unless primary studies	6,9	7,0	6,9	7,0	6,9	7,5
primary studies	7,0	7,1	6,9	7,1	7,1	7,1
high school	7,2	7,2	7,2	7,3	7,3	7,4
college	7,4	7,4	7,5	7,5	7,6	7,5
<b>professional status</b>						
public sector	7,3	7,3	7,5	7,7	7,6	7,7
private sector	7,1	7,1	7,1	7,3	7,3	7,3
businessman or salaried professional	7,9	7,9	8,4	7,7	7,7	7,7
professional or self-employed without employees	7,3	7,3	7,0	7,1	6,9	7,4
family business workers, cooperatives and other	7,3	7,5	7,0	7,4	7,2	7,8
<b>time since job started</b>						
from 1 to 2 years	7,1	7,1	7,1	7,3	7,3	7,4
from 3 to 5 years	7,2	7,1	7,3	7,3	7,3	7,4
from 6 to 10 years	7,2	7,2	7,2	7,5	7,5	7,5
from 11 to 20 years	7,4	7,4	7,3	7,3	7,4	7,3
more than 20 years	7,3	7,4	7,1	7,4	7,4	7,5
<b>type of contract</b>						
permanent contract	7,3	7,3	7,3	7,5	7,5	7,5
temporary contract	6,8	6,7	7,0	7,0	6,9	7,2
<b>full/ part time employment</b>						
full time	7,2	7,2	7,3	7,4	7,4	7,4
part time	6,9	6,8	7,0	7,3	6,8	7,4
<b>income level</b>						
up to 600 Euros	6,7	6,5	6,7	7,0	6,2	7,3
from 600 to 1.000 Euros	6,9	6,8	7,0	7,1	6,8	7,2
from 1.001 to 1.200 Euros	7,2	7,1	7,3	7,3	7,3	7,3
from 1.2001 to 1.600 Euros	7,4	7,3	7,7	7,5	7,4	7,6
from 1.601 to 2.100 Euros	7,5	7,4	7,6	7,7	7,6	7,8
from 2.101 to 3.000 Euros	7,8	7,8	7,9	7,8	7,8	7,7
more than 3.000 Euros	8,2	8,2	7,8	7,8	7,9	7,5

Source: Own elaboration from Survey of Quality of Life at Work, Ministry of Employment and Social Security.

## **5. RESULTS OF THE ANALYSIS OF HAPPINESS OF THE EMPLOYED WORKERS IN SPAIN IN 2007 AND 2010**

The results for the baseline scenario (see Figure 7), according to which job satisfaction affects individual happiness, so to greater happiness greater job satisfaction, confirm the hypothesis, showing a positive relationship. It is also observed that the ratio is higher for 2010 than for 2007, thus, job satisfaction is more important in determining the happiness of workers in Spain in 2010 than in 2007.



**Figure 7. Analysis of correlation between job satisfaction and happiness**

	2007		2010	
	Happiness	Job satisfaction	Happiness	Job satisfaction
Happiness	1.0000		1.0000	
Job satisfaction	0.3243	1.0000	0.3350	1.0000

Source: Cachón, E. (2013:227).

As for the hypothesis that states that the happiness of workers is influenced by income, but also by objective working conditions such as professional status, time since job started, type of contract and full or part time employment, the results (see Figure 8) show that there is no relationship between gender and happiness of workers in Spain neither in 2007 nor in 2010.

However, age is very significant in 2007, thus there is a direct relationship with the happiness of the employed, but the influence of age on happiness is very weak, while in 2010, the age is less significant for happiness, having a positive influence, but still very fragile.

Meanwhile, training is only significant in 2007 in two levels, high school education and professional training at first and second levels and a bachelor degree, both levels have a direct relationship with the happiness of the employed, with a positive but weak influence. Instead, in 2010, no training educational level had a direct relationship with the happiness of employed workers in Spain.

Income is significant both in 2007 and in 2010, at various levels. In 2007, income ranging from 1201 to 3000 Euros has a direct and strong relationship, with its positive influence on happiness of employed workers. In 2010, the relationship with such happiness is weak at both income levels: from 1201 Euros to 1600 Euros, and of more than 3000 Euros; in turn, the relationship is very strong in the two levels that go from 1601 to 3000 Euros; in all cases in 2010 the influence is positive.

However, the professional status is significant neither in 2007 nor in 2010; the same happens with the time since job started, which is not significant neither in 2007 nor in 2010.

In contrast, the type of contract is significant: in 2007 having a fixed contract is significant, that is, is directly related to the happiness of employed workers, and its influence is strong and positive; in 2010, having a fixed contract is significant, and again there is a positive influence even higher than in 2007. Having a full or part time employment is significant only in 2007, when having a full-time employment is directly related to the happiness of the employed, but its influence is negative, thus, those employed workers who have full-time employment have their happiness decreased compared to those who have a part-time jobs.

Summarizing, the hypothesis is confirmed: of the seven income levels, three are significant and have positive influence in 2007 and four in 2010. And three of the four objective work variables analyzed, in addition to income, have a decisive influence on the happiness of employed workers in Spain in the years analyzed, suggesting that the hypothesis is true; happiness of the employed is influenced by the income derived from their work, but also by professional status, type of contract and full or part time employment.

If we add subjective working conditions in which they carry out their work, such as satisfaction with salary, job security, and health and safety at work, as well as *Time* and *Fulfilment* indexes, the results obtained (see Figure 9) again confirm the hypothesis.

Analysis indicates that there is no direct relationship between gender and happiness of workers in Spain, neither in 2007 nor in 2010: this variable does not appear as significant in any of the two years analyzed. Training is significant only in 2007, when all levels show a direct relationship with happiness, but none of

them is significant for 2010. In 2007, the most significant level of education is the professional training of first and second degree and bachelor level, when its influence on happiness is positive and strong. The other three levels of education (primary, high school level and tertiary studies, and degree courses and postgraduate) have a positive influence, but weaker. On the other hand, age is significant only in 2007, but has a weak positive influence on happiness of employed workers.

**Figure 8. Results of regression of happiness of employed workers in Spain, with personal variables, income and objective working conditions**

	2007			2010		
	$\beta$		ES	B		ES
Woman	0,0076		0,0624	-0,0235		0,0536
	0,1200			-0,4400		
Primary studies	0,2052		0,1492	-0,1055		0,2055
	1,3800			-0,5100		
Secondary studies	0,2966	*	0,1496	-0,0985		0,2007
	1,9800			-0,4900		
Professional training, bachelor	0,3223	*	0,1499	-0,1464		0,2002
	2,1500			-0,7300		
University studies	0,1580		0,1657	-0,2616		0,2101
	0,9500			-1,2500		
Age	0,0011	***	0,0002	0,0005	*	0,0002
	5,4600			2,3500		
Incomes from 600 to 1000 €	0,1851		0,1312	-0,0007		0,1325
	1,4100			-0,0100		
Incomes from 1.001 to 1.200 €	0,2593		0,1390	0,1896		0,1393
	1,8700			1,3600		
Incomes from 1.201 to 1.600 €	0,4851	**	0,1454	0,3643	*	0,1423
	3,3400			2,5600		
Incomes from 1.601 to 2.100 €	0,5076	**	0,1525	0,5300	***	0,1505
	3,3300			3,5200		
Incomes from 2.101 to 3.000 €	0,5086	**	0,1698	0,6316	***	0,1603
	2,9900			3,9400		
Incomes more than 3.000 €	0,3818		0,2399	0,5113	*	0,2166
	1,5900			2,3600		
Employees Private Sector	-0,1689	**	0,0646	-0,1461	*	0,0563
	-2,6200			-2,5900		
Time since job started	0,0017		0,0034	-0,0013		0,0031
	0,5100			-0,4200		
Permanent contract	0,2206	**	0,0677	0,3420	***	0,0668
	3,2600			5,1200		
Full time employment	-0,3181	***	0,0875	-0,1273		0,0920
	-3,6400			-1,3800		
Constant	9,2579	***	0,4081	8,5244	***	0,4269
	22,6900			19,9700		
N° observations	5.531			5.706		
F	6.24 (25, 5505)			6.97 (25, 5680)		
Prob > F	0.0000			0.0000		
R <sup>2</sup> adjusted	0.0282			0.0297		
Root squared error	1.872			1.74		

Source: Cachón, E. (2013:234); \*\*\*p<0,001, \*\*p<0,01, \*p<0,05

In terms of revenue, it is significant only in 2007 and for just two categories of seven, from 1201-1600 Euros and 1601-2100 Euros, with a positive, strong, and very similar influence between the two categories. Instead, in 2010, no income level is significant for happiness of employed workers in Spain.

Also, neither in 2007 nor in 2010, neither the professional status of public or private sector employees nor the time since job started has a significant relationship with happiness. The type of contract is only significant in 2010, when having a permanent contract shows a direct and positive relationship on the happiness of workers in Spain.

By contrast, having a full or part time employment is significant only in 2007, as having a full-time employment is directly related to the happiness of the employed, but negative. This does not happen in 2010.

Results of the last hypotheses about the subjective variables show that satisfaction with salary in 2007 has no direct relationship with happiness of the employed workers, while in 2010 this relationship does exist, and the influence is positive, though weak; in terms of satisfaction with job security, it is not significant neither in 2007 nor in 2010, while satisfaction with health and safety at work is significant for both years, although it is more significant in 2010, and in both cases, the influence is positive, though weak.

The *Time* index is very significant for both years, with a positive and very strong relationship, which means that the subjective variables added in this index (degree of satisfaction full or part time employment, satisfaction with scheduling flexibility, degree of satisfaction with leisure time and satisfaction with holidays and leaves) have a direct and determinant relationship with happiness of workers in Spain. Similarly, the *Fulfillment* index is also very significant in the two years analyzed and also with a very strong, positive influence in both cases, demonstrating on the one hand that the variables included in the index (degree of satisfaction with the work done, degree of satisfaction with the workplace, satisfaction with autonomy/ independence, degree of satisfaction with their personal development and satisfaction with training) are crucial for the happiness of employed workers in Spain in 2007 and in 2010.

In conclusion, and according to the results obtained for this regression, the main positive influence in 2007 in the happiness of employed workers in Spain comes from the *Time* index, followed by the *Fulfillment* index, followed by vocational training level at first, second and bachelor levels, after university studies, degree courses and postgraduate, while in 2010 the greatest influence stems from the *Fulfillment* index, followed by the *Time* index, followed far from having a permanent contract.

According to the comparative results of the two regressions, we can conclude that before the outbreak of the current crisis, in 2007, the personal variables crucial to the happiness of employed workers in Spain were age, followed by the training of workers; determinant objective variables included income, while subjective variables determinants of happiness compiled in the *Time* index (satisfaction with the full or part time employment, with scheduling flexibility, with leisure time and with holidays and leaves) and *Fulfillment* index (satisfaction with the work done, with the workplace, with autonomy/ independence, with their personal development and with training), followed by satisfaction with health and safety at work.

In contrast, during the current recession and according to the matching results of both scenarios, the only objective determinant of happiness of those employed in Spain in 2010 was the permanent nature of contracts, while subjective determinants were the same as those for 2007, i.e. the *Time* and *Fulfillment* indexes, satisfaction with health and safety at work and satisfaction with salary.

Model results show two facts. First, the relationship between job satisfaction and individual happiness exists and is positive, additionally, this ratio is higher in 2010 than in 2007. In 2010, during the recession, job satisfaction is more crucial to the happiness of workers in Spain than in the booming period of 2007. Thus, job satisfaction is a subjective economic variable determinant to understand the individual happiness of workers in Spain, as noted by Hammersmesh (1977), Freeman (1978) and Borjas (1979). Secondly, in addition to income, three of the four objective variables analyzed influence the happiness of workers in Spain, as it was revealed in the work of Argyle (1999), Clark and Oswald (1994), Kenny (1999) and Frey and Stutzer (1999). Once all subjective labour conditions are included in the analysis, its influence hides the derivative of the objective variables, thus, job satisfaction is a good predictor of happiness at work and not only through income but other aspects of working conditions, objective and subjective conditions.

**Figure 9. Results of regression of happiness of employed workers in Spain, with personal variables, income, objective and subjective working conditions**

	2007			2010		
	$\beta$		ES	$\beta$		ES
Woman	-0,0366		0,0573	-0,0820		0,0498
	-0,6400			-1,6500		
Primary studies	0,2752	*	0,1356	-0,0839		0,1921
	2,0300			-0,4400		
Secondary studies	0,3298	*	0,1353	-0,0967		0,1877
	2,4400			-0,5200		
Professional training, bachelor	0,4270	**	0,1357	-0,1046		0,1873
	3,1500			-0,5600		
University studies	0,3500	*	0,1516	-0,1337		0,1960
	2,3100			-0,6800		
Age	0,0006	**	0,0002	0,0002		0,0002
	3,4300			1,1600		
Incomes from 600 to 1000 €	0,1246		0,1207	-0,0832		0,1208
	1,0300			-0,6900		
Incomes from 1.001 to 1.200 €	0,1448		0,1281	0,0010		0,1272
	1,1300			0,0100		
Incomes from 1.201 to 1.600 €	0,3042	*	0,1331	0,1140		0,1297
	2,2900			0,8800		
Incomes from 1.601 to 2.100 €	0,3194	*	0,1411	0,1645		0,1382
	2,2600			1,1900		
Incomes from 2.101 to 3.000 €	0,2344		0,1598	0,1345		0,1488
	1,4700			0,9000		
Incomes more than 3.000 €	0,0741		0,2351	0,0567		0,2003
	0,3200			0,2800		
Employees Private Sector	-0,0630		0,0612	-0,0721		0,0532
	-1,0300			-1,3600		
Time since job started	0,0007		0,0031	0,0002		0,0029
	0,2300			0,0700		
Permanent contract	0,0447		0,0685	0,1464	*	0,0670
	0,6500			2,1800		
Full time employment	-0,2745	**	0,0824	-0,0606		0,0830
	-3,3300			-0,7300		
Satisfaction with salary	0,0047		0,0151	0,0772	***	0,0135
	0,3100			5,7200		
Satisfaction with job security	0,0102		0,0154	0,0207		0,0132
	0,6600			1,5700		
Satisfaction with health and safety	0,0484	**	0,0174	0,0653	***	0,0142
	2,7800			4,6000		
Time Index	0,5785	***	0,0626	0,4676	***	0,0604
	9,2400			7,7400		
Fulfilment Index	0,5014	***	0,0619	0,4849	***	0,0518
	8,1000			9,3500		
Constant	-0,1845		0,6206	0,0755		0,5968
	-0,3000			0,1300		
N° observations	5.478			5.706		
F	24.73 (30, 5447)			26.03 (30, 5675)		
Prob > F	0.0000			0.0000		
R <sup>2</sup> adjusted	0.1528			0.1654		
Root squared error	1.7417			1.6144		

Source: Cachón, E. (2013: 238); \*\*\*p<0,001, \*\*p<0,01, \*p<0,05

## 6. CONCLUSIONS

Satisfaction and happiness of the individual at work, microeconomic variables related to individual subjective perceptions, are framed in the economic policies of the labour market to improve the quality of jobs.

In the area of economic policies and the labour market, since the seventies, concern in Europe focused on reducing unemployment, setting aside the quality of jobs created and individual satisfaction at the workplace. Policies sought only to create jobs and to reducing unemployment.

In 1997 there is a first common reference to job quality. The launch of the European Employment Strategy (EES) is a twist when including qualitative factors concerning employment working conditions of workers. In 2000, this interest is reflected in the Lisbon Agenda, which includes specific targets in this field. Thus, in the second half of the nineties the focus on unemployment was diverted and opened a space for improving working conditions. Since then, and during the expansion phase until 2007, these issues have coexisted with the attention to the amount of employment, and that since the beginning of the economic recession the bond is strengthened due to the adjustment of employment induced by the crisis.

The latest revision of the Lisbon Strategy, called Europe 2020, takes as its priority objective the short-term economic recovery and long-term sustainable growth. Among the targets, the number of jobs outweighs quality, although not ignoring some aspects of it such as education and training.

But over the past two decades, the reality reflected that, despite the inclusion of the quality of employment and the improvement of working conditions in the European political agenda, the results were not as expected.

During the expansion phase, the growth of the economy and employment should have transferred to the labour market as a whole, resulting in improved working conditions and an increase in the degree of job satisfaction. However, as is clear from the analysis carried out in this work, countries like Spain cannot make such a claim.

Until 2007 the country had a high rate of employment growth (between 2002 and 2007, employment grew at an annual rate average of 4%), however, at the same time, there was a sharp increase in temporary work (that exceed the rate of 34% in 2006), average wages fell, the gender gap widened and a lack of training of workers deepened.

Employment growth in Spain was linked to low quality jobs characterized by easy access, without qualification requirements and, therefore, lower paid with temporary contracts and job instability as well as a lack of training and career advancement; ultimately, less satisfying jobs.

This scenario observed in the expansionary phase, worsens and extends in a period of recession like the present one, where the labour factor, in quantity and quality, is weakened by rising unemployment and pressure to keep the job. In this sense, the case of Spain is not unique; other European countries reflect similar profiles (Ruesga, S. et al, 2011). This is a global phenomenon that occurs worldwide.

Labour market policies aimed at creating jobs and improving their quality have not had the expected success during the boom years, and in the crisis, they have been relegated to a secondary role, overshadowed by policies which pursue macroeconomic and fiscal stability.

Considering that the three most important factors that affect happiness are employment, its quality and the circumstances in which work is performed (Esteve, 2004), today more than ever, given the deterioration of employment in Spain, we should not forget that "the purpose of economic activity is to enhance the welfare of individuals" (Stiglitz, 2002:9), and that employment and its quality are crucial, because "if the goal of economics is to improve the living standards, improving the welfare of workers becomes an end in itself" (ibid: 22). And this end should be one of the keys in the future labour policies.

## 7. REFERENCES

- ÁLVAREZ, G. (2005): “Análisis empírico de los determinantes de la satisfacción laboral en España”, *Revista de economía y empresa*, 22 (52-53), 105-118.
- ARGYLE, M. (1999): “Causes and Correlates of Happiness”, en Kahneman, D., Diener, E. y Schwarz, N., *The foundation of Hedonic Psychology*, Russell Sage Foundation; pp. 153- 373.
- BORJAS, G. J. (1979): “Job satisfaction, wages, and unions”, *The Journal of Human Resources*, 14, 21-40.
- CACHÓN GONZÁLEZ, E. (2013): Crisis, empleo y felicidad. El caso de los trabajadores ocupados en España en 2007 y 2010. Tesis doctoral, Universidad Autónoma de Madrid, mimeo.
- CLARK, A. (1996): “Job Satisfaction in Britain”, *British Journal of Industrial Relations*, 34, 189-217.
- CLARK, A. and OSWALD, A. (1994): “Subjective well-being and unemployment”, *Economic Journal*, 104, 648–659.
- CLARK, A. and OSWALD, A. (1998): “Satisfaction and comparison income”, *Journal of Public Economics*, 61, 359-381.
- COATS, D. and LEKHI, R. (2008): ‘Good Work’: Job Quality in a Changing Economy, *The Work Foundation*.
- COMISIÓN EUROPEA (2001): Comunicación de la Comisión al Consejo, al Parlamento Europeo, al Comité Económico y Social y al Comité de las Regiones, acerca de “Las Políticas Sociales y de Empleo: un marco para invertir en calidad”. COM (2001) 313 final, Bruselas, 20.6.2001.
- COMISIÓN EUROPEA (2006): *Indicators for monitoring the Employment Guidelines 2005 compendium*.
- COMISIÓN EUROPEA (2008): Employment in Europe 2008, Capítulo 4 “Measuring the quality of employment in the EU”, Luxemburgo.
- COMISIÓN EUROPEA (2009): Indicators for monitoring the Employment Guidelines including indicators for additional employment analysis 2009 compendium.
- COMISIÓN EUROPEA (2010): Comunicación de la Comisión: Europa 2020. Una Estrategia para un crecimiento inteligente, sostenible e integrador Bruselas, 3.3.2010 COM (2010) 2020.
- DAHL, S.; NESHEIM, T. and OLSEN, K. M. (2009): “Quality of work – concept and measurement”. REC-WP 05/2009 *Working Papers on the Reconciliation of Work and Welfare in Europe*, RECOWE Publication, Dissemination and Dialogue Centre, Edinburgh.
- DAVOINE, L.; ERHEL, C. and GUERGOAT, M. (2008): “A taxonomy of European labour markets using quality indicators”, *Rapport de recherche n° 45*, Centre d’Études de l’Emploi.
- DE SANTIS, V.S. and DURST, S.L. (1996): “Comparing job satisfaction among public and private sector employees”, *American Review of Public Administration*, 26, 327-343.
- EASTERLIN, R. (1995): “Will raising the incomes of all increase the happiness of all?”, *Journal of Economic Behavior and Organization*, 27, 35–47.
- EASTERLIN, R. (2001): “Income and Happiness: Towards a Unified Theory”. *Economic Journal*, 111, 465-484.
- ENCUESTA DE CONDICIONES DE VIDA EN EL TRABAJO (ECVT). Ministerio de Empleo y Seguridad Social. [www.meyss.es](http://www.meyss.es)
- ENCUESTA DE POBLACIÓN ACTIVA (EPA). Instituto Nacional de Estadística. [www.ine.es](http://www.ine.es)
- ESTADÍSTICAS DEL MERCADO DE TRABAJO. Agencia Tributaria. [www.aeat.es](http://www.aeat.es)
- ESTEVE, F. (2004): “La Economía de la Felicidad. Nuevos elementos para la crítica del liberalismo económico” en VV.AA.: *Filosofía y Economía de nuestro tiempo: Orden económico y cambio social*. Madrid: Ministerio de Educación y Ciencia.
- FREEMAN, R. (1978): “Job satisfaction as an economic variable”, *American Economic Review*, 68, 135-141.
- FREY, B. and STUTZER, A. (1999): “Measuring preferences by subjective well-being”, *Journal of Institutional and Theoretical Economics*, 155, 755–778.
- GAMERO, C. (2003): "Satisfacción Laboral de los Asalariados en España. Especial Referencia a las Diferencias por Género", *Cuadernos de Economía*, 27 (74), 109-146.
- HAMERMESH, D. (1977): “Economic aspects of job satisfaction”, en Ashenfelter y Oates (eds.): *Essays in Labor Market and Population Analysis*, Wiley, New York.
- HAMERMESH, D. (2001): ‘The changing distribution of job satisfaction’, *Journal of Human Resources*, 36, 1–30.
- KENNY, C. (1999): “Does Growth Cause Happiness, or Does Happiness Cause Growth?”, *Kyklos* 52, 3-25.

- LAYARD, R. (2004): “Good jobs and bad jobs”, Centre for Economic Performance, Occasional paper 19, London School of Economics.
- LÉVY-GARBOUA, L. and MONTMARQUETTE, C. (2004): “Reported job satisfaction: What does it mean?”, *Journal of Socio-Economics*, 33(2), 135-151.
- PEÑA-CASAS, R. (2009): “More and Better Jobs: Conceptual Framework and Monitoring Indicators of Quality of Work and Employment in the EU Policy Arena”. REC-WP 06/2009 *Working Papers on the Reconciliation of Work and Welfare in Europe* RECOWE Publication, Dissemination and Dialogue Centre, Edinburgh.
- SLOANE, P. and WARD, M. E. (2001): “Cohort effects and job satisfaction of academics”, *Applied Economics Letters*, 8, 787 – 791.
- SLOANE, P. and WILLIAMS, H. (2000): “Job Satisfaction, Comparison Earnings and Gender”, *Labour*, 14, 473-501.
- STIGLITZ, J.E. (2002): “Empleo, justicia y bienestar de la sociedad”, *Revista Internacional del Trabajo*, 121 (1-2), 9-31.
- RUESGA BENITO, S.M., PÉREZ ORTIZ, L. and VIÑAS APAOLAZA, A.I. (2011): “Negociación colectiva y calidad del empleo en la Unión Europea”. *Revista de Economía Mundial, SEM*, N° 29/2011, pg. 89-121. ISSN 1576-0162. Comunicación premiada con el Accésit a la III edición del Premio José Luis Sampedro en la XII REM.