

45th CONGRESS OF THE EUROPEAN REGIONAL SCIENCE ASSOCIATION (ERSA)**(23-27 August 2005, Vrije Universiteit Amsterdam)****TITLE****“HEALTH AND SOCIO-ECONOMIC INEQUALITIES IN THE EUROPEAN UNION”**

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Abstract

The aim of this paper is to analyse socio-economic inequalities in the European Union and their influence on health care. The empirical analysis is based mainly on data from the European Community Household Panel which contains data homogeneous across European Union countries and make comparisons possible. In addition, the functional form of the relationship between income and health, considering the impact of socioeconomic status among individuals whose medical needs are similar, is studied.

Key words: Disability, European Community Household Panel, Probit models.

JEL classifications: I1; I12; I120.

(* Acknowledgements

The authors would like to acknowledge the help given by the Centre for Health Economics (CHE) of the University of York (United Kingdom). Also, we are very grateful for many helpful comments from the participants in the York Seminars in Health Econometrics (YSHE). This work has partially supported by Ministerio de Educacion y Ciencia (SEJ2004-02810).

1. INTRODUCTION

Since last years, there exists an increased interest of policy makers for social inclusion issues and reintegration policies for people with disabilities. Disabled people are somewhat more likely to be unemployed and inactive than non-disabled people. However, the lack of homogeneous and specific statistical information makes it difficult to evaluate to what extent the new protection policies are having a strong impact on the improvement of employment and quality of life of disabled people¹. Health status and other data related are obtained basically from these sources: World Health Organisation (WHO), National Health Surveys (NHS), Disability Surveys (DS) and the European Community Household Panel² (ECHP). This paper is focused on the analysis of the factors associated with the likelihood of reporting “non-hampered in daily activities by a chronic or mental health problem, illness or disability”, using currently available data from a large-scale representative surveys. In particular, we have used the new information contained in the ECHP.

Discussion of the economics of disability requires a common understanding of the meaning of “disability” and an overview of both the extent and demographic and economic composition of the disabled population (Wolfe, 1984; Aarts and De Jong, 1992). We begin by offering a definition of disability that we will maintain throughout the paper. Any classification of disability is based on the notion of impairment. The WHO defines this as a “loss or abnormality of body structure or of a physiological or psychological function”. This impairment leads to limitation of activities, which can turn into restrictions in participation in society³. Although people with disabilities is a very heterogeneous group⁴, we will use the self-reported definition given in the ECHP. The differences among countries are significant and the ECHP data suggest that Spain, Italy and Greece have relatively few people with

¹ The impact of disability on the cost of achieving a given level of welfare can be viewed through the theory of household production. Certain fixed inputs are required only by disabled people, other inputs are only required by the people with disabilities but at a level that varies with the basic commodities consumed and finally, some goods cannot be used by the disabled. By constraining the input set, such restrictions may imply higher costs of achieving a given level of welfare. In this sense, Jones and O'Donnell (1995) identified the impact of disability on spending patterns over market goods and constructed equivalence scales.

² Also, it was included in the Labour Force Survey (LFS) in 2001, another wide harmonized population survey, a module on disability in relation to working conditions.

³ An impairment may not necessarily result in a disability and will depend upon the activities in which the individual in question intends to engage.

⁴ Moreover, in most countries a significant proportion of people with disabilities reports a combination of impairments.

disabilities (less than 10%) and the highest disability rates are found in Finland (23%) followed by the United Kingdom (European Commission, 2001).

Another important item is individuals' health condition is deteriorating with age. This fact is the clearest and most consistent relationship across countries and justifies that disability is much more prevalent among older people. For example, in the case of European Union, 63% of people with disabilities are older than 45 and for non-disabled people the corresponding percentage is only 34% (European Commission, 2001). This pattern is mainly due to individuals' health condition deteriorating with age. Furthermore, many impairments leading to disability are acquired during a person's life.

However, the differences of disability by gender are small. International data show that in the majority of European Member Countries differences in the incidence of disability by gender are rather small. For example, in Denmark and the Netherlands there are however relatively many disabled women, whereas in France, Greece and Spain there are considerably higher numbers of men with disabilities.

On the other hand, disabled people have a relatively low educational level compared with non-disabled people⁵. This could be explained because people with certain types of disability have fewer educational opportunities and because people with lower education are working in jobs with a higher risk of becoming disabled. The correlation between disability and educational level might also be caused by the effect of disability on educational level. So, people with certain types of disability have fewer educational opportunities.

Also, the impact of having a long-standing illness⁶ on labour force participation limits the individual activities severely in their work or daily life (Loprest *et al.* 1995; Gruber, 2000; Kidd *et al.*, 2000; De Leire, 2001; Gannon and Nolan, 2003; Lechner and Vazquez-Alvarez, 2004). In this sense, across the European countries, there exists some evidence that disability income support policies have been used to hide unemployment rates and have been attractive to other workers (Haveman and Wolfe, 1999).

⁵ Countries with an extremely high share of disabled people with no educational qualifications beyond primary education level are France, Italy, Spain and United Kingdom (European Commission, 2001).

⁶ In many European countries, disability benefits exceed unemployment benefits and have a longer duration, leading to low employment rates among the disabled. Also, the health care needs of disabled people tend to be covered by some form of universal health insurance.

Disability affects the participation rate more than the unemployment rate. Consequently, the main labour market problem for people with disabilities is their low participation rate. The low unemployment rate for people with disabilities may be partly explained by a “discouraged worker effect”⁷. The situation is likely to be reinforced by institutional factors and disincentives related to benefit systems (benefit traps) so, relatively low unemployment rates among disabled people do not fully capture the extent of their labour market disadvantage.

The focus of attention in this paper is to model the probability of an individual reporting non hampered in daily activities by a chronic or mental health problem, illness or disability in the European Union. The structure of this paper is as follows. Section two describes the data sources we have used and characteristics of the variables involved in our analysis. Section three explains the principal methodological decisions about the econometric model we have used. In section four, we present empirical results using probit models and finally, section five gives a summary and conclusion.

2. THE EUROPEAN COMMUNITY HOUSEHOLD PANEL (ECHIP)

This standardised multi-purpose annual longitudinal survey contains data on individuals and households for the European Union countries with the full eight waves available (1994-2001). The main advantage is that information is homogeneous among countries since the questionnaire is similar across them. This source of data is coordinated by the Statistical Office of the European Communities (EUROSTAT). Also, this survey includes rich new information about income, social transfers, education, employment, health, housing, etc. In this sense, it is important to highlight that it is the first fixed and harmonized panel for studying socio-economic factors of the households and individuals inside the European Union (Peracchi, 2002; Pascual and Sarabia, 2003).

This representative survey of households of different European Union countries was carried out for the first time in 1994 and were interviewed 60.500 households (approximately

⁷ Because chances of getting a job are perceived to be low, they do not enter the labour market at all.

170.000 individuals) for the 12 Member States⁸. For example, in the case of Spain the first wave was of 7.200 households (approximately 23.000 individuals). In this paper, we have used the microdata for the European Union countries in order to test the sensitivity and robustness of the results to different hypotheses.

The ECHP also contains questions on health and the respondent's self-assessment on the limitation of activities⁹. In particular, given the nature of our study, we have used two questions to determine whether someone is disabled or not. The first one is "Do you have any chronic physical or mental health problem, illness or disability? (yes/no). If yes, the second question is "Are you hampered in your daily activities by this chronic or mental health problem, illness or disability?" (no; yes, to some extent; yes, severely). In this way, those who answer "yes" (severely or to some extent) are defined as disabled persons. The interviews corresponding to the first eight waves of the ECHP were performed since 1994 to 2001. In this paper, we will focus on the microdata provided in 2001 for the different European Union countries.

3. METHODS

Our dependent variable in the statistical model is a dichotomy variable which takes a value of 1 if the individual can not be considered as disabled person, that is, if the individual is not hampered severely or to some extent in his/her daily activities by a chronic or mental health problem, illness or disability. On the other hand, factors such as age, education, marital status, etc., and some economic data could be relevant in explaining whether an individual is hampered in his/her daily activities.

In this way, the respondent either is hampered in his/her daily activities by a chronic or mental health problem, illness or disability ($Y=0$) or does not ($Y=1$) in the corresponding period. A set of factors, such as age, marital status, education, etc., gathered in a vector x explain this fact so the probability model is a regression:

⁸ Austria joined the project since 1995 and Finland in 1996. Also, similar data is available for Sweden from 1997 onwards. However, the original ECHP surveys were stopped in 1997 in Germany, Luxembourg and the United Kingdom where national surveys were used.

⁹ For example, Jones, Koolman and Rice (2004) considered models of the association between socioeconomic status and self-assessed health (SAH) and health-related attrition based on eleven waves available of the British Household Panel Survey (BHPS) and the full eight waves available of the ECHP.

$$E(y | x) = F(x, \beta). \quad (1)$$

The set of parameters β reflects the impact of changes in x on the probability. In order to estimate this equation, a nonlinear specification of $F(\cdot)$ can avoid logical inconsistency and the possibility of predicted probabilities outside the range $[0,1]$. The most common nonlinear parametric specifications are logit and probit models which have been analysed. So, we are going to use a latent variable interpretation (Jones, 2001; Greene, 2003). Let

$$\begin{aligned} y &= 1 && \text{if } y_i^* > 0 \\ y &= 0 && \text{if } y_i^* \leq 0 \end{aligned} \quad (2)$$

where

$$y^* = x' \beta + \varepsilon, \quad (3)$$

and if the distribution is symmetric, such as the normal and logistic, then:

$$\Pr(y = 1 | x) = \Pr(y_i^* > 0 | x) = \Pr(\varepsilon < x' \beta | x) = F(x' \beta). \quad (4)$$

If we assume that ε has a standard normal distribution, we obtain the probit model, while assuming a standard logistic distribution, we obtain the logit model. These models are usually estimated by maximum likelihood estimation and the log-likelihood for a sample of independent observations is:

$$\ln L = \sum_{i=1} \{y_i \ln F(x_i' \beta) + (1 - y_i) \ln [1 - F(x_i' \beta)]\}. \quad (5)$$

The definition of each variable used in the estimates is given in Table 1 and Table 2 reports frequencies for the response to the question “Are you hampered in daily activities by a chronic or mental health problem, illness or disability?” for each country considered.

INSERT TABLE 1 HERE

INSERT TABLE 2 HERE

4. RESULTS

Given the structure of our database, the aim of this paper is to model the probability of an individual reporting non-hampered as a function of a range of socio-economic characteristics, including the individual's gender, age, marital status, education, work status, etc.

Our regression function in Table 3 includes two types of explanatory variable. The first type can be treated as though they were continuous variables (individual's age measured in years and labour experience) and other explanatory variables are binary or dummy variables. These take the value 1 if the individual has a particular characteristic. In this way, the marginal effects let us know the impact of a small change in the variable on the probability of participation. Thus, we can study the impact of age on the probability of reporting non-hampered. On the other hand, for the dummy variables, it does not make sense to think in terms of small changes (an individual either has a characteristic or does not). So, we will consider the average effects, that is, the difference in the probability of reporting non-hampered if someone is unemployed compared to someone who is employed.

INSERT TABLE 3 HERE

Finally, the sign of the coefficients inform us about the qualitative effect of the explanatory variables. In this way, if the sign of the coefficient on unemployment is negative, this means that an individual who is currently "Unemployed" is less likely to report that he/she is not hampered relative to the reference individual who is employed. For all the countries considered, except Greece, unemployed has a negative coefficient in the probit model. Also, those individuals who are married are less likely to report they are not hampered. Similarly, the results show that for all the European Union countries (except Denmark) those individuals who are older are less likely to report that they are not hampered in their daily activities. Furthermore, those with less education (and fewer years of education) and who have been working less years are less likely to report they are not hampered in their daily activities.

Also, in order to interpret the quantitative implications of our results, we have computed marginal effects (for the continuous explanatory variables) and average effects (for

the binary explanatory variables). Table 4 presents the average and marginal effects for the probit model considered. Although for all the countries, on average the probability of an unemployed individual reporting non hampered in his/her daily activities is less than for the reference individual, Netherlands has the highest average effect (-0.2412).

INSERT TABLE 4 HERE

5. CONCLUSIONS

People with disabilities face many barriers related with their living standards and quality of life. This paper has analysed the factors associated with the likelihood of people reporting non hampered in daily activities by a chronic or mental health problem, illness or disability in a large-scale representative survey - ECHP. The results of our analysis bring out the negative effect of age, unemployment and lower levels of education in our dependent variable and the positive effect of being married and being male.

At least in the near future, it seems clear that all industrialized countries are likely to continue to face dilemmas with their policies toward the disabled people. Nevertheless, a further exploiting the potential of those data is a priority for future work.

REFERENCES

- Aarts, L., De Jong, P., 1992. *Economic Aspects of Disability Behavior*. North-Holland, Amsterdam.
- De Leire, T., 2001. Changes in Wage Discrimination against People with Disabilities: 1984-1993. *The Journal of Human Resources* Vol. 36, No. 1, Winter 2001, 144-158.
- European Commission, 2001. *The employment situation of people with disabilities in the European Union*. Employment&Social Affairs.
- EUROSTAT, 2001. *European Community Household Panel (wave 8)*.
- Gannon, B., Nolan, B., 2003. *Disability and Labour Market Participation*. HRB Working Paper.
- Greene, W.H., 2003. *Econometric analysis*. Prentice Hall.
- Gruber, J., 2000. Disability Insurance and Labor Supply. *Journal of Political Economy* Vol. 108, no. 6, 1162-1183.
- Haveman, R., Wolfe, B., 1999. *The Economics of Disability and Disability Policy*. Handbook of Health Economics.
- Jones, A., 2001. *Applied Econometrics for Health Economists-A practical guide*. Office of Health Economics, London.
- Jones, A., Koolman, X., Rice, N., 2004. Health-related attrition in the BHPS and ECHP: using inverse probability weighted estimators in nonlinear models. *Ecuity III Project Working Paper N° 18*, May 2004.
- Jones, A., O'Donnell, O., 1995. Equivalence scales and the costs of disability. *Journal of Public Economics* 56, 273-289.
- Kidd, M.P., Sloane, P.J., Ferko, I., 2000. Disability and the labour market: an analysis of british males. *Journal of Health Economics* 19, 961-981.
- Lechner, M., Vazquez-Alvarez, R., 2004. The effect of disability on Labour Market Outcomes in Germany: Evidence from matching. *Discussion Paper Series CEPR, Labour Economics*, No 4223, London.
- Loprest, P., Rupp, K., Sandell, S., 1995. Gender, Disabilities and Employment. *The Journal of Human Resources* 30, 293-318.
- Pascual, M., Sarabia, J.M., 2003. Análisis de la Distribución de la Renta a partir de Funciones de Cuantiles: Robustez y Sensibilidad de los Resultados frente a Escalas de Equivalencia. *Working Paper, Instituto de Estudios Fiscales*, No 1.

- Peracchi, F., 2002. The European Community Household Panel: A review. *Empirical Economics* 27, 63-90.
- Wolfe, B., 1984. Measuring Disability and Health. *Journal of Health Economics* 3, 187-193.

TABLE 1. Variable definitions

AGE	Individuals' age
MALE	1 if male, 0 otherwise
MARRIED	1 if married, 0 otherwise
UNEMPLOYED	1 if unemployed, 0 otherwise
NOACAD	1 if highest level of education completed is 2 nd stage (ISCED 0-2), 0 otherwise
LABEXP	Labour experienced: Individuals' age minus Age started working

TABLE 2. Frequencies for the response to the question:
 “Are you hampered in daily activities by a chronic of mental health problem, illness or disability?”

	Denmark	Netherlands	Belgium	France	Ireland	Italy	Greece	Spain	Portugal	Austria	Finland	Sweden	Germany	U.Kingdom
Severely	6.11	8.23	5.37	10.23	3.95	3.95	7.72	6.09	10.51	5.27	7.03	11.83	8.52	14.63
To some extent	16.53	15.90	9.48	13.34	12.35	6.16	8.61	10.15	13.53	11.69	19.41	13.14	28.47	--
No	77.36	75.87	85.15	76.43	83.70	89.74	83.68	83.76	75.96	83.04	73.56	75.03	63.01	85.37

SOURCE: Own elaboration from ECHP.

TABLE 3: Probit Estimates

	DENMARK		NETHERLANDS		BELGIUM		FRANCE		IRELAND		ITALY		GREECE	
	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)
AGE	0.0264 (0.0077)	3.43 (0.001)	-0.0176 (0.0026)	-6.85 (0.000)	-0.0055 (0.0062)	-0.89 (0.372)	-0.0250 (0.0032)	-7.93 (0.000)	-0.0161 (0.0065)	-2.46 (0.014)	-0.0270 (0.0029)	-9.35 (0.000)	-0.0276 (0.0028)	-9.97 (0.000)
MALE	0.2377 (0.0492)	4.83 (0.000)	0.2155 (0.0376)	5.72 (0.000)	0.0487 (0.0531)	0.92 (0.359)	0.0321 (0.0341)	0.94 (0.347)	-0.0008 (0.0538)	-0.01 (0.988)	0.0252 (0.0401)	0.63 (0.529)	-0.0319 (0.0392)	-0.81 (0.416)
MARRIED	0.1626 (0.0499)	3.26 (0.001)	0.1469 (0.0405)	3.63 (0.000)	0.1607 (0.0551)	2.92 (0.004)	0.1601 (0.0356)	4.50 (0.000)	0.1707 (0.0570)	2.99 (0.003)	0.1218 (0.0441)	2.76 (0.006)	0.2190 (0.0430)	5.09 (0.000)
UNEMPLOYED	-0.3457 (0.1276)	-2.71 (0.007)	-0.7058 (0.0867)	-8.14 (0.000)	-0.2672 (0.1118)	-2.39 (0.017)	-0.1178 (0.0781)	-1.51 (0.132)	-0.5467 (0.1410)	-3.88 (0.000)	-0.2373 (0.1126)	-2.11 (0.035)	0.0001 (0.1340)	0.000 (0.999)
NOACAD	-0.2930 (0.0583)	-5.03 (0.000)	-0.1183 (0.1761)	-0.67 (0.502)	-0.1147 (0.0601)	-1.91 (0.056)	-0.2704 (0.0417)	-6.49 (0.000)	-0.3395 (0.0588)	-5.78 (0.000)	-0.1865 (0.0469)	-3.98 (0.000)	-0.3645 (0.0469)	-7.78 (0.000)
LABEXP	-0.0441 (0.0073)	-6.06 (0.000)	-0.0038 (0.0021)	-1.77 (0.077)	-0.0194 (0.0058)	-3.32 (0.001)	-0.0059 (0.0028)	-2.16 (0.031)	-0.0065 (0.0063)	-1.03 (0.301)	-0.0073 (0.0026)	-2.83 (0.005)	-0.0012 (0.0024)	-0.51 (0.608)
Cons.	0.7020 (0.1685)	4.17 (0.000)	1.6583 (0.1871)	8.86 (0.000)	1.8058 (0.1643)	10.99 (0.000)	2.2411 (0.0980)	22.87 (0.000)	2.0881 (0.1541)	13.55 (0.000)	3.0086 (0.1037)	29.01 (0.000)	2.6225 (0.0983)	26.69 (0.000)
Numb. of obs	3556		6206		3632		7439		3539		9421		7376	
Log likelihood	-1742.7141		-3004.9262		-1452.5828		-3605.3240		-1412.6611		-2552.9990		-2859.1112	
Pseudo R2	0.0936		0.0494		0.1005		0.1559		0.1097		0.1752		0.1592	

SOURCE: Own elaboration from ECHP.

TABLE 3: Probit Estimates (continued)

	SPAIN		PORTUGAL		AUSTRIA		FINLAND		SWEDEN		GERMANY (SOEP)		UK (BHPS)	
	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)	Coef. (Std.Err.)	z (P> z)
AGE	-0.0228 (0.0028)	-8.19 (0.000)	-0.0242 (0.0021)	-11.58 (0.000)	-0.0185 (0.0053)	-3.47 (0.001)	-0.0052 (0.0052)	-1.00 (0.316)	-0.02588 (0.009)	-29.12 (0.000)	-0.01801 (0.0042)	-4.27 (0.000)	-0.0164 (0.0037)	-4.38 (0.000)
MALE	0.0950 (0.0349)	2.72 (0.007)	0.1612 (0.0329)	4.89 (0.000)	-0.0219 (0.0479)	-0.46 (0.648)	0.1492 (0.0399)	3.73 (0.000)	0.0391 (0.0279)	1.40 (0.162)	0.6521 (0.0286)	2.28 (0.023)	0.1244 (0.0380)	3.27 (0.001)
MARRIED	0.1846 (0.0365)	5.06 (0.000)	0.1030 (0.0348)	2.96 (0.003)	0.0632 (0.0504)	1.25 (0.210)	0.0924 (0.0430)	2.15 (0.032)	1.2811 (0.0337)	38.05 (0.000)	0.0046 (0.0312)	0.15 (0.883)	0.0807 (0.0383)	2.11 (0.035)
UNEMPLOYED	-0.2191 (0.0755)	-2.90 (0.004)	-0.2820 (0.0914)	-3.08 (0.002)	-0.6149 (0.1283)	-4.79 (0.000)	-0.0571 (0.0886)	-0.64 (0.519)	-0.1749 (0.0663)	-2.64 (0.008)	-0.3226 (0.0586)	-5.51 (0.000)	-0.4699 (0.1297)	-3.62 (0.000)
NOACAD	-0.4570 (0.0446)	-10.25 (0.000)	-0.4920 (0.0551)	-8.93 (0.000)	-0.1658 (0.0522)	-3.18 (0.001)	-0.1861 (0.0482)	-3.86 (0.000)	0.0901 (0.0332)	2.71 (0.007)	-0.1451 (0.0357)	-4.07 (0.000)	-0.2289 (0.0419)	-5.46 (0.000)
LABEXP	-0.0062 (0.0025)	-2.52 (0.012)	-0.0086 (0.0018)	-4.73 (0.000)	-0.0152 (0.0051)	-2.96 (0.003)	-0.0236 (0.0050)	-4.72 (0.000)	-	-	-0.0168 (0.0040)	-4.16 (0.000)	-0.0058 (0.0034)	-1.70 (0.090)
Cons.	2.5865 (0.0887)	29.16 (0.000)	2.5706 (0.0835)	30.79 (0.000)	2.5080 (0.1271)	19.74 (0.000)	1.4642 (0.1234)	11.87 (0.000)	0.7183 (0.0437)	16.43 (0.000)	1.6480 (0.0970)	16.99 (0.000)	2.0971 (0.0991)	21.17 (0.000)
Number of obs	9677		9146		4754		5077		9290		9062		7687	
Log likelihood	-3476.7240		-4086.0666		-1840.1240		-2623.3421		-5404.1990		-5244.4766		-2840.7444	
Pseudo R2	0.1799		0.1886		0.1576		0.1229		0.1562		0.1380		0.1044	

*Sweden has not available information about age started working.

*Lux(PSELLII) has not available information about hamper.

* For Germany and UK, the national surveys have been used (SOEP and BHPS, respectively).

SOURCE: Own elaboration from ECHP.

TABLE 4: Average and marginal effects for probit model

	DENMARK		NETHERLANDS		BELGIUM		FRANCE		IRELAND		ITALY		GREECE	
	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)
AGE	0.0076 (0.0022)	3.43 (0.001)	-0.0048 (0.0007)	-6.85 (0.000)	-0.0012 (0.0014)	-0.89 (0.372)	-0.0075 (0.0009)	-7.93 (0.000)	-0.0036 (0.0014)	-2.46 (0.014)	-0.0035 (0.0003)	-9.35 (0.000)	-0.0059 (0.0006)	-9.97 (0.000)
MALE	0.0686 (0.0141)	4.83 (0.000)	0.0596 (0.0104)	5.72 (0.000)	0.0108 (0.0118)	0.92 (0.359)	0.0097 (0.0103)	0.94 (0.347)	-0.0002 (0.0119)	-0.01 (0.988)	0.0033 (0.0052)	0.63 (0.529)	-0.0068 (0.0084)	-0.81 (0.416)
MARRIED	0.0475 (0.0147)	3.26 (0.001)	0.0415 (0.0117)	3.63 (0.000)	0.0367 (0.0129)	2.92 (0.004)	0.0489 (0.0110)	4.50 (0.000)	0.0386 (0.0132)	2.99 (0.003)	0.0163 (0.0062)	2.76 (0.006)	0.0495 (0.0103)	5.09 (0.000)
UNEMPLOYED	-0.1121 (0.0453)	-2.71 (0.007)	-0.2412 (0.0336)	-8.14 (0.000)	-0.0672 (0.0312)	-2.39 (0.017)	-0.0369 (0.0253)	-1.51 (0.132)	-0.1543 (0.0476)	-3.88 (0.000)	-0.0361 (0.0197)	-2.11 (0.035)	0.0000 (0.0288)	0.000 (0.999)
NOACAD	-0.0901 (0.0189)	-5.03 (0.000)	-0.0311 (0.0438)	-0.67 (0.502)	-0.0261 (0.0140)	-1.91 (0.056)	-0.0786 (0.0116)	-6.49 (0.000)	-0.0766 (0.0134)	-5.78 (0.000)	-0.0238 (0.0059)	-3.98 (0.000)	-0.0757 (0.0093)	-7.78 (0.000)
LABEXP	-0.0128 (0.0021)	-6.06 (0.000)	-0.0010 (0.0006)	-1.77 (0.077)	-0.0043 (0.0013)	-3.32 (0.001)	-0.0018 (0.0008)	-2.16 (0.031)	-0.0014 (0.0014)	-1.03 (0.301)	-0.0009 (0.0003)	-2.83 (0.005)	-0.0003 (0.0005)	-0.51 (0.608)

(*) dF/dx is for discrete change of dummy variable from 0 to 1.
z and P>|z| are the test of the underlying coefficient being 0.

SOURCE: Own elaboration from ECHP.

TABLE 4: Average and marginal effects for probit model (continued)

	SPAIN		PORTUGAL		AUSTRIA		FINLAND		SWEDEN		GERMANY (SOEP)		U.KINGDOM (BHPS)	
	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)	dF/dx (Std. Err.)	z (P> z)
AGE	-0.0044 (0.0005)	-8.19 (0.000)	-0.0066 (0.0006)	-11.58 (0.000)	-0.0039 (0.0011)	-3.47 (0.001)	-0.0017 (0.0017)	-1.00 (0.316)	-0.0102 (0.0003)	-29.12 (0.000)	-0.0069 (0.0016)	-4.27 (0.000)	-0.0033 (0.0007)	-4.38 (0.000)
MALE	0.0185 (0.0068)	2.72 (0.007)	0.0439 (0.0089)	4.89 (0.000)	-0.0047 (0.0103)	-0.46 (0.648)	0.0475 (0.0127)	3.73 (0.000)	0.1550 (0.0111)	1.40 (0.162)	0.0244 (0.0109)	2.28 (0.023)	0.0249 (0.0075)	3.27 (0.001)
MARRIED	0.0369 (0.0076)	5.06 (0.000)	0.0284 (0.0098)	2.96 (0.003)	0.0137 (0.0110)	1.25 (0.210)	0.0296 (0.0139)	2.15 (0.032)	0.4722 (0.0103)	38.05 (0.000)	0.0017 (0.0119)	0.15 (0.883)	0.0163 (0.0078)	2.11 (0.035)
UNEMPLOYED	-0.0475 (0.0181)	-2.90 (0.004)	-0.0852 (0.0302)	-3.08 (0.002)	-0.1738 (0.0441)	-4.79 (0.000)	-0.0185 (0.0292)	-0.64 (0.519)	-0.0683 (0.0254)	-2.64 (0.080)	-0.1267 (0.0233)	-5.51 (0.000)	-0.1198 (0.0398)	-3.62 (0.000)
NOACAD	-0.0833 (0.0075)	-10.25 (0.000)	-0.1155 (0.0107)	-8.93 (0.000)	-0.0371 (0.0122)	-3.18 (0.001)	-0.0611 (0.0162)	-3.86 (0.000)	0.0357 (0.0132)	2.71 (0.007)	-0.0560 (0.0139)	-4.07 (0.000)	-0.0473 (0.0089)	-5.46 (0.000)
LABEXP	-0.0012 (0.0005)	-2.52 (0.012)	-0.0023 (0.0005)	-4.73 (0.000)	-0.0033 (0.0011)	-2.96 (0.003)	-0.0075 (0.0016)	-4.72 (0.000)	-	-	-0.0064 (0.0015)	-4.16 (0.000)	-0.0012 (0.0007)	-1.70 (0.090)

(*) dF/dx is for discrete change of dummy variable from 0 to 1.
z and P>|z| are the test of the underlying coefficient being 0.

SOURCE: Own elaboration from ECHP.