

Measuring Satisfaction of the Unemployed: A Composite Indicator and Policy Implications*

Hector Bellido, University of Zaragoza (Spain)

J. Ignacio Gimenez-Nadal, University of Zaragoza (Spain) and CTUR (Oxford)

Raquel Ortega, University of Zaragoza (Spain)

Abstract

Given that unemployment is one of the main economic problems, policy-makers debate the possible solutions. We contribute to this debate by analysing the general satisfaction of the unemployed in Spain, and comparing it with that of the employed. To this end, we create a composite indicator of general satisfaction using responses in the ECHP (1994-2001) relating to specific satisfaction in different areas, work, financial, home and leisure time. We find that being unemployed has a significant and negative association with the general satisfaction of individuals and, in consequence, we conclude that the Spanish unemployment problem cannot be attributed, at least not entirely, to a lack of incentives for seeking work.

JEL CODES: I31; J64

KEYWORDS: Unemployment, General Satisfaction, Spain;

* We thank the Spanish Ministry of Science (project ECO2008-01297) and the Department of Science, Technology and University of the Regional Government of Aragon (reference number B094/09) for their financial support. Correspondence to Hector Bellido, Department of Economic Analysis, Faculty of Economics, C/ Gran Via 2, 3rd floor, C.P.: 50005 – Zaragoza (Spain). phone.: +34 976 76 10 00 ext. 4621. email.: hbellido@unizar.es

I. Introduction

Economists have long debated the causes and consequences of unemployment, with this undesirable labour situation being considered as one of the strongest correlates of individual well-being (for a review of the relationship between unemployment and well-being see Clark, Knabe and Rätzel, 2010). Unemployment is particularly relevant in the case of Spain, since Spain traditionally has one of the highest unemployment rates among the European countries, currently close to 20% (Dolado and Jimeno, 1997; Olave, Andrés and Alcalá, 2008).

In this paper we aim to determine whether the unemployed in Spain have lower levels of general satisfaction than the employed. We hypothesize that if levels of general satisfaction are similar between both the employed and the unemployed in Spain, the latter may have no incentives to search for employment, and thus incentives for them to actively search for work should be increased through economic measures (e.g., shorten the duration of unemployment benefits, condition unemployment benefits on the active search for work, special measures for long-term unemployed).

We contribute to the discussion of satisfaction of the unemployed (Alba-Ramírez, 1999; Arranz and Muro, 2007) by creating a composite indicator of general satisfaction in the following areas of life: 1) work or main activity, 2) financial situation, 3) housing situation, and 4) the amount of leisure time. This contribution is particularly relevant given that the commonly used European base data, the European Community Household Panel (1994-2001), includes sectoral information about satisfaction, but does not contain a general life satisfaction indicator.

Our results show that the problem of unemployment in Spain cannot be entirely attributed to the lack of initiative of the unemployed, as their general satisfaction levels are significantly lower than those of the employed. Our results are consistent with prior research using national surveys of general satisfaction (e.g., Winkelmann and Winkelmann, 1998; Blanchflower and Oswald, 2004).

II. Data and construction of composite indicator of general satisfaction

We use the 8 waves of the European Community Household Panel (ECHP) 1994-2001, “a standardized multi-purpose annual longitudinal survey carried out at the level

of the European Union. It is centrally designed and coordinated by the Statistical Office of the European Community (Eurostat), and covers demographics, labour force behaviour, income, health, education and training, housing, migration, etc.” (Peracchi, 2002). Our sample is restricted to Spanish respondents between the ages of 16 and 65 – the working age in Spain – who are neither students nor retired. The final sample consists of 19,245 observations.

Given that the main limitation we face in our base data is the absence of a variable expressing overall or general satisfaction, we contribute to the literature by creating a ‘composite indicator’ using four different variables: 1) satisfaction with work or main activity, 2) satisfaction with financial situation, 3) satisfaction with housing situation, and 4) satisfaction with the amount of leisure time. Respondents report the level of satisfaction in each domain on a scale ranging from 1 (not satisfied) to 6 (fully satisfied).

In the composite indicator we give a specific weight to each of its components by defining weights using “principal components analysis (PCA)”. This statistical technique transforms a number of possibly correlated variables into a number of uncorrelated variables called principal components, related to the original variables by an orthogonal transformation. In our analysis, the four components of general satisfaction become one principal component, which is our composite indicator.¹ The weights resulting from our analysis are 0.2865 to ‘satisfaction with work or main activity’, 0.3033 to ‘satisfaction with financial situation’, 0.2540 to ‘satisfaction with housing situation’, and 0.1561 to ‘satisfaction with amount of leisure time’. The resulting indicator is a continuous variable (*General Satisfaction*) obtained from the four discrete variables on satisfaction.

Table 1 shows the mean and standard deviation of our composite indicator and the four variables of satisfaction that comprise it. If we consider separately the employed (Column 1) and the unemployed (Column 2), the sample of employed is composed of 17,345 individuals and their mean satisfaction is 4.00, while the sample of unemployed is 1,900 with a mean satisfaction of 3.10. The p-values of the difference between the mean values for the 2 groups are reported in Column (3). Compared to the unemployed, the employed ones report higher levels of satisfaction with work, with financial

¹ Appendix 1 shows the results of the PCA analysis.

situation, and with housing, while they report lower levels of leisure satisfaction, resulting in higher levels of *General Satisfaction*.

III. Results

We estimate the following baseline model (OLS model), where S_{it} is our variable *General Satisfaction*:

$$S_{it} = \alpha + \beta_1 \text{Unemployed}_{it} + \beta_2 X_{it} + \varepsilon_{it} \quad (1)$$

where Unemployed_{it} is a dummy variable that takes value '1' if the individual i normally works in year t , and value '0' if the individual i is unemployed in year t . Other personal and household characteristics (e.g., gender, age, education, married), and macroeconomic aggregates (e.g., unemployment rate, consumer price Index) are included in X_{it} . We also exploit the panel structure of the data, which allows for the identification of the relationship between unemployment and satisfaction net of (permanent) individual heterogeneity in preferences, by estimating a Random Effects model and a Fixed Effects model.

Table 2 shows the results of estimating an Ordinary Least Squares model (Column 1), a Random Effects model (Column 2), and a Fixed Effects model (Column 3). Results obtained in the different models are very similar for the variable that allows us to distinguish between employed and unemployed individuals. Unemployment is associated with lower levels of *General Satisfaction*, ranging between 10.6 and 14.9 percentage points, and in all cases those results are statistically significant at the 99 percent level. These results are in contrast to the notion that unemployment benefits generate a level of satisfaction of the unemployed that is similar to that of the employed and that, in consequence, unemployment in Spain is reinforced by a lack of motivation to seek employment. Our results clearly confirm that the Spanish unemployment problem cannot be attributed mainly to a lack of motivation to seek work on the part of the unemployed.

Other results obtained for both OLS and RE models are as follows. We observe that higher education is associated with higher levels of *General Satisfaction*, as is belonging to a club or having a close relationship with friends. As we would expect, having good or very good health has a positive relation with *General Satisfaction*. We find a negative association between having responsibilities for home care and *General*

Satisfaction. There is also a negative association between having been unemployed during the previous five years and *General Satisfaction*.

IV. Concluding Comments

Unemployment is one of the main problems faced by the Spanish economy. In this situation, some policy-makers argue that unemployment benefits should be reduced, claiming that the unemployed do not have sufficient incentive to look for work. Other policy-makers argue that this would only aggravate the problem, since the unemployed people would lose their only source of income.

In order to contribute to this debate, we propose the use of a composite indicator given that specific questions on general life satisfaction are not available in the base data (ECHP, 1994-2001). Our composite indicator of general satisfaction uses the responses of individuals regarding their satisfaction in four different areas of their lives: work, financial, home and leisure time, with the results being consistent with existing research using questions on general satisfaction (e.g, Winkelmann and Winkelmann, 1998; Blanchflower and Oswald, 2004).

We particularly observe that being unemployed has a significant and negative association with the general satisfaction of individuals. Therefore, we conclude that the Spanish unemployment problem cannot be attributed to a lack of incentives for seeking work, at least not entirely. The development of measures to reduce unemployment benefits to encourage the unemployed to find work does not seem sufficient to resolve the unemployment problem in Spain.

References

- Alba-Ramírez, A. (1999) Explaining the transitions out of unemployment in Spain: the effect of unemployment insurance, *Applied Economic*, **31**, 183-193.
- Arranz, J. and Muro, J. (2007) Duration data models, unemployment benefits and bias, *Applied Economic Letters*, **14**, 1119-1122.
- Blanchflower, D. and Oswald, A. (2004) Well-being over time in Britain and the USA, *Journal of Public Economics*, **88**, 1359-1386.

- Clark, A., Knabe, A. and Rätzel, S. (2010) Boon or bane? Others' unemployment, well-being and job insecurity, *Labour Economics*, **17**, 52-61.
- Dolado, J. and Jimeno, J. (1997) The causes of Spanish unemployment: a structural VAR approach, *European Economic Review*, **41**, 1281-1307.
- Olave, P., Andrés, E. and Alcalá, J. (2008) Studying the relationship between unemployment periods in Spain: a nonparametric approach, *Applied Economic Letter*, **15**, 683-387.
- Peracchi, F. (2002) The European Community Household Panel: a review, *Empirical Economics*, **27**, 63-90.
- Winkelmann, L. and Winkelmann, R. (1998) Why are the unemployed so unhappy? Evidence from panel data, *Economica*, **65**, 1-15.

Table 1. Summary Statistics, Satisfaction Measures ^{1,2,3}

<i>Variable</i>	(1) Employed	(2) Unemployed	(3) P-value
General satisfaction	4.000 (0.896)	3.104 (0.906)	<0.01
Work satisfaction	4.316 (1.218)	2.393 (1.498)	<0.01
Financial satisfaction	3.571 (1.273)	2.185 (1.220)	<0.01
Housing satisfaction	4.511 (1.126)	4.234 (1.249)	<0.01
Leisure satisfaction	3.424 (1.413)	4.357 (1.365)	<0.01

Notes: ¹ Standard deviations in parentheses ² Sample consists of Spanish individuals aged 16-65, who are neither students nor retired, in the ECHP (1994/2001) ³ Columns (1) and (2) show means and standard deviations of the composite indicator of satisfaction and its components. Column (3) indicates whether there is a statistically significant difference in the mean value of each variable between the employed and the unemployed.

Table 2. General Satisfaction and Unemployment ^{1,2,3,4,5}

<i>General Satisfaction</i>	(1) OLS	(2) RE	(3) FE
Unemployed	-0.744*** (0.027)	-0.633*** (0.023)	-0.530*** (0.031)
Male	-0.008 (0.021)	0.004 (0.022)	-
Age	-0.018*** (0.006)	-0.011* (0.006)	0.068*** (0.023)
Age squared	0.032*** (0.007)	0.023*** (0.007)	-0.031** (0.015)
CPI	0.019 (0.014)	0.023** (0.010)	-0.000 (0.005)
Unemployment rate	-0.003 (0.008)	0.001 (0.006)	0.005 (0.005)
Higher education	0.256*** (0.019)	0.257*** (0.020)	0.047 (0.042)
Secondary education	0.102*** (0.021)	0.108*** (0.019)	0.007 (0.030)
Married	0.012 (0.022)	0.002 (0.023)	0.059 (0.071)
Caring for someone	-0.034* (0.019)	-0.049*** (0.016)	-0.055*** (0.019)
Friendship	0.114*** (0.029)	0.077*** (0.023)	0.046* (0.026)
Neighbourhood	0.023 (0.025)	0.049*** (0.019)	0.032 (0.021)
Unemployed before	-0.215*** (0.019)	-0.235*** (0.020)	0.003 (0.104)
Club member	0.125*** (0.017)	0.061*** (0.014)	-0.013 (0.017)
Very good health	0.745*** (0.186)	0.561*** (0.119)	0.407*** (0.131)
Good health	0.515*** (0.185)	0.368*** (0.118)	0.238* (0.130)
Fair health	0.343* (0.186)	0.227* (0.119)	0.141 (0.130)
Poor health	0.091 (0.191)	0.044 (0.122)	0.021 (0.133)
Non-salary income	0.000*** (0.000)	0.000*** (0.000)	0.000 (0.000)
Observations	19245	19245	19245

Notes: 1 Robust standard errors in parenthesis ² Sample consists of Spanish individuals aged 16-65, who are neither students nor retired, in the ECHP (1994/2001) ³ The composite indicator of general satisfaction is composed of satisfaction with work (0.2865%), financial satisfaction (0.3033%), satisfaction with home (0.2540%) and satisfaction with leisure time (0.1561%) ⁴ *CPI* reports the Consumer Price Index based on 1992; *Caring for someone* indicates whether the daily activities of the person include, without pay, looking after children or other persons who need special help because of old age, illness or disability; *Friendship* indicates whether the person meets friends or relatives not living with him/her, whether at home or elsewhere, at least once or twice a week; *Neighbourhood* indicates whether the person talks to any of his/her neighbours, at least once or twice a week; *Club member* indicates whether the person is a member of any club, such as a sport or entertainment club, a local or neighbourhood group, a party, etc ⁵ *, ** and *** denote significance at 10, 5 and 1% levels, respectively.

