

The Richer, the Happier?

An Empirical Investigation based on the European Community Household Panel⁽¹⁾

*Più Ricchi, più Felici? Uno Studio Empirico
sul Panel Europeo delle Famiglie.*

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Riassunto: In questo lavoro si esamina la relazione tra il reddito e la percezione soggettiva del benessere economico individuale in alcuni paesi dell’Unione Europea. L’analisi è basata su un campione di individui con più di 16 anni, seguiti longitudinalmente nelle prime sei *waves* del Panel Europeo delle Famiglie (*ECHP*). Si è utilizzato un modello *probit* ordinale a effetti casuali, al fine di tener conto della componente di eterogeneità non osservabile dovuta all’individuo. In tutti i Paesi si evidenzia una relazione positiva tra il reddito e il livello di soddisfazione ad eccezione della Danimarca, che presenta una relazione opposta. La percentuale di variabilità dovuta agli individui risulta pari al 50% circa della variabilità totale in ogni Paese.

Keywords: Subjective well-being, economic well-being, Panel data.

1. Introduction

The main purpose of this paper is to study the determinants of subjective financial well-being over time in selected European countries. In particular, we try to detect the possible differences between countries in the relationship between income and income satisfaction, taking into account the influence of some covariates, like age, sex and other socio-demographic variables. In addition, by using longitudinal data, instead of cross-sectional equations, we can control for the fact that some persons may be more inclined than others to be happy with their life. Ignoring this characteristic, which can be correlated with observable variables, may bias the final result.

2. Data and methods

We use data from the European Community Household Panel (*ECHP*). The *ECHP* is an extensive, sample-based panel survey in which the same households and persons are interviewed annually from 1994 to 2001 in EU member states. Data from the survey come from a standardized questionnaire on the main aspects of welfare including income and employment, housing and education, social relationships and health.

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In our analysis we consider only ten countries for the six waves, ignoring those countries which didn't join the survey from the beginning). Our key variables are individual financial satisfaction - the dependent variable – and net yearly household equivalised income. The former is measured by satisfaction with the current financial situation on a scale of one to six in increasing order of satisfaction. The latter is given by household income in Euros, made comparable between countries by the use of PPPs. This income is further converted into household equivalent measure using the OECD modified scale. To correctly interpret the ordinal dependent variable, the discrete satisfaction judgment must be related to levels of a latent continuous satisfaction variable. Then we assume that an explanatory variable, like income, is associated with this unobservable variable. Moreover, we assume that the relationship between these two variables is not the same for everybody, i.e. there is individual heterogeneity in the process of "well-being production", which, if not duly considered, would bias our results.

Given these assumptions, we decided to run a random-effect ordered probit model, separately for each country, relating the latent satisfaction variable to income and controlling also for some socio-demographic fixed effects. In the final paper, also variables at the household level are included in the model.

3. Main findings

A preliminary look at our data (Table 1) shows that the average level of financial satisfaction varies across countries and between strata. Most satisfied appear to be the people living in Northern Countries – in particular in Denmark, in the Netherlands and Belgium - while Southern Europeans present lower levels of satisfaction. With regard to sex, the differences are modest, but they stand out more clearly between different age groups. The older seems to be more satisfied than the average, in almost every country, with the exception of Greece and Portugal.

With regard to marital status, the married are the group reporting the highest level of satisfaction, while, the divorced and the never married are, apparently, the worst off. As for the widowed, their opinions differ across countries: in some context they seem to be relatively happy with their income, while in others (e.g. the Netherlands, Italy, Spain and Portugal) the opposite is true.

As expected, being in good health increases the level of satisfaction with the financial situation, and so does, not surprisingly, a good household income (grouped in quartiles in Table 1). There are some notable exceptions, though: the relation is completely reversed in Denmark, while, in Portugal, the highest levels of satisfaction are reported by those who are in the first and in the fourth quartile.

Table 2 suggests that financial satisfaction does not depend only on income, but also on the other variables considered. Most of the results that emerge from our regressions confirm what has been already outlined in the descriptive analysis. In all the Northern countries male respondents are less content than females; on the contrary, in Southern countries (Italy, Greece and Portugal) females are more likely to report a low subjective economic well-being than their males counterparts. This peculiarity may be connected to the low level of gender equity in the Southern countries: this is subject to further analysis.

In most countries with the exception of the UK and Belgium, age affects financial satisfaction, but in a non-linear way. In most countries, the young and the elderly appear to be relatively more satisfied than the rest, but the opposite is true in the Netherlands, in Italy, in Greece and in Portugal.

Table 1: *Average level of satisfaction by country and selected characteristics*

VARIABLES	COUNTRY									
	DK	NL	B	F	UK	EL	I	EL	E	P
Gender										
female	3,52	3,38	3,01	2,55	2,83	2,59	2,05	1,85	2,12	1,92
male	3,51	3,42	3,03	2,55	2,86	2,54	2,15	1,96	2,15	2,05
Age										
16-29	3,02	3,10	2,81	2,34	2,74	2,23	1,80	1,79	1,93	2,01
30-49	3,40	3,45	2,91	2,48	2,80	2,50	2,24	2,11	2,14	2,05
50-64	3,80	3,49	3,14	2,65	2,91	2,72	2,20	1,93	2,16	1,97
65+	4,07	3,53	3,38	2,87	2,99	3,05	2,11	1,68	2,39	1,87
Mar. status										
married	3,75	3,57	3,17	2,70	2,95	2,72	2,26	2,00	2,24	2,03
divorced	3,11	2,72	2,33	2,11	2,44	1,81	1,90	1,65	1,60	1,78
widow	3,98	3,22	3,14	2,62	2,87	2,76	1,91	1,62	2,14	1,80
never married	3,13	3,16	2,83	2,34	2,75	2,31	1,81	1,75	1,98	1,95
Health status										
good	3,54	3,49	3,14	2,67	2,96	2,64	2,23	2,03	2,23	2,17
fair	3,51	3,23	2,82	2,47	2,73	2,30	2,01	1,64	2,09	1,96
bad	3,20	2,76	2,29	1,95	2,41	1,88	1,60	1,34	1,73	1,60
Income Quartile (1)										
1	3,57	3,37	3,00	2,53	2,78	2,47	2,05	1,86	2,04	1,98
2	3,48	3,34	2,97	2,49	2,77	2,51	2,10	1,87	2,07	1,94
3	3,49	3,42	3,05	2,57	2,89	2,67	2,11	1,92	2,22	1,97
4	3,45	3,49	3,08	2,64	2,92	2,74	2,16	2,03	2,31	2,05
Tot.	3,51	3,40	3,02	2,55	2,84	2,57	2,10	1,90	2,14	1,98

(1) net yearly household equivalised income, previous year.

The married are more likely to report high levels of financial satisfaction than the divorced, the widowed or the never married, other things being equal.

In addition, the results indicate a highly positive relation between subjective well-being and self-rated health: being in good health increases the probability of declaring a high subjective economic well-being, other things being equal.

In all the countries considered, income, objectively measured, affects financial satisfaction only marginally, surely less than one might expect *a priori*, although, in most cases, the sense of the relationship goes in the expected direction, with the poor reporting lower levels of satisfaction. The only exception is represented by the interesting case of Denmark. Possible explanation might be that wealthier Danish people must spend more of their time at work, so that have less time to enjoy their riches. It is also possible that wealthy people adapt to their conditions and have rising expectation and desires (Diener and Biswas-Diener 2002).

An important result is that in all of the countries, about half of the total percentage of model variability is due to differences within observations supporting our hypothesis about the presence of heterogeneity among individuals.

Table 2: *Parameter estimates for the random effect ordered probit model. Dependent variable: the level of satisfaction*

	DK	NL	B	F	UK	EI	I	EL	E	P
VARIABLE	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
age	0,0136	0,0329	-0,0094 *	-0,0117	-0,0106	0,0130	0,0260	0,0156	-0,0029 n	0,0129
age2	0,0002	-0,0002	0,0003	0,0003	0,0002	0,0001	-0,0002	-0,0002	0,0002	-0,0001
income (1)	-0,081	0,033	0,001	0,007	0,130 #	0,077	0,000	0,000	0,001 #	0,000
sex (ref.female)										
male	-0,06031	-0,05034	-0,02719 n	-0,03518 *	0,00877 n	-0,09433	0,07591	0,09893	-0,00527 n	0,11891
mar. status (ref.married)										
divorced	-0,52166	-0,85878	-0,69306	-0,50628	-0,66415	-0,71606	-0,37634	-0,35889	-0,46226	-0,30357
widowed	-0,37500	-0,49635	-0,31935	-0,34418	-0,39753	-0,30558	-0,22038	-0,07985	-0,30087	-0,07659
never marr	-0,15496	-0,14995	-0,17049	-0,26599	-0,23266	-0,05293 *	-0,39020	-0,33362	-0,15040	-0,15271
health. status (ref. fair)										
good	0,24406	0,25602	0,27499	0,31717	0,20954	0,36597	0,29821	0,28225	0,25313	0,24337
bad	-0,38396	-0,25262	-0,37993	-0,41937	-0,26626	-0,36881	-0,36528	-0,25405	-0,31347	-0,37378
_cut1	-2,80374	-0,88473	-1,56830	-1,16809	-1,70168	-0,03255 n	-0,30444	-0,44089	-0,19180	-1,24697
_cut2	-2,13118	-0,10102 n	-0,88138	-0,50951	-0,80274	0,69082	0,63913	0,59822	0,62886	-0,09738 n
_cut3	-1,36452	0,77898	0,04663 n	0,55452	0,78238	1,49229	1,66927	1,66656	1,45279	1,31135
_cut4	-0,35017	1,96766	1,15858	1,73850	2,25438	2,44908	2,84139	2,76843	2,31768	2,96561
_cut5	0,96827	3,74555	2,46645	3,80416	-	3,39543	4,09871	3,83745	3,46605	3,77914
rho	0,51123	0,57902	0,57411	0,54217	0,58550	0,49432	0,50793	0,42072	0,40037	0,49834

data source: ECHP

all estimates are significant at 5% level, apart from the ones marked with (*) significant at 1% and with (n) non significant

(1) net yearly household equivalised income, previous year. The coefficient indicates an increase of 10.000€..

4. Conclusions

The results presented here suggest that the income affects financial satisfaction only up to a point: other individual characteristics matter at least as much, and possibly even more. Among these, some can be measured with the *ECHP* database, but others (expectations, social competition, etc.) can only be guessed, or, at best, poorly proxied. The results, however, suggest that further investigation on this topic may be worth conducting, also on other sources of data. As for the *ECHP*, some improvement may derive from the introduction of a component of variability at the household level, in order to keep into account, among other things, the influence of the environment where individuals live.

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