

The Economics of Happiness in Argentina

Martin Tetaz*

ABSTRACT

Since Easterlin famous paper, in 1974, many others tried either to refute its findings or to produce additional explanations. Scholars have found relative income and adaptation effects, threshold effects, age and gender effects, and so on. However few papers analyzed the determinants of happiness, using data from Argentina. In this paper we exploit two different data sets from Argentina. The main findings indicate a raise in happiness in the last 10 years, although with regional differences. Income effects are significant but not always present. The same applies to age effects. Neither gender nor the number of children has any impact on happiness. Those very active at family and social life report higher levels of happiness. Finally couples very active at their relationships are happier, even when they are not as active in their sexual lives.

JEL CODE: D01, D03, D60

* CEDLAS-IIL-UNLP.

1. Introduction

In 1974, analyzing data on happiness for 19 countries, Richard Easterlin found a puzzling result, known since then as “the Easterlin paradox”. In a nutshell, his main finding was that although within a country there was a positive correlation between income and happiness, “the association among countries was uncertain”. Moreover, for the only country he had time series data –United States– “higher income was not systematically accompanied by grater happiness”.

Since then an impressive amount of papers have tried to explain the issue (see Powdthavee (2007); Veenhoven and Hagerty (2006) for reviews). For instance, Clark, Frijters and Shields (2006) argue that if happiness depends on relative income considerations and consumption, the first effect should not show up at aggregate levels and the second is not likely to increase too much in developed countries. In the same direction Graham (2008) states that “humans are on a hedonic treadmill” whereby happiness increases until basic needs are satisfied but then relative more than absolute income matters. The explanation of why this effect takes place may have to do with an adaptation effect (Fray and Stutzer (2002); Di Tella and MacCulloch (2008)).

Stevenson and Wolfers (2008) state that it is a matter of analyzing the issue with appropriate data. Using a broad number of countries and making adjustments so as to make the different surveys comparable, they find income coefficients of 0.3 and 0.36 for within and between country respectively (both statistically significant). They also obtained a positive time series effect for most of the countries with the exception of the United States. Taken all together they conclude that there is room for both, absolute and relative income effects to account for people happiness.

Powdthavee (2010) uses an instrumental variable approach and find that when controlling for endogeneity, not only income coefficients remains statistically significant, but they actually doubles. In their attempts to replicate Easterlin’s findings, scholars have come across other different effects, such as the “age effect” (Blanchflower and Oswald 2004); gender effects (Stevenson and Wolfers 2008); interaction effects between both (Plagnol and Easterlin 2008); and many other socioeconomic effects (see Vennhoven 1994 for a review).

For example, Powdthavee (2012) analyzes the influences of changes on “the Big Five” personality traits coming to the conclusion that they matter even more than socioeconomic factors.

Aknin (et. al. 2012) focuses on the way money is spent rather than the actual levels of income finding that pro social behaviors increases happiness more than money. Finally Kahneman’s last book (2011) suggests that the key to happiness may not be income, but the alternative allocations of personal time.

Interesting as it may be, however, there are few studies on the economics of happiness using data from Argentina. Giarrizzo (2008) in a tailored survey, carried out by *Centro de Economía Regional y Experimental* (CERX) and *Centro de Investigaciones en Epistemología de las Ciencias Económicas* (CIECE) finds that although 84% of the respondents evaluated their economic situation as either “very bad”, “bad” or “regular”, an overwhelming majority (73.5%) considered itself “happy” or “very happy”. However, when they were asked to answer what factors would make them happier 81.5% of the surveyed referred to economic related aspects, such as a higher income or a better job. Cruces, Ham and Tetaz (2008) offer an analysis of quality of life and happiness at a neighbourhood level. Both, quality of the neighbourhood and income had a positive impact on happiness. They also found a positive correlation of some interesting variables, such as the home quality, the satisfaction with friend, mental health and emotional life. In addition, males were happier on average than women. Neither the number of children nor the age had a statistically significant effect.

In this paper we attempt to analyze the micro determinants of happiness using two different data sets from Argentina. The well known World Value Survey, covering five waves and two waves of the 2011 Gallup – Universidad de Palermo survey.

Whereas the first data set allows us to study the relation between many socioeconomic outcomes and happiness, the latter survey provides additional information on the perceived determinants of subjective well being and it’s relation to people’s use of time.

The rest of the paper is organized in the following way. Section 2 presents some stylized facts. Section 3 discusses the econometric strategy. In the next part of the paper we show the econometric results of the World Value Survey data base. Section 5 explores the relation between happiness and the satisfaction with the financial situation of the households. Section 6 presents the findings of the Gallup-Universidad de Palermo surveys. Section 7 concludes with some discussions and comments.

2. Stylized facts

To begin with, we would like to make a distinction between the two different questions both, the World Value Survey and the Gallup – Universidad de Palermo survey ask in order to elucidate respondents well being. The first question commonly referred to as “Life satisfaction” is: “In general, taking all in, how satisfied are you with your life in a 10 point scale, where 1 is dissatisfied and 10 is satisfied?”; The second question digs straight forward into happiness asking: “In general, taking all in, would you say that you are Very Happy; Quite Happy; Not Very Happy, or Not At All Happy?”.

Tables number 1, 2 and 3 show the relation between both questions, first in the five waves of the World Value Survey, and then in the two waves of the Gallup-Universidad de Palermo survey. Life satisfaction is in all cases the dependent variable.

Table 1 | The relation between Happiness and Life Satisfaction (OLS estimation)

	Year 1984	Year 1991	Year 1995	Year 1999	Year 2006
very happy	1,422	0,730	1,272	0,677	0,981
<i>t statistic</i>	9,330	5,800	9,520	5,660	9,040
not very happy	-2,020	-1,186	-1,791	-1,893	-2,308
<i>t statistic</i>	-13,070	-6,760	-8,420	-9,310	-9,650
not happy al all	-4,068	-3,036	-4,152	-3,434	-3,787
<i>t statistic</i>	-6,090	-6,740	-8,860	-7,050	-6,310
_cons	6,982	7,341	6,926	7,477	7,745
<i>t statistic</i>	96,840	91,000	79,240	97,120	104,910
R2	0,290	0,180	0,250	0,180	0,280

Source; own calculations based on World Value Survey (All coefficients significant at 1%)

Table 2 | The relation between Happiness and Life Satisfaction (OLS estimation)

	Coefficients	<i>t statistic</i>
very happy	0,916	10,300
not very happy	-2,333	-13,780
not happy al all	-4,485	-6,140
_cons	8,016	151,660
R2	0,430	

Source; own calculations based on Gallup-Universidad de Palermo
(All coefficients significant at 1%)

Table 3 | The relation between Happiness and Life Satisfaction (OLS estimation)

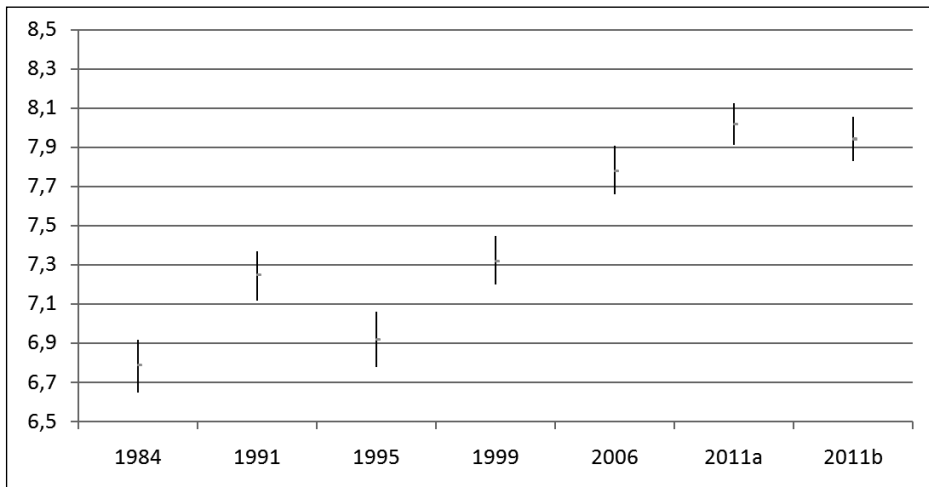
	Coefficients	<i>t statistic</i>
very happy	1,118	12,750
not very happy	-2,026	-10,340
not happy al all	-4,408	-7,430
_cons	7,911	160,900
R2	0,4	

Source; Own calculations based on Gallup-Universidad de Palermo
(All coefficients significant at 1%)

Since happiness variables are dichotomic, the “Quite happy” answer is always the omitted response, so the coefficients can be interpreted as the change in life satisfaction when the subject state changes from “Quite happy” to the other responses (i.e. very happy, not very happy, not happy at all). All the regression show positive and statistically significant coefficients ranging from 0,677 to 1,422 for “very happy”, and negative (and significant) ones for “not very happy” and “not happy at all”. The goodness of fit of all models (R^2) goes from 0,18 in the 1999 World Value Survey, to 0,43 in the first wave of the 2011 Gallup survey.

Due to the strong correlation with Happiness, and the ease of interpretation, we will focus now on the Life satisfaction question, to see whether it has changed over time. To start analyzing the evolution of Life Satisfaction, graph number 1 plot the average response to the question “In general, taking all in, how satisfied are you with your life in a 10 point scale, where 1 is dissatisfied and 10 is satisfied?” in all the surveys. It also display the 95% confidence intervals, so the reader can easily tell when there is a significant difference between two averages values (not intervals overlapping) and otherwise.

Graph 1 | “Taking all in how satisfied are you with your life”

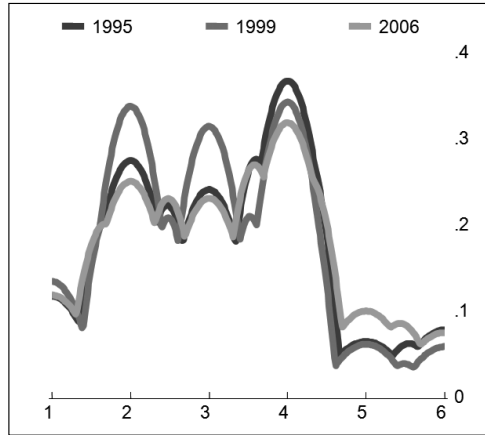


Source: Own calculations based on World Value Survey and Gallup- Universidad de Palermo (bars represent 95% confidence intervals)

At first sight there seems to be no statistically significant difference in happiness (life satisfaction) between 1984 and 1995, neither is any noticeable discrepancy between 1991 and 1999. The contrast between 2006 and 2011 depends on the 2011 wave taken into consideration. On the other hand, there is indeed an upward trend from 1995 to 2001.

A closer look at the five World Value Survey waves, however, suggest differences in sampling strategies among them, rendering problematic the simple average comparisons. To give the reader an idea of the differences, we show the kernel distribution of education in three particular waves, as graph number two shows:

Graph 2 | Kernel distribution of education in three different waves



Source; Own calculations based on World Value Survey

Graph number 2 shows that, for example, the 2006 survey was administered to a more educated sample. Furthermore, the heterogeneous sampling strategies over time can be further confirmed checking out the kind of workers surveyed in the five waves. Table 4 highlights the differences.

Table 4 | Composition of worker’s skills in the different samples

	Year 1984	Year 1991	Year 1995	Year 1999	Year 2006
“employer/manager of establishment”	4%	9%	16%	10%	3%
“professional worker”	14%	9%	13%	1%	7%
“middle level non-manual office worker”	0%	12%	0%	0%	0%
“supervisory non manual -office worker”	33%	0%	2%	2%	4%
“junior level non manual”	0%	10%	0%	0%	0%
“non manual -office worker”	15%	0%	33%	25%	18%
“foreman and supervisor”	5%	6%	4%	1%	1%
“skilled manual”	15%	15%	9%	20%	19%
“semi-skilled manual worker”	12%	6%	4%	0%	8%
“unskilled manual”	1%	8%	13%	16%	19%
“farmer: has own farm”	0%	0%	0%	0%	1%
“agricultural worker”	0%	0%	0%	0%	1%
“member of armed forces”	0%	1%	1%	0%	1%
“never had a job”	0%	23%	2%	25%	16%

Source; Own calculations based on World Value Survey

Therefore, in order to get a more appropriate picture of what actually happened from 1984 to 2011, we split the data according to three different Argentinean regions; namely Buenos Aires City, Great Buenos Aires and the Rest of the Country, and use the sampling weights within each region to account for socioeconomic differences. Table number 4 shows the average changes in life satisfaction in 1991, 1995 and 2006 in comparison with 1984, by regions within the country.

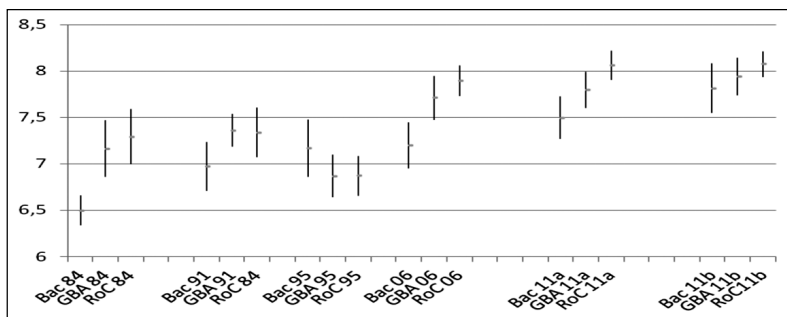
Table 5 | The evolution of Life satisfaction over time, across different Argentinean regions (OLS estimation)

	Buenos Aires city	Buenos Aires surroundings (GBA)	Rest of the country
Education	0,02	0,04	0,17
(t value)	0,37	0,72	2,82**
Year 1991	0,47	-0,11	0,28
(t value)	2,61**	-0,38	1,13
Year 1995	0,65	-0,61	-0,26
(t value)	3,53**	-1,94*	-1,33
Year 2006	0,67	0,26	0,76
(t value)	3,39**	0,83	3,97**
Constant	6,41	7,34	6,73
(t value)	38,19**	23,08**	33,43**
R2	0.019	0.023	0.045

Source; Own calculations based on World Value Survey
 (* significant at 5%; ** significant at 1%)

The evolution of Life satisfaction over time can be confirmed with a simple glimpse at graph number 3.

Graph 3 | “Taking all in how satisfied are you with your life”, by region



Source; Own calculations based on World Value Survey and Gallup- Universidad de Palermo (bars represent 95% confidence intervals)

In graph 3, regional averages are grouped by year of survey. The first 95% confidence interval bar within each year represents always Buenos Aires City, while the second belongs to Grate Buenos Aires. The last is the Rest of the country interval. Again overlapping between two different surveys confidence intervals, for the same region, means the absence of statistically significant differences, whereas the opposite indicates otherwise.

Clearly, Buenos Aires City's life satisfaction jumped from 1984 to 1991, remains steady to 2006 and depending on the 2011 wave analyzed, either rose again or stayed about the same. On the other hand, life satisfaction in the surroundings of Buenos Aires City (GBA) did not improved in 1991 (from 1984) and actually fell in 1995, recovered in 2006 and stayed basically the same since then. Finally, average answers in the Rest of the Country showed a similar path to that described for Grate Buenos Aires (GBA), although with a higher life satisfaction since 2006.

Those life satisfaction patterns are consistent with the structural changes in the Argentinean economy during this period of time. The over valuation of the local currency during the 90's inflicted a huge damage on the industrial sector of the country, basically located at the Great Buenos Aires. This sector strongly recovered thanks to the devaluation in 2002. The Rest of the country, in turn, took advantage of the beneficial terms of trade of the last 7 years, because the countryside specializes in agricultural production.

3. Determinants of Happiness, the econometric approach

Strictly speaking, the former question produces an ordinal variable therefore we should estimate our model running an Ordered Probit model that assumes the underlying relation

$$Y_i^* = \alpha + \sum_j \beta_j X_j + \mu_i \quad 1)$$

Where “ Y_i^* ” is the unobserved life satisfaction of subject “ i ”; α stands for a constat, the β_j 's are parameters, and “ X_{ji} ” is a vector of “ j ” personal characteristics of subject “ i ”. As usual “ μ_i ” refers to the white noise error term. Because we can only observe ten possible discrete realizations of “ Y_i ” the Ordered Probit model estimates by maximum likelihood the coefficients that maximize the joint probability of the actual observed values of “ Y_i ”, conditional on the observed “ X_j ” vector of “ j ” personal characteristics. Since the interpretation of the resulting coefficients is not straight forward (i.e. they are not marginal effects), it may be useful to run a simple ordinary last square regression (OLS) alongside, and use those coefficients as an approximation of the marginal effects (simulations can be conducted, should an interest on the exact magnitude of a particular effect arises).

On the other hand, the latter question presents a harder problem because answers provide categorical data. Normally we start by stating the probability of a particular

realization of the categorical variable, conditional on the “ X_{ji} ” observed vector of “ j ” personal characteristics of subject “ i ”, as a linear function of some sort.

$$P_i = E(Y_i = 1 / X_j) = \beta_1 + \sum_{j=1}^m \beta_j X_j \quad (2)$$

Then we do the same for the other possible particular realizations of Y_i and estimate (again by maximum likelihood) the β coefficients so as to maximise the probability of a particular realization of that dependent variable against a rival realization, called the “base outcome”. The resulting Multinomial Logistic model produces therefore, coefficients that can be interpreted as the change in the relative (to the base outcome) likelihood function, due to the change in the independent variable of interest. Coefficients of one particular category can also be compared relative to other categories.

4. The results: World Value Survey data

Under Easterlin’s Hypothesis there should not be any effect of income on neither life satisfaction nor happiness, over time. Effects of income on happiness may yet be present at particular moment; after all, Easterlin indeed found cross section effects within the United States and systematically richer people reported higher levels of happiness (perhaps due to relative income effects). Regretfully, our data bases do not include always an income variable; however the World Value Survey five waves do indeed have the same question regarding the satisfaction on household financial situation, providing a proxy for income. In table 5, we show the evolution of the answers to the question “How satisfied are you with the financial situation of your household?” Presumptively such satisfaction depends on the income, among other things, but since we don’t have income variables, controlling for the level of education and gender, we obtain a pseudo Mincer approximation.

Table 6 | The evolution of the satisfaction of household’s financial situation over time, across different Argentinean regions (OLS estimation)

	All country	Buenos Aires city	Great Buenos Aires	Rest of the country
Education	0,288**	0,233**	0,309**	0,367**
Gender (male)	-0,135*	-0,034	-0,027	-0,245
year1991	-0,149	0,251	-0,827**	-0,438
year1995	-0,461**	-0,006	-0,897**	-1,183**
year1999	0,136			
year2006	1,045**	1,084**	0,436	0,661**
_cons	4,932**	4,632**	5,258**	5,465**

Source; Own calculations based on World Value Survey
(* significant at 5%; ** significant at 1%)

Definitely the satisfaction on household's financial situation varies heterogeneously over time, depending on the geographical region. In Buenos Aires City, there seems not to be any improvement in the '90 (the 1984 satisfaction is the comparison point), but there is indeed a significant rise in the last wave (2006). In contrast, its surrounding area, The Great Buenos Aires, depicts a worsening in financial satisfaction in 1991, lasting until 1995. In the last wave the dependent variable rose, but never fully recovered the levels of the 1994 wave. The Rest of the country got even much worse in 1995, however not only recovered completely the 1984 level of satisfaction in 2006 but surpassed it, perhaps coupling the effect of the devaluation of the exchange rate plus the improvement of the international terms of trade that favoured mostly the countryside. This is consistent with the over valuation of the exchange rate during the last decade of the previous century, because it caused a huge level of industrial unemployment everywhere outside Buenos Aires (the capital city economy concentrates on services that actually benefited from the low value of foreign currencies).

Accordingly, had Easterlin been wrong, we should expect a similar patter regarding life satisfaction. Table 6 presents the evolution of happiness across the five waves of the World Value Survey.

Table 7 | The evolution of Happiness over time, across different Argentinean regions (Multinomial Logit estimation)

	Buenos Aires city		Buenos Aires surroundings (GBA)		Rest of the country	
	Coef	z	Coef	z	Coef	z
very happy						
education	0,02	0,17	-0,05	-0,7	0,03	0,43
year1991	0,76**	3,52	1,62**	3,78	0,78	2,87
year1995	0,13	0,55	1,23**	2,9	0,62	2,82
year2006	0,55*	2,31	1,22**	2,84	0,52	2,46
_cons	-1,23	-5,67	-1,67	-3,87	-1,06	-4,74
not very happy						
education	-0,24*	-2,51	-0,2	-2,2	-0,26**	-2,81
year1991	0,02	0,08	0,96*	2,43	0,24	0,74
year1995	-0,24	-0,98	0,25	0,63	0,18	0,73
year2006	0,2	0,8	0,3	0,74	-0,71**	-2,64
_cons	-0,49	-2,44	-1,15	-2,84	-0,73	-2,82
not at all happy						
education	-0,37	-1,61	-0,46*	-2,37	-0,2	-0,74
year1991	2,11**	3,8	1,34	1,27	1,09	1,45
year1995	0,66	0,88	1,1	1,05	-0,03	-0,03
year2006	1,86**	2,85	0,91	0,84	-0,84	-1,02
_cons	-3,39	-5,74	-2,91	-2,75	-3,21	-4,23
(happiness==quite happy is the base outcome)						

Source; Own calculations based on World Value Survey
 (* significant at 5%; ** significant at 1%)

The first column of the previous table indicates a widening of happiness variance in Buenos Aires both in 1991 and 2006. More people feel “very happy” rather than just “quite happy” in the first wave of the 90’s, but the number of those reporting to be “not at all happy” rose as well, being the coefficients of the latter category more than threefold the size of those belonging to the former. On the other hand, in Buenos Aires surroundings, happiness increased unambiguously in 1995 and stayed stable until 2006. Last but not least important, fewer people claimed to be “not very happy” in the sample of the 2006 wave, living in the “rest of the country”. From table 4 we also know that life satisfaction improved in Buenos Aires City during the 90’s, but stayed roughly the same in 2006, whereas the satisfaction to the financial situation of the household had not shown any increase neither in 1991 nor in 1995, but a huge rise in 2006.

As to Great Buenos Aires samples, table 4 indicated a worsening since 1995, with no reversal in 2006, but from table 5 is clear that financial satisfaction in those households had dramatically fell earlier, in 1991.

Finally, when it comes to the Rest of the Country data, life satisfaction improved in 2006, following the recovery of the financial satisfaction of this year. Nonetheless, the former did not show any worsening during the '90 even when the latter clearly fell in 1995, according to table 5.

Taking all in, Easterlin appears to be vindicated; therefore we devote the rest of the paper to study the (other) determinants of life satisfaction. The next table presents the estimations of five different ordinary least squares regressions; one for each wave of the World Value Survey.

Table 8 | Determinants of Life satisfaction over time (OLS estimation)

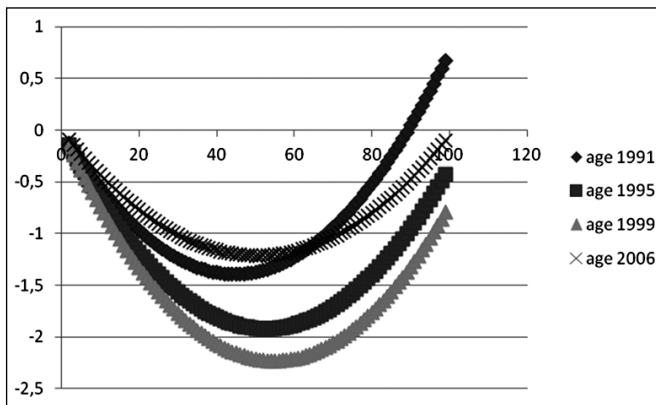
	Year 1984		Year 1991		Year 1995		Year 1999		Year 2006	
	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>
age			-0,06	-2,02	-0,07	-2,32	-0,08	-3,47	-0,05	-1,88
age (square)			0,00	2,17	0,00	2,15	0,00	3,00	0,00	1,75
Buenos Aires City	-0,58	-2,66	-0,45	-1,77	0,22	1,02			-0,71	-4,53
Great Buenos Aires	0,39	1,34	0,00	-0,01	-0,08	-0,47			-0,09	-0,61
Gender (male)	0,02	0,12	0,26	1,53	-0,04	-0,23	0,05	0,35	0,16	1,25
Class A and B			-0,08	-0,26						
Class C2			-0,13	-0,65						
Class D			-0,96	-3,39						
Income Decil					0,07	2,15				
Income level							0,00	0,74		
Education level	0,16	1,49	-0,10	-0,93						
Primary educ incompleted					-0,17	-0,48	-0,10	-0,38	-0,06	-0,20
Primary educ completed					0,55	2,30	-0,16	-0,88	-0,39	-2,03
Secondary educ incompleted					0,20	0,93	0,04	0,25	-0,12	-0,71
Superior educ incompleted					0,21	0,70	0,10	0,38	-0,03	-0,17
Superior educ completed					0,33	1,08	0,41	1,90	0,02	0,08
Single	-0,13	-0,39	-0,33	-1,01	-0,93	-2,97	-0,47	-2,00	-0,35	-1,38
Live together	0,96	2,39	-0,42	-1,01	-0,95	-2,84	-0,13	-0,53	-0,15	-0,77
Separated	-1,53	-3,02	-0,63	-1,59	-1,04	-2,17	-1,09	-3,64	-0,75	-2,27
Divorced	1,00	1,89	-0,10	-0,14	0,21	0,42	-0,31	-0,65	-0,68	-2,07
Widowed	-0,20	-0,75	-0,75	-2,00	-0,46	-1,36	-0,54	-1,67	-0,40	-1,21
One child	0,27	0,79	-0,07	-0,22	0,18	0,63	0,08	0,36	-0,47	-2,09
Two children	0,19	0,64	0,25	0,79	-0,20	-0,68	0,36	1,54	0,04	0,19
Three children	0,25	0,77	-0,32	-0,93	-0,30	-0,99	0,06	0,24	0,12	0,52
Four children	-0,16	-0,31	0,19	0,47	0,06	0,14	0,51	1,81	-0,41	-1,20
Five or more children	-0,28	-0,40	0,04	0,05	0,10	0,16	0,50	1,18	0,13	0,28
_cons	6,68	13,63	8,69	10,22	8,59	10,59	9,16	15,69	9,10	13,83
R2	0,05		0,05		0,05		0,04		0,05	

Source; Own calculations based on World Value Survey
(Shaded coefficients significant at 5%)

For 1984, we do not have respondents age, neither we have any variable to account for income, conforming ourselves with just an imputed value of education¹. To begin with the statistically significant results, people living in Buenos Aires City felt less satisfied with life than those in the Rest o the Country (the omitted dummy variable). Those living together reported higher levels of satisfaction compared with married ones. Interestingly the same can be said for divorced subjects. In contrast there seems to be a sadness effect for separated people. Finally, children do not make any difference.

In 1991 we have respondents age and social class, both playing a significant role. As mentioned earlier, the “U” shape effect of age on life satisfaction is a commonly result in the literature, and not only we find the same result here, but the impact is basically the same across all remaining survey waves, as shown in the graph 4, indicating that age has a negative impact on life satisfaction until somewhere between 45 and 55 years of age (depending on the wave analyzed).

Graph 4 | The relation between life satisfaction and age



Source; Own calculations based on World Value Survey

Regarding geographical effects, people in Buenos Aires City remain less satisfied than the Rest of the Country, although the coefficient is just significant at 10% level. As to social class, those belonging to the lower step (Class D) claimed not to be as happy as those in Class C1 (the omitted dummy variable for medium class). Contrary to 1984 wave results, widowed were significantly less happy than married, being 1991 the only wave in which this result arises.

1. In 1984 survey the only variable with information about education is a question asking respondents the year they left education. Fortunately that variable correlates highly with level of education in the other waves, allowing us to estimate education level based on that.

For the 1995 wave, the World Value Survey provides information on income deciles and the positive and statistically significant coefficient indicates a positive (though small) relation with life satisfaction. In contrast to the previous waves, there is no evidence of geographical effects.

The wave also has information on education level. Strange as it may be, those with just primary education completed reported higher life satisfaction than those with secondary completed (the omitted dummy variable). Marital effects return although this time single, separated and those living together were less satisfied than the happily married.

When it comes to the 1999 survey, the wave does not have geographic information so we cannot see whether Buenos Aires City inhabitants remain pessimistic about their lives. On the other hand, there is now data on incomes allowing us to analyze the impact of money on happiness. Not surprisingly, the coefficient is positive but not significant at all. However, people having completed superior education indeed claim to feel more satisfied with their lives, compared with those with secondary education (the omitted dummy variable). In accordance with the precedent wave, both single and separated subjects felt less satisfied than married (the omitted dummy variable).

Finally, the last wave presents again a negative Buenos Aires City effect and a negative impact on life satisfaction for those with just complete primary education (relative to those with secondary). Separated and divorced are less happy than married, and we find a noteworthy child negative effect.

Summing up, age “U” shape effects are always present, Buenos Aires citizens feel less happy, money plays a modest role, education effects are neither consistent nor stable, and separated people are always worse. Last but not least, since table 7 estimations come from an OLS regression, coefficients are actually marginal effects measuring the change in the dependent variable (life satisfaction) due to the one unit modification of any particular independent variable.

5. Satisfaction on the financial situation of the households and endogeneity Issues

It is important to notice that in order to analyze to what extent money can buy happiness, we can further exploit the World Value Survey data base, taking advantage of the already mentioned question that measures the satisfaction on the financial situation of the household. A potential concern may be that since this information also comes from a subjective evaluation, it may be endogenous on life satisfaction. To properly address this issue, in table 8 we show the results of a three stages simultaneous estimation of “Life satisfaction” and “Financial satisfaction”.

Table 9 | Determinants of Life satisfaction over time (simultaneous equations, 3 stages OLS estimation)

	Year 1984		Year 1991		Year 1995		Year 1999		Year 2006	
Life satisfaction	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>
Satisfaction financial situation	0,29	1,83	0,62	2,99	0,38	2,17	0,37	2,47	0,44	1,62
Buenos Aires City	-0,45	-2,36	-0,37	-1,78	0,11	0,77			-0,39	-2,38
Great Buenos Aires	0,2	0,82	0	0,02	0,02	0,23			-0,06	-0,74
age			0	-0,08	-0,02	-0,73	-0,04	-1,41	-0,03	-1,42
age (square)			0	0,27	0	0,74	0	1,18	0	1,4
Gender (male)	-0,03	-0,28	0,2	1,38	-0,08	-0,76	-0,01	-0,06	0,1	1,28
Single	-0,07	-0,34	-0,19	-0,69	-0,46	-1,99	-0,4	-2,12	-0,23	-1,4
Live together	0,52	1,09	-0,28	-0,7	-0,52	-1,96	-0,15	-0,96	-0,16	-0,95
Separated	-1,15	-2,44	-0,42	-1,25	-0,86	-2,1	-0,75	-2,7	-0,61	-1,58
Divorced	0,53	0,87	0,02	0,02	0,24	0,71	-0,38	-1,19	-0,37	-1,65
Widowed	0,03	0,16	-0,6	-2	-0,3	-1,42	-0,36	-1,81	-0,25	-1,45
One child	0,17	0,6	0,06	0,17	0,27	1,09	0,1	0,52	-0,25	-1,19
Two children	0,13	0,55	0,29	0,96	-0,14	-0,6	0,31	1,72	-0,02	-0,1
Three children	0,21	0,78	0,06	0,17	-0,22	-0,87	-0,05	-0,23	0,28	1,29
Four children	-0,24	-0,59	0,21	0,5	0,3	0,95	0,34	1,43	-0,19	-0,71
Five or more children	-0,21	-0,37	-0,18	-0,29	0,48	1,11	0,48	1,42	0,35	0,94
Constant	5,44	5,41	3,78	2,31	5,83	4,08	6,3	4,44	5,67	2,67
Satisfaction financial situation	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>	<i>Coef</i>	<i>t stat</i>
Life satisfaction	0,91	4,38	0,31	1,07	0,94	4,05	0,87	3,68	0,82	3,5
age			-0,07	-1,86	-0,05	-1,43	-0,05	-1,72	0	0,09
age (square)			0	1,8	0	1,37	0	1,86	0	-0,04
Class A and B			0,16	0,52						
Class C2			-0,34	-1,85						
Class D			-1,08	-2,88						
Income Decil					0,08	2,3				
Income level							0	2,14		
Education level	0,41	3,46	-0,02	-0,21						
Secondary educ uncompleted					0,07	0,39	0,3	2,04	0,3	1,78
Secondary educ completed					0,08	0,44	0,28	2,01	0,34	1,95
Superior educ uncompleted					0,37	1,33	0,44	1,7	0,39	1,74
Superior educ completed					0,46	1,77	0,93	2,92	0,45	1,78
One child	0,09	0,34	-0,12	-0,42	-0,25	-0,82	-0,24	-1,06	-0,05	-0,21
Two children	0,03	0,12	-0,06	-0,19	0,19	0,75	-0,33	-1,43	0,11	0,55
Three children	-0,07	-0,25	-0,44	-1,49	0,17	0,62	0,09	0,42	-0,42	-1,72
Four children	0,31	0,69	0,04	0,09	-0,42	-1,1	-0,11	-0,34	-0,1	-0,33
Five or more children	-0,01	-0,01	0,42	0,67	-0,4	-0,73	-0,73	-1,82	-0,61	-1,45
Constant	-1,6	-1,22	4,78	1,88	-1,01	-0,55	-0,2	-0,1	-0,1	-0,05

Source; Own calculations based on World Value Survey
(Shaded coefficients significant at 5%)

The results on the upper panel suggest a positive and (almost always) highly significant effect of financial satisfaction on life satisfaction. This result may appear to conflict with the earlier confirmation regarding the Easterlin effect. Nevertheless it is noteworthy to say that within a society at any particular time there may exist indeed an effect whereby the richer feels happier even when across different countries or societies that effect is absent, as shown by Esterlin. The same happens when we observe the same country over time. Perhaps the explanation has to do with the relevance of relative income for happiness, over and above absolute income or wealth. Notwithstanding, however, the coefficients are all below one, implying that the effect is less than proportional. As to age, it impacts the estimations on the lower panel, perhaps indicating that older people feel worse through a financial satisfaction channel. To complete, the other coefficients do not differ too much from those of table 7.

In the next section we study other variables available in the last two 2011 surveys, run by Gallup and Universidad de Palermo.

6. The Gallup – Universidad de Palermo survey

To begin with, we estimate Life satisfaction first by Ordinary Least Squares (columns 1 and 2) and then by Ordered Probit (columns 3 and 4). The next table depicts the results from the first wave of the 2011 survey.

Table 10 | Determinants of Life satisfaction

	OLS estimation		Ordered Probit estimation	
	<i>Coefficients</i>	<i>t statistics</i>	<i>Coefficients</i>	<i>Z statistics</i>
Age	-0,044*	-2,130	-0,029*	-2,130
Age (square)	0,000	1,730	0,000	1,740
Gender (male)	-0,114	-1,010	-0,107	-1,460
Class ABC1	0,515*	2,270	0,351	1,830
Class D1	-0,043	-0,330	-0,009	-0,110
Class D2E	-0,449**	-2,660	-0,255**	-2,490
Single	-0,460*	-2,050	-0,295*	-2,140
Live together	0,252	1,690	0,148	1,420
Separated / divorced	-0,293	-1,200	-0,165	-1,080
Widowed	-0,803**	-2,800	-0,454**	-2,740
Children	-0,078	-0,410	-0,037	-0,310
Buenos Aires city	-0,662**	-4,750	-0,480**	-5,460
Great Buenos Aires	-0,246*	-2,060	-0,216**	-2,850
_cons	9,546**	20,000		
R2	0,08		0,02	

Source; Own calculations based on Gallup-Universidad de Palermo
(* significant at 5%; ** significant at 1%)

It is clear from columns 1 to 4 that age effects remain stable under any estimation strategy, confirming the accordance with the international usually found results. Older subjects are less satisfied although the effect diminishes as people ages. The extremes of the social classification present a logical pattern whereby high class individuals (ABC1) feel happier and conversely low class respondents (D2E) are less satisfied with their lives.

Single and widowed interviewed, report lower levels of life satisfaction (relative to married). People living in Great Buenos Aires are less satisfied than those in the Rest of the Country (the omitted dummy variable), but inhabitants of Buenos Aires City are much less satisfied.

Even when we showed above the fact that life satisfaction and happiness highly correlate, it may be interesting to explore the effect of some of the previous variables in a qualitative framework. The following table shows a multinomial logit regression.

Table 11 | Determinants of Happiness (Multinomial Logit estimation)

	Not at all happy		Not very happy		Very Happy	
	<i>Coef</i>	<i>Z stat</i>	<i>Coef</i>	<i>Z stat</i>	<i>Coef</i>	<i>Z stat</i>
age	0,006	0,05	0,067*	1,81	-0,089**	-2,93
age (square)	0	0,34	0	-1,4	0,001**	2,68
Gender (male)	0,044	0,06	0,04	0,19	-0,213	-1,29
Class ABC1	0,661	0,5	-1,249*	-2,16	0,109	0,23
Class D1	0,502	0,44	0,711**	2,8	0,281	1,54
Class D2E	1,716*	1,89	0,768**	2,63	-0,15	-0,67
Single	1,339	1,45	0,62	1,48	-0,488	-1,65
Live together	-12,783**	-15,71	-0,241	-0,66	-0,176	-0,77
Separated / divorced	0,708	0,63	0,034	0,08	0,144	0,47
Widowed	-0,929	-0,88	0,873*	2,37	-1,027**	-2,52
Children	0,597	0,48	-0,189	-0,53	0,106	0,42
Buenos Aires city	-13,389**	-33,05	0,528*	2,04	-0,832**	-3,49
Great Buenos Aires	-0,302	-0,42	0,074	0,31	-0,167	-0,99
_cons	-6,319**	-2,71	-3,861**	-3,87	1,771**	2,53

Source; Own calculations based on Gallup-Universidad de Palermo (* significant at 5%; ** significant at 1%) “Quite Happy” is the comparison group

The table should be read considering that coefficients in column one, for example, indicate to what extent a particular independent variable affects the chance of belonging to that column category, in opposition to the omitted category (being quite happy). Having said that, let's have a look at the coefficients. Age effects show the same previously found pattern, though age is not responsible for people feeling not at all happy. Social class has an impact in the expected way. It is less likely to be "not very happy" if someone belongs to the high class (ABC1), on the other hand, should a subject comes from a low class family it is more likely that she feels either "not very happy" or "not at all happy". What the social class effect is saying, is that a good position is useful to avoid sadness, rather than to assure happiness.

Interestingly, living together (relative to the omitted married category) represents almost a full guarantee against feeling "not at all happy", while being widowed excludes anyone from the "very happy" group.

When it comes to geographical effects, it is noteworthy that it is less likely to be very happy in someone lives in Buenos Aires City but the citizenship fully protects people from falling in the "not at all happy" group.

In order to confirm our findings for the 2011 sample, we now turn to the second wave of the Gallup Universidad de Palermo survey. The strategy is the same, table eleven shows the determinants of life satisfaction, and the following table presents the multinomial happiness study.

Table 12 | Determinants of Life satisfaction

	OLS estimation		Ordered Probit estimation	
	<i>coef</i>	<i>t stats</i>	<i>coef</i>	<i>t stats</i>
Age	-0,031	-1,74	-0,023	-1,81
Age (square)	0	1,64	0	1,75
Gender (male)	-0,131	-1,21	-0,129	-1,69
Class ABC1	-0,043	-0,19	-0,05	-0,33
Class D1	-0,023	-0,21	0,013	0,17
Class D2E	-0,129	-0,84	-0,068	-0,64
Active in family life	0,775**	3,58	0,528**	4,11
Active in labour	-0,084	-0,64	-0,069	-0,76
Active religeously	0,138	1,15	0,107	1,25
Active voluntariate	-0,257	-1,76	-0,165	-1,61
Active in sports	0,012	0,11	0,014	0,18
Active socially	0,426**	2,41	0,227*	1,98
Active in studying	0,111	1,05	0,077	1
Active going out	0,311**	2,67	0,197*	2,38
Active politically	-0,242	-1,31	-0,171	-1,43
Active in couple life but seldom sex	0,442**	2,7	0,298**	2,65
Active in sex life but not at couple	0,288	1,23	0,216	1,25
Active in both couple and sex lives	0,555**	3,97	0,391**	3,99
Buenos Aires city	-0,2	-1,31	-0,115	-1,13
Great Buenos Aires	-0,1	-0,84	-0,09	-1,07
_cons	7,231	15,54		
R2	0,12		0,04	

Source; Own calculations based on Gallup-Universidad de Palermo
 (* significant at 5%; ** significant at 1%)

We find again, the same previous age effect, although this time is less statistically significant (just at 10%). Contrary to the first wave, there is no statistically significant social class effect, and neither have we found geographical regions effects.

On the other hand, this particular survey asked people how active they were in several domains, providing us with very rich information. For simplification we grouped responses in a dichotomy variable whereby those either “very active” or “quite active” were considered “Active”. The results are very interesting, indicating that those active in their family life, socially active and accustomed to going out frequently, felt more satisfied with their lives.

Moreover, we split dating and sexual activity levels in four different groups; those active sexually but not very active in other aspects of their romantic relationships, those active in their couple lives, but not very active sexually, a third class containing people active both in their relationships and sexually, and a fourth group of those neither active sexually nor in any other aspect of a romantic relationships (this particular group was the omitted variable, so results should be interpreted as relative to be in this class of people). As expected, best case scenario was being active in dating someone and having sex frequently (0,55 more satisfied with their lives), followed by just dating someone actively, though without a very active sexual life (0,44 additional points in life satisfaction). Perhaps surprisingly, people very active in their sexual lives, but not active romantically, did not report higher levels of life satisfaction than those neither dating nor having sex.

Finally, in the same spirit we did it above, we now turn to a multinomial analysis of happiness. Please bear in mind that coefficients in column one of the next table, for example, indicate to what extent a particular independent variable affects the chance of belonging to that column category, in opposition to the omitted category (being quite happy).

Table 13 | Determinants of Happiness (Multinomial Logit estimation)

	Not at all happy		Not very happy		Very Happy	
	Coef	Z stat	Coef	Z stat	Coef	Z stat
Age	0,375	1,81	0,100*	2,14	-0,033	-1,18
Age (square)	-0,004	-1,8	-0,001*	-2,18	0	0,8
Gender (male)	-4,151**	-3,23	-0,105	-0,38	-0,147	-0,86
Class ABC1	-17,878**	-8,87	-2,444*	-2,28	-0,095	-0,24
Class D1	2,222*	2,26	0,484	1,57	0,215	1,18
Class D2E	1,686	1,57	1,089**	3,07	0,496*	2,12
Active in family life	2,632*	2,35	1,008**	2,92	0,564**	2,6
Active in labour	0,094	0,1	-0,02	-0,06	-0,358	-1,9
Active religeously	-3,425**	-3,46	-0,239	-0,72	1,778**	3,96
Active voluntariate	1,244	1,27	-0,950**	-3,01	-0,506**	-2,58
Active in sports	1,79	1,49	0,062	0,21	0,08	0,43
Active socially	0,369	0,38	0,366	0,94	-0,062	-0,28
Active in studying	-12,617**	-9,72	0,121	0,37	0,149	0,84
Active going out	-0,906	-1,41	-0,951**	-3,23	0,248	0,92
Active politically	-1,153	-1,33	0,469	1,52	0,468**	2,64
Active in couple life but seldom sex	-3,498	-1,65	-0,694*	-2,24	-0,187	-1,01
Active in sex life but not at couple	3,396**	2,62	-0,174	-0,33	-0,426	-1,52
Active in both couple and sex lives	-2,25	-1,6	-0,17	-0,46	0,498	1,91
Buenos Aires city	1,655	0,79	0,557	1,23	0,756	1,84
Great Buenos Aires	-1,93	-1,28	-0,477	-1,32	0,747**	3,17
_cons	-11,287**	-2,21	-2,701*	-2,41	-2,066**	-2,87

Source; Own calculations based on Gallup-Universidad de Palermo

(* significant at 5%; ** significant at 1%)

Over and over again, older people are significantly (though just at 5% and 10% levels) less happy. Gender plays a role for the first time. The negative coefficient in column one says that males are less likely to belong to the “not at all happy” group. High class subject’s probability of being “quite happy” is significantly higher than the likelihood of belonging to the “not very happy” and “not at all happy” categories. Medium low class coefficient is positive in the “not at all happy” column suggesting this class is overrepresented in the low happiness group. An interesting result arises in low class individuals. There is a lower likelihood of belonging to the “quite happy” category, relative to feeling either worse (not very happy) or better (very happy), though the former state is twice likely than the latter.

The same puzzling result is found when it comes to people active in their family life. Moreover, active people overpopulate the “not at all happy” group more than other categories. In addition we find a noteworthy religious effect. Those active in their religious lives escape the “not at all happy” group and overcrowd the “very happy” category.

Studying seems to be another vaccine against extreme sadness. People active in their romantic relationships but not as active in their sexual lives, belong mostly to the “quite happy” class, whereas those with the opposite pattern seems to be condemned to sadness. Again, heaven is associated with people active both romantically and sexually.

7. Discussion and conclusions

To our knowledge this is the first paper on the economics of happiness using exclusively data from Argentina. Consequently several results are certainly novel, starting with the confirmation of the positive and regionally heterogeneous evolution of happiness over time. Argentineans are happier now than in 1984, but the highest improvement was documented in Buenos Aires City, being that the only region with a monotonic rise over time. Both Great Buenos Aires and the rest of the country fell in 1995, and recovered latter.

In accordance with Easteling seminal paper, the improvements in happiness did not correlate with the satisfaction with the financial situation of the households. Financial satisfaction did not rise in Buenos Aires city until the 2006 survey, fell in Great Buenos Aires in 1991, stayed the same during the 90s, but not fully recovered in 2006. Only for the Rest of the Country sample, data seems to support the hypothesis of a positive relation between income and life satisfaction.

In addition, analyzing one particular wave at a time, we found consistent effects in age, indicating that older people fell less satisfied, although the marginal effect diminishes as people ages. Seldom have we found any gender effect, but once present females were happier. Social class status and income affects happiness in many but not in all waves. The sign was almost always the expected. Perceived satisfaction with the financial situation of the household indeed affects life satisfaction, but it does it less than proportionally.

Moreover, separated couples were less satisfied with life in comparison with married ones. Divorce effect was ambiguous over time (positive in the first wave, but negative in the last) perhaps showing the effect of changes in law that facilitated the process. The same happened for people living together in 1984 (positive effect) and in 1995 (negative). Children coefficients were almost never statistically significant, and when they were, actually having one child was found to be detrimental for life satisfaction (in the 2006 wave). People active socially, that frequently go out and have a fluid familiar relationship, were more satisfied with their lives. Particularly, religious activity and studying were fundamental to escaping extreme sadness. Finally, being active in a relationship is important, but coupling that with a lot of sex is paramount, even when the sex itself does not make any difference whatsoever.

Bibliography

Aknin, Lara B., Elizabeth W. Dunn, and Michael I. Norton. (2012) “Happiness runs in a circular motion: evidence for a positive feedback loop between prosocial spending and happiness”. *Journal of Happiness Studies* 13: 347-355.

Blanchflower D. Oswald A. (2004). “Well-being over time in Britain and the USA”. *Journal of Public Economics*, 88, 1359-1386.

Clark A. Frijters P. Shields M. (2008). “Relative Income, Happiness and Utility: An Explanation for the Easterlin Paradox and Other Puzzles.” *Journal of Economic Literature* 46, no. 1: 95–144.

Cruces G. Ham A. Tetaz M. (2008). “Quality of Life in Buenos Aires’ Neighborhoods: Hedonic Price Regressions and the Life Satisfaction Approach”, Working paper for the project “Quality of Life Urban Neighborhoods in LAC”, BID, Research department, 2008.

Easterlin R. (1974). “Does Economic Growth Improve the Human Lot? Some Empirical Evidence.” In *Nations and Households in Economic Growth: Essays in Honor of Moses Abramowitz*, edited by Paul A. David and Melvin W. Reder. Academic Press.

Frey S. Stutzer A. (2002). “What Can Economists Learn from Happiness Research?” *Journal of Economic Literature* 40, no. 2: 402–35.

Giarrizzo, V. (2008). “Economía y Felicidad: Existe vínculo?”. Unpublished.

Graham C. (2008). “Happiness and Health: Lessons—And Questions—For Public Policy.” *Health Affairs* 27, no. 1: 72–87.

Powdthaveel N. (2008). “Economics of Happiness: A Review of Literature and Applications”. Forthcoming in *Chulalongkorn Journal of Economics*.

Powdthavee, N. (2010) “How Much Does Money Really Matter? Estimating the Causal Effects of Income on Happiness”, *Empirical Economics*, 39(1), 77-92.

Powdthavee, N. (forthcoming) “Is Personality Fixed? Personality Changes as Much as “Variable” Economic Factors and More Strongly Predicts Changes to Life Satisfaction”, with Christopher Boyce and Alex Wood, *Social Indicators Research*.

Ravallion M. Lokshin M. (2002). “Self-rated economic welfare in Russia”. *European Economic Review*, 46, 1453-1473.

Stevenson B. Wolfers J. (2008). “Economic Growth and Subjective Well Being; reassessing the Easterlin Paradox”. *Brookings Papers on Economic Activity*.

Van Praag B. Baarsma B. (2004). “Using happiness surveys to value intangibles: The case of airport noise”. *Economic Journal*, 115, 224-246.

Veenhoven R. Hagerty M. (2006). “Rising Happiness in Nations 1946-2004; a replay to Easterlin”.

Social Indicators Research, Vol. 79, pp 421-436.

WORLD VALUES SURVEY 2005 OFFICIAL DATA FILE v.20090621, 2009. World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: ASEP/JDS, Madrid.

