Europeans Work To Live and Americans Live To Work (Who is Happy to Work More: Americans or Europeans?)

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Abstract

This paper compares the working hours and life satisfaction of Americans and Europeans using the World Values Survey, Eurobarometer and General Social Survey. The purpose is to explore the relationship between working hours and happiness in Europe and America. Previous research on the topic does not test the premise that working more makes Americans happier than Europeans. The findings suggest that Americans may be happier working more because they believe more than Europeans do that hard work is associated with success.

KEYWORDS: LIFE SATISFACTION, WORKING HOURS, EUROPE, USA

Introduction

Americans work 50% more than the Germans, the French and the Italians (Prescott, 2004). Explanations about this phenomenon generally fall into one of two groups: economic and cultural.

According to Prescott (2004), Americans work more than Europeans because of domestic tax rates; tax rates affect labor supply (assuming it is not fixed). There are lower tax rates in the US than in Europe, and hence working more pays off more in the US. Michelacci and Pijoan-Mas (2007a,b) posit that U.S. job inequality leads to within-skill wage differences that provide incentives to work longer hours. In Europe these incentives are not that strong. Essentially, the market return on observed skills is much higher in the US than in Europe (Michelacci and Pijoan-Mas, 2007b). In addition, Alesina et al.

^{*}EMAIL: adam.okulicz.kozaryn@gmail.com I am indebted to Micah Altman and Ben Gaddis. All mistakes are mine.

(2004) argue that opportunities for social mobility are (or are perceived to be) higher in the US than in Europe. In other words, working longer hours does (or appears to) pay off more in the US than in Europe. The final economic explanation is that working hours differential is due to unionization and labor regulations (Wharton, 2006, Alesina et al., 2005). European workers are far more unionized than their American counterparts.

Cultural explanations mostly refer to protestant ethic (Weber et al., 2003) It is not true that protestant ethic is similar in Europe and in the US. Ferguson (2003) argues that the protestant ethic is dying in Europe and alive and well in the U.S. Americans may be more concerned with status (American dream), whereas Europeans may value leisure more (Wharton, 2006, Frijters and Leigh, 2008, Benahold, 2004).

This paper argues that Europeans are happier to work less than Americans¹. An economic truism is that people do things to maximize their utility. Americans maximize their utility (happiness) by working and Europeans maximize their utility through leisure. The relationship between working hours and happiness is shown in Figure 1. In short, working less makes Europeans more happy than Americans. This is a new idea proposed in this paper and tested empirically².

¹Note that happiness means general life satisfaction or happiness, not job satisfaction. The focus here is on the life satisfaction literature and modeling.

 $^{^2}$ The goal of this paper is to document a relationship between working hours and happiness in the US and Europe. A more theoretical account has been provided elsewhere, see Alesina et al. (2005) for instance.



Figure 1: Happiness by working hours categories in the U.S and Europe. Data are described in Data Description section.

Life Satisfaction Literature, A Brief Overview

The literature offers insights into the determinants of life satisfaction³. Myers (2000) summarizes happiness research done in psychology. Personal characteristics (e.g., extroversion) and culture (e.g., affluent societies with political rights) impact life satisfaction. The most important predictor, however, is social capital (Putnam, 2001). The "need to belong", which can be satisfied in multiple ways, can seriously affect happiness. Religion, friendship and marriage also boost life satisfaction because they provide social capital (Putnam, 2001). Married people are happier than never married, divorced or separated (Myers and Diener, 1995). Age and gender do not correlate strongly with life satisfaction (Myers, 2000). Older people have a closer fit between their ideals and self perceptions compared to the young (Diener et al., 1999), and some find a U-shaped correlation between age and happiness, with a minimum around age of 30 (Oswald, 1997), or 45 (Sanfey

 $^{^{3}}$ Life satisfaction and happiness are conceptually different. The former refers to cognition while the latter refers to affect. For simplicity I use them interchangeably and specifically I mean life satisfaction.

and Teksoz, 2005). The correlation between education and life satisfaction is higher for individuals with low income and in poorer nations; education may help to satisfy aspirations, but it might also elevate aspirations (Diener et al., 1999). Personal or household income matters more in poor countries (with GNP less than \$8,000 per person) (Diener et al., 1999). As long as people can afford necessities, income does not contribute much to happiness (Myers, 2000). Thereafter leisure activities become an important predictor (Diener et al., 1999).

Complementing this work by psychologists, a new branch in economics has developed. The economics of happiness began with Easterlin's (1974) seminal paper *Does Economic Growth Improve the Human Lot?* In this and subsequent works (1995, 2001, 2003, 2005), Easterlin argues that the happiness function comprises aspirations and achievements. People have aspirations that they try to satisfy. Once aspirations are satisfied, happiness should follow. However, new achievements result in new aspirations, because through the process of hedonic adaptation people adapt to new circumstances. Therefore, happiness is positively correlated with income but negatively correlated with unrealized aspirations. The two influences cancel out.

While the life satisfaction literature is substantial, there is a dearth of research about the relationship of working hours and happiness. Golden and Wiens-Tuers (2006) and Clark and Senik (2006) address this relationship to some extent. Job satisfaction varies across occupations and overtime work hours are generally associated with dissatisfaction. However, Golden and Wiens-Tuers (2006) analyze only the US data and only with respect to extra working hours; Clark and Senik (2006) analyze only French and British data with respect to wage, but not working hours. Clearly, there is a lack of cross national research on the effect of working hours on happiness and this paper is a first attempt at filling this gap. This study is an attempt at understanding working hours differences between Europe and America. Results show that working longer hours makes Americans happier than Europeans.

Data Description

The data for Europe come from Eurobarometer series (EB), a large scale survey administered in each country of Europe at least once a year since 1974; data on working hours is available only for 1996 (EB96) and 2001 (EB01). The happiness question reads: *Would* you say you are very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead ? (Not very satisfied and not at all satisfied were combined to match the scaling of GSS data.)

The US data come from General Social Survey (GSS) for 1996, 1998, 2000 and 2002⁴. Respondents were asked the following question: *Taken all together, how would you say things are these days-would you say that you are very happy, pretty happy, or not too happy*? Appendix A provides sample details. Because the interest is in comparing Europe and the US, variables were recoded to similar categories and data for the US and Europe were pooled together. Wording of the survey questions is slightly different (see Appendix B), but these small differences do not make surveys incomparable. At least two other papers used the same surveys to conduct successful comparisons between Europe and the US (see Alesina et al. (2004), Stevenson and Wolfers (2009)). "Happiness" and "Life Satisfaction" measures are highly correlated⁵.

There are several control variables that are comparable across surveys: age, income, marital status and gender. Several control variables suggested by literature (Diener et al., 1999, Myers, 2000), however, are not comparable across surveys: health, friends, extra hours, and family time (Appendix B). These variables will be included in separate models for the US and Europe.

⁴Choice of these years is determined by data availability for Europe, so that Europeans and Americans were surveyed approximately at the same time.

⁵Still, robustness of the results can be improved if wording of the survey questions is the same for all respondents. This remains for the future research when better data become available.

Results and Discussion

The pooled model controls for a set of individual characteristics. Moreover, there are likely to be regional differences between and within the US and Europe. To control for observed and unobserved heterogeneity across countries in Europe and regions in the US all models include country and region dummies⁶. Data come from different years and all models include time fixed effects as well. The dependent variable, *happiness* is measured on scale from 1 to 3, and the model is a standard ordered logit with odds ratios reported (e.g. Long, 1997).

| Variable | A1 | A2 | A3 | A4 | A5 |
|--|---------------|---------------|---------------|---------------|---------------|
| happy | | | | | |
| working hours * Europe | 0.992^{***} | | | | |
| working hours | 1.001 | | | | |
| Europe | 0.494^{***} | 0.480^{***} | 0.449^{***} | 0.259^{***} | 0.302^{***} |
| household income | 1.368^{***} | 1.370^{***} | 1.374^{***} | 1.364^{***} | 1.375^{***} |
| married | 2.017^{***} | 2.017^{***} | 2.015^{***} | 2.022^{***} | 2.019^{***} |
| age of respondent | 0.922^{***} | 0.922^{***} | 0.923^{***} | 0.921^{***} | 0.923^{***} |
| age squared | 1.001^{***} | 1.001^{***} | 1.001^{***} | 1.001^{***} | 1.001^{***} |
| male | 0.978 | 0.983 | 0.989 | 0.968 | 0.981 |
| working hrs cat * Europe | | 0.927^{***} | | | |
| working hours category | | 1.005 | | | |
| working hours quartiles * Europe | | | 0.907^{***} | | |
| working hours quartiles | | | 0.989 | | |
| less than 40 hours $*$ Europe | | | | 1.241^{**} | |
| less than 40 hours | | | | 0.944 | |
| more than $40 \text{ hrs} * \text{Europe}$ | | | | | 0.824^{**} |
| more than 40 hrs | | | | | 0.953 |
| N | 11630 | 11630 | 11630 | 11630 | 11630 |

 Table 1: Pooled data ordered logistic regressions of happiness (Odds ratios reported)

Columns in Table 1 represent ordered logistic regressions of pooled data from GSS and EB. All models control for a set of basic personal characteristics. The key variable is an interaction of working hours variable and a dummy variable for Europe. To account for nonlinear effect of working hours on happiness several models with alternative measurement are proposed. In (A1) working hours is a raw number; In (A2) there are seven categories of working hours, from less than part time (<17) to more than one and a half time (>59)⁷. Model (A3) breaks working hours by quantiles. Model (A4) introduces a

⁶For a list of European countries and American regions see Appendix A. There is a statistically and substantively significant variation across European countries in average happiness, but country-level analysis is difficult due to small sample sizes.

⁷For categories see Table 3 in Appendix A.

dummy variable for a person working less than 40 hours, and (A5) a dummy for a person working more than 40 hours. All interactions except (A5) are significant and suggest that Europeans are less happy to work longer hours than Americans⁸. Instead of interpreting awkward odds ratios Figure 2 plots predicted probabilities (setting other variables at their means) of being very happy against working hours categories and by Europe/America⁹.



Figure 2: Predicted probability of being very happy based on ordered logistic regression with other variables set at their means for models (A1) and (A2)

If you are European and increase working hours from less than 17 to more than 60 hours per week¹⁰ then you are 5% to 10% (depending on the model) less likely to be very happy than an American who increases his working hours by the same amount¹¹. This is quite an incentive. Taking this into account it is less surprising that Americans work even

⁸ These models may suffer from left out variable bias, however. Additional controls are used in separate models for the US and Europe. Results are shown in Appendix C. The relationship is robust: in all models Europeans are less happy than Americans when working longer hours.

⁹Figure 2 utilizes postgr3 by Michael Mitchell and spostado by Scott Long in Stata.

¹⁰This is a hypothetical scenario. Again, as argued in this paper, for Europeans it makes sense to work less and for Americans to work more.

¹¹However, this relationship is not necessarily causal for two main reasons. Data is cross-sectional, and it is not entirely clear what is the direction of causality here, although it seems more reasonable that working more makes Americans happier than that happier Americans work more than Europeans. If the reader has ideas about enhancing causal inference, please email me.

50% more than Europeans. Americans and Europeans are quite rational – they simply maximize their utility.

Why does working more makes Europeans less happy than Americans? Do Americans think that work is more important to their lives than Europeans? There is some evidence in the World Values Survey (WVS) that helps answer this question. Respondents were asked several questions as shown in Table 2^{12} .

| Table 2: | Description | of ' | Variabl | les |
|----------|-------------|------|---------|-----|
|----------|-------------|------|---------|-----|

| | a a | |
|---------------------|---|--|
| Variable | Survey Question | Measurement (After Recoding) |
| Leisure-Work | Which point on this scale most clearly describes how much weight you place on work (including housework and school- work), as compared with leisure or recreation? How impor- tant is leisure time in your life ? | 1(it is leisure that makes life worth living)-5(work is what makes life worth living) |
| Work Impor- tant | How important is work in your life ? | 1(not at all important)-4 |
| Success | Now I'd like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can chose any number in between. Agreement: Hard work brings success. | 1(Hard work doesn't generally bring success - it's more a matter of luck and connections)-10(In the long run, hard work usually brings a better life) |



Figure 3: Work Value in America and Europe

 $^{^{12}}$ For ease of exposition variables were recoded so that higher value means that work is more important. Responses to these questions were standardized so that they are comparable in Figure 5.

The Leisure-Work and Work Important variables have higher values in Europe, which suggests that work is more important for Europeans. This is surprising given the conventional wisdom that Americans work more than Europeans because they value work more. One explanation is that Americans value more outcome of work (success), while Europeans are more concerned with the process (work) itself. The *Success* variable suggests, however, that for Americans hard work is (perceived to be) associated with success more than for Europeans.

This is the first study to test empirically whether working more makes Americans happier than Europeans. This study suggests that as the number of work hours increases, Americans become happier about life than Europeans. The purpose of this study was to document this relationship. More research is needed to find out why working more makes Americans happier than Europeans. I just note here one possible explanation: Americans may work more because they believe more than Europeans do that hard work brings success¹³. Future research may investigate the differences between specific European countries and the U.S. states. There are also different satisfaction domains such as job satisfaction or family satisfaction that are theoretically related to working hours.

Findings of this research are relevant to social scientists. We tend to think of labor markets in terms of observable characteristics such as wages and working hours, but there is more to that. This paper contributes to our understanding of labor markets: Americans are happier to work more than Europeans.

 $^{^{13}}$ Again, there is a need for more research on this: There may be other plausible explanations.

Appendix A



Figure 4: Happiness in America and Europe



Figure 5: Working hours in America and Europe

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|---------|-------|------|-----------|----------|
| Valid | <17 | 1044 | 2 | 5 | 5 |
| | 17-34 | 3405 | 7 | 15 | 20 |
| | 35 - 39 | 3789 | 8 | 17 | 37 |
| | 40 | 5999 | 13 | 27 | 65 |
| | 41 - 49 | 3293 | 7 | 15 | 80 |
| | 50-59 | 2393 | 5 | 11 | 91 |
| | 60-160 | 2081 | 4 | 9 | 100 |
| | Total | 22004 | 46 | 100 | |
| Missing | | 25936 | 54 | | |
| Total | | 47940 | 100 | | |

 Table 3: Seven categories of working hours

Table 4: Data sets

| | | Freq. | Per. | Val. Per. | Cum. Per |
|-------|-------|-------|------|-----------|----------|
| Valid | EB01 | 15943 | 33 | 33 | 33 |
| | EB96 | 20679 | 43 | 43 | 76 |
| | GSS | 11318 | 24 | 24 | 100 |
| | Total | 47940 | 100 | 100 | |

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|----------------|-------|--------|-----------|----------|
| Valid | france | 2299 | 5 | 6 | 6 |
| | belgium | 2359 | 5 | 6 | 13 |
| | netherlands | 2328 | 5 | 6 | 19 |
| | west germany | 2329 | 5 | 6 | 25 |
| | italy | 2388 | 5 | 7 | 32 |
| | luxembourg | 1181 | 2 | 3 | 35 |
| | denmark | 2272 | 5 | 6 | 41 |
| | ireland | 2325 | 5 | 6 | 48 |
| | united kingdom | 2947 | 6 | 8 | 56 |
| | greece | 2323 | 5 | 6 | 62 |
| | spain | 2300 | 5 | 6 | 68 |
| | portugal | 2304 | 5 | 6 | 75 |
| | east germany | 2355 | 5 | 6 | 81 |
| | finland | 2301 | 5 | 6 | 87 |
| | sweden | 2253 | 5 | 6 | 94 |
| | austria | 2358 | 5 | 6 | 100 |
| | Total | 36622 | 76 | 100 | |
| Missing | | 11318 | 24 | | |
| Total | | 47940 | 100 | | |

Table 5: European countries. Eurobarometers: 1996, 2001

Table 6: American regions. General Social Survey: 1996, 1998, 2000, 2002

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|-----------------|-------|------|-----------|----------|
| Valid | new england | 578 | 1 | 5 | 5 |
| | middle atlantic | 1704 | 4 | 15 | 20 |
| | e. nor. central | 1926 | 4 | 17 | 37 |
| | w. nor. central | 840 | 2 | 7 | 45 |
| | south atlantic | 2070 | 4 | 18 | 63 |
| | e. sou. central | 792 | 2 | 7 | 70 |
| | w. sou. central | 1138 | 2 | 10 | 80 |
| | mountain | 735 | 2 | 6 | 86 |
| | pacific | 1535 | 3 | 14 | 100 |
| | Total | 11318 | 24 | 100 | |
| Missing | | 36622 | 76 | | |
| Total | | 47940 | 100 | | |

Appendix B

Table 7: Variables comparable across datasets: Survey Questions. All variables have been recoded so that the higher value means "more", or in case of the dummy variables, one means "yes" and zero means "no". Frequency tables are in the Appendix C.

| Variable | Survey Question |
|----------------|---|
| happiness | |
| GSS | Taken all together, how would you say things are these days-would you say that you are very |
| | happy, pretty happy, or not too happy? |
| EB98/EB01 | Would you say you are very satisfied, fairly satisfied, not very satisfied or not at all satisfied with |
| | the life you lead? |
| household | |
| income | |
| GSS | In which of these groups did your total family income, from all sources, fall last year before taxes |
| EB01 | Income quartiles as provided by principal investigator |
| EB96 | [] Please count the total wages and salaries PER MONTH of all members of this household; all |
| | pensions and social insurance benefits; child allowances and any other income like rents, etc[] |
| | deductions |
| marital status | |
| GSS | Are you currently–married, widowed, divorced, separated, or have you never been married? |
| EB01 | Could you give me the letter which corresponds best to your own current situation ? (Married; |
| | Remarried; Unmarried, currently living with partner; Unmarried, having never lived with a part- |
| | ner; Unmarried, having previously lived with a partner, but now on my own Divorced; Separated; |
| | Widowed.) |
| EB96 | Which of the following statements best describes your current situation? |
| working hours | |
| GSS | How many hours did you work last week, at all jobs? |
| EB98/EB01 | How many hours do you usually work a week in your job, including overtime? Please do not |
| | include meal breaks. If it varies, take the average over the last 4 weeks. |

Table 8: Variables incomparable across datasets: Survey Questions. All variables have been recoded so that the higher value means "more", or in case of the dummy variables, one means "yes" and zero means "no". Frequency tables are in the Appendix C.

| Variable | Survey Question |
|-------------|---|
| health | |
| GSS | Would you say your own health, in general, is excellent, good, fair, or poor? |
| EB01 | I am now going to ask you to talk to me about different aspects of your everyday life. For each of |
| | them, could you tell me if you think this aspect of your life is very good, fairly good, fairly bad or very bad? |
| friends | |
| GSS | Would you use this card and tell me which answer comes closest to how often you do the following |
| | things. Spend a social evening with friends who live outside the neighborhood? |
| EB96 | How often do you spend time with relatives other than any you live with: several times a week, |
| | about weekly, about fortnightly, about monthly, a few times a year, once a year, less often than |
| | once a year or never?; And with friends? |
| EB01 | For each of these statements, please tell me if it applies to your situation, or not. I meet my friends |
| | several times a week |
| extra hours | When you work extra hours on your main job, is it mandatory (required by your employer)? |
| GSS | |
| EB96 | I often have to work extra time, over and above the formal hours of my job, to get through the work or to help out |
| EB01 | How much do you agree or disagree with each of the following statements describing your job? |
| | Do you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree? 3. I often |
| | have to work extra time, over and above the formal hours of my job, to get through the work or |
| | to help out |
| family time | How hard is it to take time off during your work to take care of personal or family matters? |
| GSS | |
| EB01 | How often do you? find your job prevents you from giving the time you want to your partner or |
| | family |
| occupation | See frequency tables below. |

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|--------------------|-------|------|-----------|----------|
| Valid | 1(not at all hard) | 832 | 2 | 47 | 47 |
| | 2(not too hard) | 480 | 1 | 27 | 74 |
| | 3(somewhat hard) | 270 | 1 | 15 | 89 |
| | 4(very hard) | 191 | 0 | 11 | 100 |
| | Total | 1773 | 4 | 100 | |
| Missing | | 36622 | 76 | | |
| | .d | 9 | 0 | | |
| | .i | 9522 | 20 | | |
| | .n | 14 | 0 | | |
| | Total | 46167 | 96 | | |
| Total | | 47940 | 100 | | |

Table 9: GSS: Family time

 Table 10:
 GSS: Extra hours

| | Freq | Dev | TT 1 D | ~ ~ |
|-------|--------------------------------------|--|--|---|
| | | Per. | Val. Per. | Cum. Per |
| (no) | 1293 | 3 | 74 | 74 |
| (yes) | 461 | 1 | 26 | 100 |
| otal | 1754 | 4 | 100 | |
| | 36622 | 76 | | |
| ł | 24 | 0 | | |
| | 9522 | 20 | | |
| n | 18 | 0 | | |
| otal | 46186 | 96 | | |
| | 47940 | 100 | | |
| | (no) (yes) 'otal l 'otal | (no) 1293 (yes) 461 'otal 1754 36622 24 9522 1 n 18 'otal 46186 47940 18 | $\begin{array}{ccccccc} (no) & 1293 & 3 \\ (yes) & 461 & 1 \\ botal & 1754 & 4 \\ & & 36622 & 76 \\ d & 24 & 0 \\ & & 9522 & 20 \\ n & 18 & 0 \\ botal & 46186 & 96 \\ & & 47940 & 100 \\ \end{array}$ | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |

Table 11: GSS: Friends

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|---------------------|-------|------|-----------|----------|
| Valid | 1(never) | 583 | 1 | 9 | 9 |
| | 2(once a year) | 465 | 1 | 7 | 16 |
| | 3(sev times a year) | 1184 | 2 | 18 | 34 |
| | 4(once a month) | 1407 | 3 | 21 | 55 |
| | 5(sev times a mnth) | 1399 | 3 | 21 | 77 |
| | 6(sev times a week) | 1292 | 3 | 20 | 96 |
| | 7(almost daily) | 249 | 1 | 4 | 100 |
| | Total | 6579 | 14 | 100 | |
| Missing | | 36622 | 76 | | |
| | .a | 4702 | 10 | | |
| | .d | 23 | 0 | | |
| | .n | 14 | 0 | | |
| | Total | 41361 | 86 | | |
| Total | | 47940 | 100 | | |

Table 12: GSS: Health

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|--------------|-------|------|-----------|----------|
| Valid | 1(poor) | 459 | 1 | 5 | 5 |
| | 2(fair) | 1570 | 3 | 17 | 22 |
| | 3(good) | 4489 | 9 | 48 | 69 |
| | 4(excellent) | 2893 | 6 | 31 | 100 |
| | Total | 9411 | 20 | 100 | |
| Missing | | 36622 | 76 | | |
| | .d | 10 | 0 | | |
| | .i | 1861 | 4 | | |
| | .n | 36 | 0 | | |
| | Total | 38529 | 80 | | |
| Total | | 47940 | 100 | | |

| Table 13. Obb. Occupation | Table | 13: | GSS: | Occupatio | n |
|---------------------------|-------|-----|------|-----------|---|
|---------------------------|-------|-----|------|-----------|---|

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|-----------------------|-------|------|-----------|----------|
| Valid | professional | 1477 | 3 | 14 | 14 |
| | administrative | 1851 | 4 | 17 | 31 |
| | clerical | 1191 | 2 | 11 | 42 |
| | sales | 1509 | 3 | 14 | 56 |
| | service | 1510 | 3 | 14 | 70 |
| | agriculure | 91 | 0 | 1 | 71 |
| | production, transport | 1084 | 2 | 10 | 81 |
| | craft, technical | 2054 | 4 | 19 | 100 |
| | Total | 10767 | 22 | 100 | |
| Missing | | 37173 | 78 | | |
| Total | | 47940 | 100 | | |

 Table 14:
 EB96:
 Family time

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|------------------|-------|------|-----------|----------|
| Valid | 0(not mentioned) | 859 | 2 | 76 | 76 |
| | 1(mentioned) | 264 | 1 | 24 | 100 |
| | Total | 1123 | 2 | 100 | |
| Missing | | 46817 | 98 | | |
| Total | | 47940 | 100 | | |
| | | | | | |

Table 15: EB96: Extra hours

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|---------------------------------|-------|------|-----------|----------|
| Valid | 1(strongly disagree) | 945 | 2 | 12 | 12 |
| | 2(disagree) | 2077 | 4 | 27 | 39 |
| | 3(neither agree / nor disagree) | 1242 | 3 | 16 | 55 |
| | 4(agree) | 2033 | 4 | 26 | 81 |
| | 5(strongly agree) | 1459 | 3 | 19 | 100 |
| | Total | 7756 | 16 | 100 | |
| Missing | | 40184 | 84 | | |
| Total | | 47940 | 100 | | |

Table 16: EB96: Friends

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|-----------------------------------|-------|--------|-----------|----------|
| Valid | 1(never) | 335 | 1 | 2 | 2 |
| | 2(less often than once a year $)$ | 142 | 0 | 1 | 2 |
| | 3(once a year) | 140 | 0 | 1 | 3 |
| | 4(a few times a year) | 930 | 2 | 5 | 7 |
| | 5(about monthly) | 1966 | 4 | 10 | 17 |
| | 6 (about fortnightly) | 2318 | 5 | 11 | 28 |
| | 7(about weekly) | 5413 | 11 | 26 | 54 |
| | 8(several times a week) | 9405 | 20 | 46 | 100 |
| | Total | 20649 | 43 | 100 | |
| Missing | | 27291 | 57 | | |
| Total | | 47940 | 100 | | |

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|------------------------|-------|------|-----------|----------|
| Valid | look after the home | 2162 | 5 | 10 | 10 |
| | student | 1665 | 3 | 8 | 19 |
| | unemployed | 5395 | 11 | 26 | 45 |
| | retired/unable to work | 3539 | 7 | 17 | 62 |
| | farmer | 248 | 1 | 1 | 63 |
| | fisherman | 6 | 0 | 0 | 63 |
| | professional | 181 | 0 | 1 | 64 |
| | shop owner/craftsmen | 680 | 1 | 3 | 67 |
| | business proprietors | 279 | 1 | 1 | 69 |
| | employed professional | 162 | 0 | 1 | 69 |
| | general management | 195 | 0 | 1 | 70 |
| | middle management | 1088 | 2 | 5 | 76 |
| | employed at desk | 1211 | 3 | 6 | 81 |
| | employed travelling | 400 | 1 | 2 | 83 |
| | employed service job | 1176 | 2 | 6 | 89 |
| | supervisor | 228 | 0 | 1 | 90 |
| | skilled manual worker | 1263 | 3 | 6 | 96 |
| | other manual worker | 777 | 2 | 4 | 100 |
| | Total | 20655 | 43 | 100 | |
| Missing | | 27285 | 57 | | |
| Total | | 47940 | 100 | | |

 Table 17: EB96: Occupation

 Table 18:
 EB01:
 Family time

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|----------------|-------|------|-----------|----------|
| Valid | 1(never) | 1945 | 4 | 27 | 27 |
| | 2(hardly ever) | 1816 | 4 | 25 | 52 |
| | 3(sometimes) | 2250 | 5 | 31 | 83 |
| | 4(often) | 953 | 2 | 13 | 96 |
| | 5(always) | 261 | 1 | 4 | 100 |
| | Total | 7225 | 15 | 100 | |
| Missing | | 40715 | 85 | | |
| Total | | 47940 | 100 | | |

Table 19: EB01: Extra hours

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|----------------------------|-------|------|-----------|----------|
| Valid | Strongly agree | 1193 | 2 | 16 | 16 |
| | Agree | 2081 | 4 | 27 | 43 |
| | Neither agree nor disagree | 1345 | 3 | 18 | 60 |
| | Disagree | 2076 | 4 | 27 | 87 |
| | Strongly disagree | 963 | 2 | 13 | 100 |
| | Total | 7658 | 16 | 100 | |
| Missing | | 40282 | 84 | | |
| Total | | 47940 | 100 | | |

Table 20: EB01: Friends

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|--------|-------|------|-----------|----------|
| Valid | 0(no) | 5638 | 12 | 36 | 36 |
| | 1(yes) | 9974 | 21 | 64 | 100 |
| | Total | 15612 | 33 | 100 | |
| Missing | | 32328 | 67 | | |
| Total | | 47940 | 100 | | |

Table 21: EB01: Health

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|----------------|-------|------|-----------|----------|
| Valid | 1(very bad) | 494 | 1 | 3 | 3 |
| | 2(fairly bad) | 1959 | 4 | 12 | 15 |
| | 3(fairly good) | 7067 | 15 | 45 | 60 |
| | 4(very good) | 6312 | 13 | 40 | 100 |
| | Total | 15832 | 33 | 100 | |
| Missing | | 32108 | 67 | | |
| Total | | 47940 | 100 | | |

Table 22: EB01: Occupation

| | | Freq. | Per. | Val. Per. | Cum. Per |
|---------|--|-------|--------|-----------|----------|
| Valid | Self-employed (coded 5 to 9 in $V145$) | 1238 | 3 | 8 | 8 |
| | Managers (coded 10 to 12 in V145) | 1345 | 3 | 8 | 16 |
| | Other white collars (coded 13 or 14 in V145) | 1567 | 3 | 10 | 26 |
| | Manual workers (coded 15 to 18 in V145) | 3565 | 7 | 22 | 48 |
| | House persons (coded 1 in V145) | 1801 | 4 | 11 | 60 |
| | Unemployed (coded 3 in V145) | 1072 | 2 | 7 | 66 |
| | Retired (coded 4 in V145) | 3732 | 8 | 23 | 90 |
| | Students (coded 2 in V145) | 1623 | 3 | 10 | 100 |
| | Total | 15943 | 33 | 100 | |
| Missing | | 31997 | 67 | | |
| Total | | 47940 | 100 | | |

Appendix C

Table 23: Ordered logistic regressions of happiness by survey: extra hours (Odds ratios reported)

| Variable | GSS | EB96 | EB01 |
|---------------------------|---------------|---------------|---------------|
| working hours category | 1.112^{**} | 0.949^{**} | 1.002 |
| household income | 1.270^{***} | 1.403^{***} | 1.460^{***} |
| married | 2.461^{***} | 1.669^{***} | 1.531^{***} |
| age of respondent | 0.912^{***} | 0.910^{***} | 0.948^{***} |
| age squared | 1.001^{***} | 1.001^{***} | 1.001^{***} |
| male | 0.944 | 1.032 | 1.016 |
| extra hours | 1.316 | | |
| extra hours | | 0.944^{**} | |
| extra hours | | | 1.073^{***} |
| country/region dummies | yes | yes | yes |
| N | 778 | 5794 | 5154 |
| *** .0.01 ** .0.05 * .0.1 | | | |

*** p<0.01, ** p<0.05, * p<0.1

 Table 24:
 Ordered logistic regressions of happiness by survey: family time (Odds ratios reported)

| Variable | GSS | EB96 | EB01 |
|--------------------------------|---------------|---------------|---------------|
| working hours category | 1.145^{***} | 1.085 | 1.040^{*} |
| household income | 1.275^{***} | 1.468^{***} | 1.466^{***} |
| married | 2.460^{***} | 1.241 | 1.604^{***} |
| age of respondent | 0.911^{***} | 0.935 | 0.952^{***} |
| age squared | 1.001^{***} | 1.001 | 1.000^{**} |
| male | 0.907 | 0.595^{**} | 0.993 |
| family time | 0.808^{***} | | |
| family time | | 1.441** | |
| family time | | | 0.732^{***} |
| country/region dummies | yes | yes | yes |
| N | 782 | 845 | 4892 |
| *** p<0.01, ** p<0.05, * p<0.1 | | | |

 Table 25:
 Ordered logistic regressions of happiness by survey: health (Odds ratios reported)

| Variable | GSS | EB96 | |
|--------------------------------|---------------|---------------|-----|
| working hours category | 1.002 | 0.977 | |
| household income | 1.208^{***} | 1.389^{***} | |
| married | 2.508^{***} | 1.552^{***} | |
| age of respondent | 0.950^{***} | 0.956^{***} | |
| age squared | 1.001^{***} | 1.001*** | |
| male | 0.984 | 0.999 | |
| health | 2.015^{***} | | |
| health | | 2.112*** | |
| country/region dummies | yes | yes | yes |
| N | 4996 | 5143 | |
| *** p<0.01, ** p<0.05, * p<0.1 | | | |

 Table 26:
 Ordered logistic regressions of happiness by survey: friends (Odds ratios reported)

| Variable | GSS | EB96 | EB01 |
|------------------------|---------------|---------------|---------------|
| working hours category | 0.999 | 0.933^{***} | 0.977 |
| household income | 1.307^{***} | 1.413^{***} | 1.452^{***} |
| married | 2.335^{***} | 1.770^{***} | 1.638^{***} |
| age of respondent | 0.957^{**} | 0.914^{***} | 0.952^{***} |
| age squared | 1.001^{***} | 1.001^{***} | 1.000^{**} |
| male | 0.915 | 1.013 | 0.991 |
| friends | 1.111*** | | |
| friends | | 1.151^{***} | |
| friends | | | 1.456^{***} |
| country/region dummies | yes | yes | yes |
| N | 3841 | 5814 | 5083 |

*** p<0.01, ** p<0.05, * p<0.1

 Table 27:
 Ordered logistic regressions of happiness by survey: occupation (Odds ratios reported)

| Variable | GSS | EB96 | EB01 |
|------------------------|---------------|---------------|---------------|
| working hours category | 1.009 | 0.923^{***} | 0.979 |
| household income | 1.281^{***} | 1.343^{***} | 1.431^{***} |
| married | 2.439^{***} | 1.715^{***} | 1.547^{***} |
| age of respondent | 0.940^{***} | 0.902^{***} | 0.945^{***} |
| age squared | 1.001^{***} | 1.001^{***} | 1.001^{***} |
| male | 1.021 | 1.069 | 1.004 |
| occupation dummies | yes | yes | yes |
| country/region dummies | yes | yes | yes |
| N | 5792 | 5813 | 5172 |

*** p<0.01, ** p<0.05, * p<0.1

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