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# Leisure and happiness in the United States: evidence from survey data

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## Abstract

We study the relationship between leisure and happiness, controlling for income and other determinants. Using survey data for the United States in 2007, our results show that certain aspects of leisure, such as leisure activity satisfaction, have a significant impact on individual well-being whereas the amount of leisure time may not play an important role in affecting happiness.

Keywords: leisure, happiness

## I. Introduction

Happiness is thought to depend on leisure; for we are busy that we may have leisure, and make war that we may live in peace – Aristotle.

The past two decades have seen a rapid development in the economics of happiness, combining both economists' and psychologists' techniques to assess individual well-being (Clark and Oswald, 1994; Frey and Stutzer, 2002; Easterlin, 2003; Blanchflower and Oswald, 2004). There exists an extensive body of empirical literature studying the determinants of happiness, and most of the studies have centred on the relationship between income and well-being. Although it is routinely assumed in microeconomic models that individual well-being is derived from utility, which depends on both income and leisure (Varian, 2005), leisure is largely absent from empirical studies of happiness. Our article tries to fill this gap in the literature. Complementing existing studies, we take into consideration both the quantity and the quality of leisure and explore the relationship between leisure and happiness.

We use survey data for the United States from the 2007 International Social Survey Programme (ISSP) *Leisure Time and Sports Survey*. Our results suggest that leisure does have a significant impact on individual happiness. However, the quantity of leisure is not as important as the quality of leisure and how individuals use their leisure time. After leisure time or leisure activities are controlled for, income does not seem to have a significant influence on happiness.

The rest of our article proceeds as follows: Section II describes data and model specifications, Section III presents empirical results and Section IV offers conclusions.

## II. Data and Methodology

We estimate the happiness equation as follows (Blanchflower and Oswald, 2004):

$$Happy_i = \beta Leisure_i + \gamma' Z_i + \varepsilon_i \quad (1)$$

where *Happy* is a happiness rating (1–4) for individual *i*; *Leisure* represents an individual's leisure time or leisure activities; *Z* is a vector of other determinants of happiness suggested by previous studies;  $\beta$  is the coefficient on the leisure measure;  $\gamma$  represents the vector of coefficients on other determinants of happiness;  $\varepsilon$  represents the error term.

We collect data for the United States from the recently available 2007 ISSP *Leisure Time and Sports Survey*. Individuals were asked to indicate whether they are 'very happy', 'fairly happy', 'not very happy' or 'not at all happy' with their life in general. The measurement of happiness is based on their answers to this question. It takes the value of 1 if the individual indicates he/she is 'not at all happy', 2 if the answer is 'not very happy' and so on.

We capture leisure by four different sets of variables, which are summarized as follows:

1.	Leisure time: leisure time is proxied by weekly working hours. The longer hours worked, the less leisure time an individual has.
2.	Leisure activities: Kahneman <i>et al.</i> (2006) argued that subjective satisfaction is dependent on how people spend their time, and compulsory nonwork activities (e.g. childcare) and active leisure (e.g. exercise) may have different effects on happiness than passive leisure activities (e.g. watching movies). We control for all 13 leisure activities covered in the survey by measuring the frequency of each activity in an individual's leisure time, which include 'daily', 'several times a week', 'several times a month', 'several times a year or less often' and 'never'. <sup>11</sup> The leisure activities include Watch TV, Go to the movies, Go shopping, Read books, Attend cultural events, Get together with relatives, Get together with friends, Play

	cards, Listen to music, Join physical activities, Attend sporting events as a spectator, Do handicrafts and Spend time on the Internet.
3.	Satisfaction from leisure activities: the measures of satisfaction from leisure come from two questions asking respondents whether their free time activities enable them 'to be the kind of person they are' or to 'strengthen their relationships with other people'. Five answers to these questions are available, ranging from 'not at all' to 'very much'.
4.	Meaning of leisure: we also include a measure of the meaning of leisure based on three questions asking whether the respondents use free time to establish useful contacts and try to develop skill or whether they find themselves thinking about work in their free time. Answers to these questions vary from 'never' to 'very often'.

All measures of leisure, except the leisure time, are on a 5-point scale with 'very much', 'very often' or 'daily' taking a value of 5 and 'never' or 'not at all' taking a value of 1.

In addition to leisure time or activities, we also control for other determinants of individual happiness (Z) including self-rated health condition (poor to excellent), age, gender, employment status, marital status, family income and education.

### III. Empirical Results

Ordered logit regression results are reported in Table 1. There are 1536 US respondents for the survey. Given data availability and specifications, our sample size varies between 851 and 1382 observations. Regression 1 in Table 1 includes weekly working hours as the measure of leisure time; regression 2 reports result based on leisure activities<sup>2</sup>; regressions 3–4 control for measures of leisure satisfaction; and regressions 5–7 focus on measures capturing the meaning of leisure.

Table 1. Ordered logit happiness regressions for the United States

	Regressio n 1	Regressio n 2	Regressio n 3	Regressio n 4	Regressio n 5	Regressio n 6	Regressio n 7
Working hours							
Log of weekly hours worked	0.00477 (0.164)						
Leisure activities							
Go to the movies		0.259***					
		-0.095					
Go shopping		0.176***					
		-0.065					
Read books		0.088**					
		-0.043					
Get together with relatives		0.143** (0.064)					
Listen to music		0.116*					
		-0.059					
Leisure time enables you							
To be the person you are			0.274*** (0.055)				
To strengthen relationship				0.309*** (0.051)			

Use free time to							
Develop skills					0.118** (0.055)		
Establish useful contacts						0.299*** (0.055)	
Do you find yourself							
Thinking about work in free time							0.145*** (0.045)
Health	0.567***	0.578***	0.563***	0.567***	0.588***	0.605***	0.597***
	-0.074	-0.057	-0.055	-0.055	-0.055	-0.055	-0.055
Age	0.053	0.005	0.012	0.004	0.008	0.003	0.006
	-0.0357	-0.0219	-0.0216	-0.0213	-0.0212	-0.0214	-0.0212
Age2	0.0006	0.0001	0.0002	0.0001	0.0002	0.0001	0.0001
	-0.0004	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002
Male	0.434***	0.197	0.319***	0.272**	0.320***	0.305**	0.287**
	-0.149	-0.124	-0.12	-0.119	-0.119	-0.12	-0.119
White	0.0364	0.113	0.0469	0.0987	0.0851	0.104	0.0731
	-0.196	-0.152	-0.152	-0.152	-0.151	-0.153	-0.151
Employed (fulltime)		0.035	0.046	0.0051	0.019	0.036	0.011
		-0.177	-0.177	-0.177	-0.175	-0.177	-0.176
Unemployed		0.267	0.248	0.227	0.240	0.240	0.222
		-0.374	-0.371	-0.373	-0.371	-0.372	-0.371
Retired		0.355	0.448*	0.464**	0.456**	0.544**	0.314
		-0.236	-0.236	-0.236	-0.231	-0.237	-0.236
Student		0.026	0.035	0.0007	0.104	0.037	0.045
		-0.408	-0.409	-0.411	-0.406	-0.409	-0.406
Home duties		0.238	0.32	0.286	0.286	0.355	0.246
		-0.225	-0.225	-0.225	-0.222	-0.224	-0.222
Widowed	0.778*	0.689***	0.660***	0.709***	0.649***	0.651**	0.620**
	-0.406	-0.248	-0.25	-0.248	-0.245	-0.253	-0.245
Divorced	0.540***	0.659***	0.633***	0.663***	0.634***	0.688***	0.638***
	-0.206	-0.168	-0.165	-0.165	-0.164	-0.166	-0.164
Separated	0.815*	0.654*	0.650*	0.638*	0.579*	0.761**	0.606*
	-0.42	-0.344	-0.344	-0.34	-0.34	-0.345	-0.34
Single	0.718***	0.557***	0.600***	0.549***	0.595***	0.612***	0.582***
	-0.198	-0.165	-0.162	-0.162	-0.161	-0.161	-0.161
Log of Income	0.091	0.052	0.013	0.008	0.022	0.029	0.02
	-0.103	-0.072	-0.069	-0.069	-0.068	-0.069	-0.069
Log of years of education	0.872** (0.355)	0.462* (0.276)	0.700*** (0.259)	0.677*** (0.259)	0.617** (0.256)	0.578** (0.259)	0.557** (0.256)
cut1	6.541	3.140	4.119	3.867	4.403	3.505	4.974
cut2	4.134	1.060	2.120	1.853	2.331	1.434	2.976
cut3	0.274	2.583	1.495	1.778	1.258	2.205	0.615
χ²2 (prob>χ²2)	98.5 (0.00)	215 (0.00)	205 (0.00)	215 (0.00)	188 (0.00)	213 (0.00)	193 (0.00)
Pseudo R 2	0.07	0.09	0.09	0.09	0.08	0.09	0.08

Observations	851	1382	1365	1374	1382	1368	1381
Notes: SEs are given in parentheses.							
***, ** and * Significant at 0.01, 0.05 and 0.1 levels, respectively.							

Notes: SEs are given in parentheses.

\*\*\*, \*\* and \* Significant at 0.01, 0.05 and 0.1 levels, respectively.

Looking across the columns, health condition, gender, marital status and employment status all have robust effects on happiness. The coefficient on *Health* is positive and significant at the 1% level in all seven regressions, suggesting that happiness rises with health. Based on the numerical results of regression 1, the predicted probability of a person with excellent health being 'very happy' is 53.4%, whereas the predicted probability of a person with excellent health being 'not at all happy' is only 0.17%, holding other things constant.<sup>3</sup> The gender variable (male) has a negative coefficient that is significant in six of seven regressions. The results suggest that females tend to be happier than males. The predicted probability for a female to feel 'very happy' is 39%, which is 10% higher than the predicted probability for a male to feel 'very happy' (based on regression 1 estimates). Married people who live with their spouses seem to be happier than others. Dummy variables are included to control for marital status such as widowed, divorced, separated and never married (single) and the coefficients on these dummy variables are robustly negative.

The coefficient on income is positive, but not significant at conventional levels, which implies that higher income might not necessarily raise happiness. This is consistent with results summarized in Easterlin (2001) and Frey and Stutzer (2002). An explanation proposed in the literature is that individuals' income relative to others, instead of their absolute income, determines their happiness. The coefficient on education is consistently negative in different specifications. It seems that people with higher education tend to feel less happy than people with relatively lower education. For example, the probability of being 'very happy' is 27% for individuals with 20 years of education, but 33% for individuals with 15 years of education.<sup>4</sup> We also include a quadratic form of education in the regression. The results do not change qualitatively. The coefficient on the quadratic form is typically not significant whereas the coefficient on education itself is negative and significant. Similar results can be found in other studies focusing on developed countries, which show that education can impose a negative impact on happiness possibly due to the fact that individuals with higher education may face more career pressure (Veenhoven, 1996; Headey and Wooden, 2004).

We now focus on our measures of leisure. The coefficient on weekly working hours is not statistically different from zero. It seems that more free time does not necessarily increase happiness. Instead, leisure activities, satisfaction from leisure activities and the meaning of leisure to individuals play a much more important role in determining happiness. We find that leisure activities such as shopping, reading books, getting together with relatives and listening to music tend to increase individual happiness, whereas going to the movies somehow reduces happiness. In addition, individuals who consider that their leisure activities enable them to become the person they are or to strengthen their relationship with others generally are happier than others. Based on regression 4, individuals who think their leisure activities very much strengthen their relationship with friends, families and colleagues are twice as likely to be 'very happy' than individuals who feel that their leisure activities do not at all strengthen their relationship with others. In terms of the meaning of leisure, individuals who often use their leisure time to develop important skills or establish useful contacts tend to report a higher level of happiness.

Interestingly, individuals who frequently think about work in their free time tend to be less happy than others. For instance, regression 7 results indicate that the predicted probability of respondents feeling 'very happy' is 43% if they never think about work in their free time and drops to 30% if respondents very often think about work in their free time.

## IV. Conclusions

This article examines the relationship between leisure and happiness. Using survey data for the United States in 2007, we find that leisure does play a significant role in affecting individual happiness. In addition, the quantity of leisure is not as important as other aspects of leisure such as satisfaction from leisure activities and the meaning of leisure time.

## Notes

<sup>1</sup>The leisure activities include Watch TV, Go to the movies, Go shopping, Read books, Attend cultural events, Get together with relatives, Get together with friends, Play cards, Listen to music, Join physical activities, Attend sporting events as a spectator, Do handicrafts and Spend time on the Internet.

<sup>2</sup>For the purpose of brevity we only report the coefficients on activities that are statistically significant. Estimated coefficients on other activities are available upon request.

<sup>3</sup>The probability is  $(Y = m|X) = \frac{1}{1+\exp(-(\tau_m - X\beta))} - \frac{1}{1+\exp(-(\tau_{m-1} - X\beta))}$ , where  $m = 1 - 4$  and  $\tau$  is the cut-point value.

<sup>4</sup>We also include a quadratic form of education in the regression. The results do not change qualitatively. The coefficient on the quadratic form is typically not significant whereas the coefficient on education itself is negative and significant.

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