

Applied Research in Public Policy Making

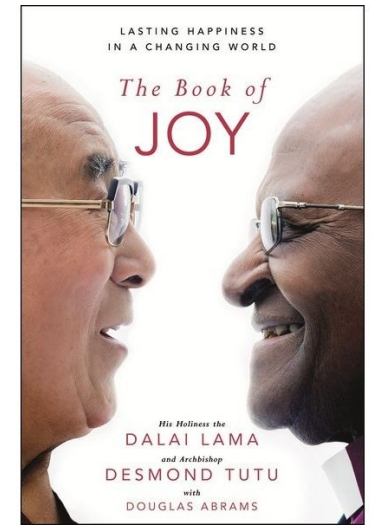
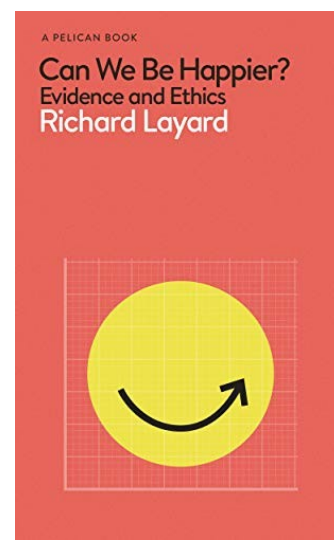
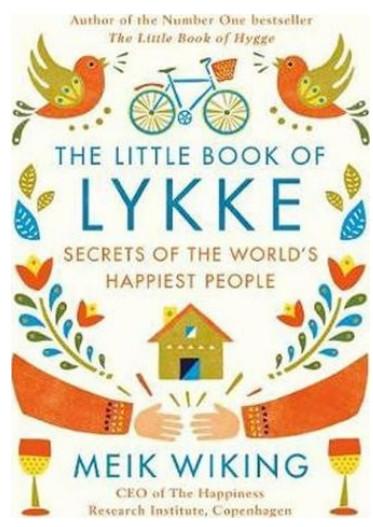
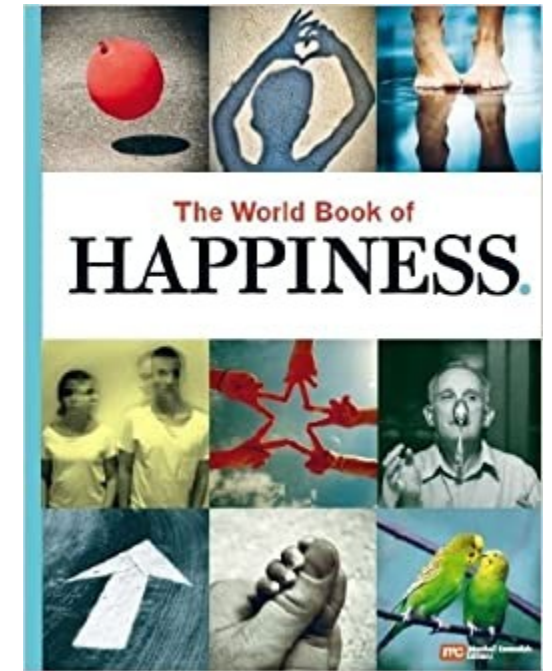
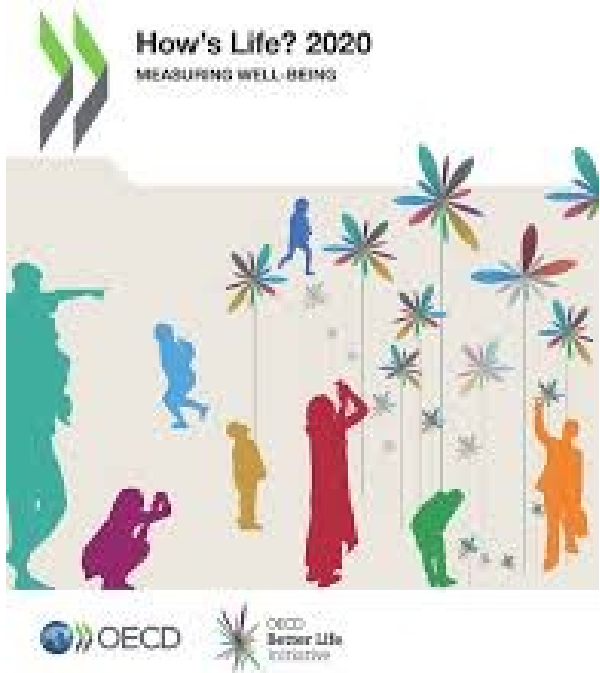
Fall 2024

In pursuit of happiness and job satisfaction

Week 1

Martin GUZI

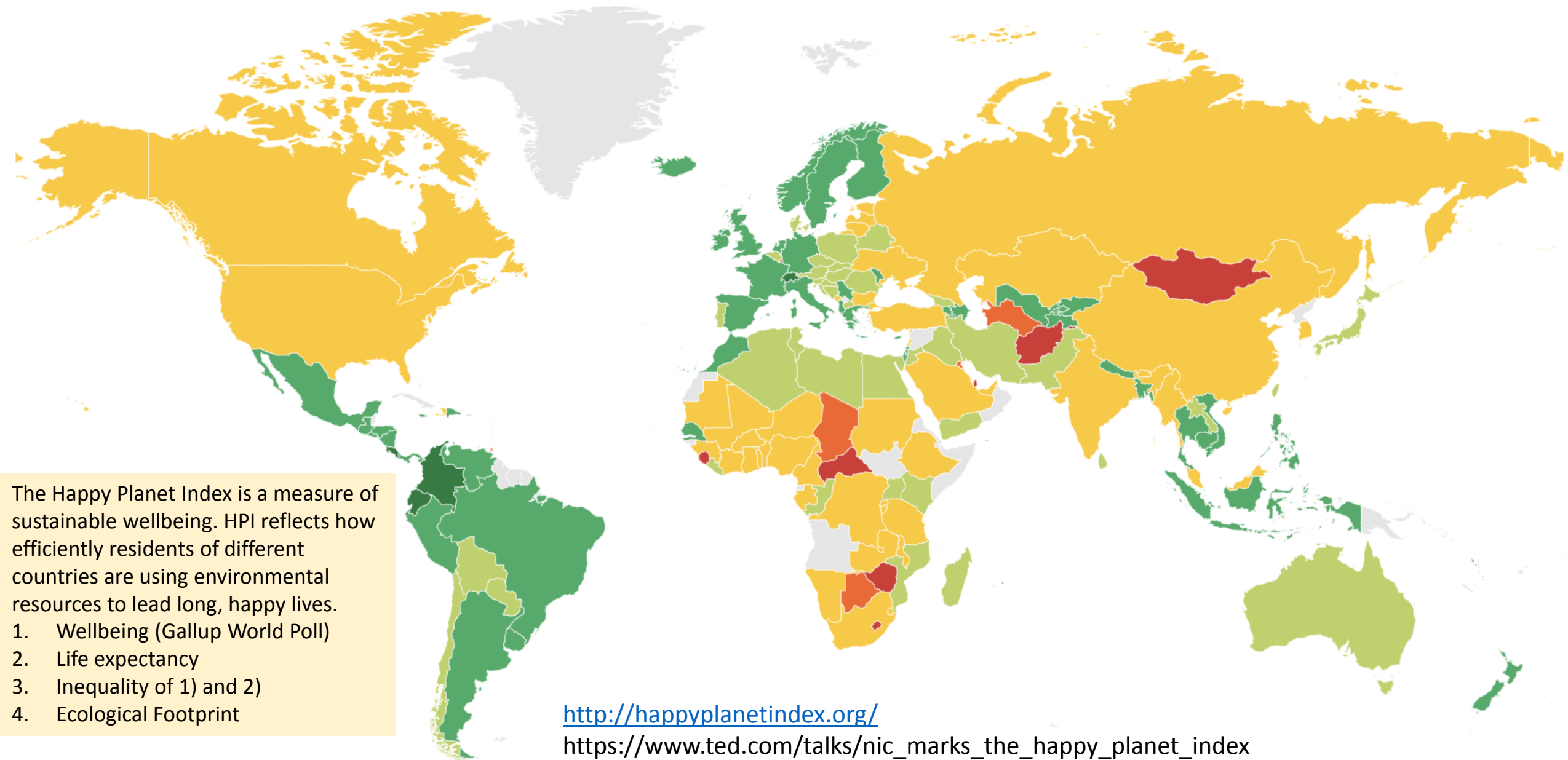
martin.guzi@econ.muni.cz



BAD

GOOD

Happy Planet Index



The Happy Planet Index is a measure of sustainable wellbeing. HPI reflects how efficiently residents of different countries are using environmental resources to lead long, happy lives.

1. Wellbeing (Gallup World Poll)
2. Life expectancy
3. Inequality of 1) and 2)
4. Ecological Footprint

<http://happyplanetindex.org/>

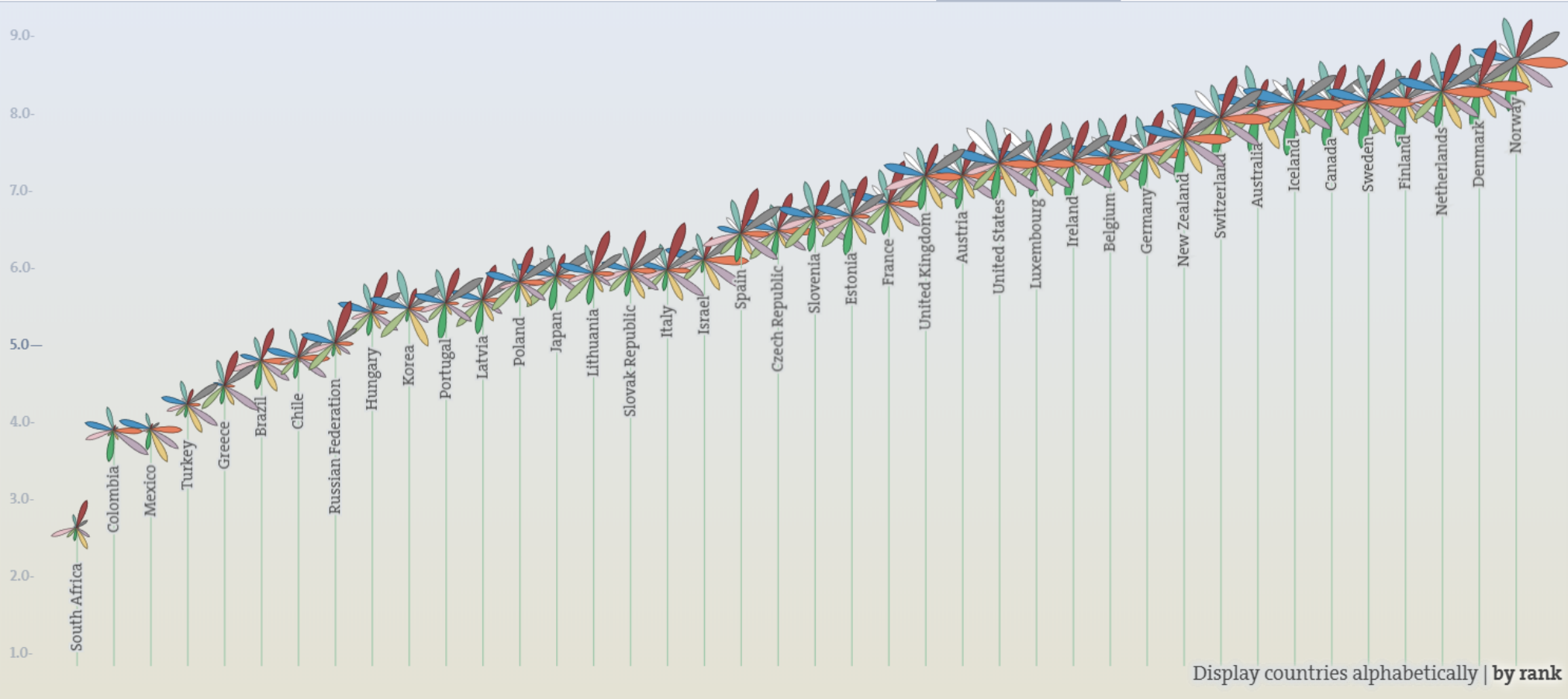
https://www.ted.com/talks/nic_marks_the_happy_planet_index

TOP 10 COUNTRIES

RANK	COUNTRY	LIFE EXPECTANCY	WELL BEING	ECOLOGICAL FOOTPRINT	HPI SCORE
1	COSTA RICA	○ 80.4 years	○ 7.00/10	● 2.65 gha/p	62.1
2	VANUATU	● 70.5 years	○ 6.96/10	● 1.62 gha/p	60.4
3	COLOMBIA	○ 77.3 years	○ 6.35/10	● 1.90 gha/p	60.2
4	SWITZERLAND	○ 83.8 years	○ 7.69/10	● 4.14 gha/p	60.1
5	ECUADOR	○ 77 years	● 5.81/10	○ 1.51 gha/p	58.8
6	PANAMA	○ 78.5 years	○ 6.09/10	● 2.1 gha/p	57.9
7	JAMAICA	● 74.5 years	○ 6.31/10	● 1.84 gha/p	57.9
8	GUATEMALA	● 74.3 years	○ 6.26/10	● 1.77 gha/p	57.9
9	HONDURAS	○ 75.3 years	● 5.93/10	● 1.58 gha/p	57.7
10	URUGUAY	○ 77.9 years	○ 6.6/10	● 2.62 gha/p	57.5

BOTTOM 10 COUNTRIES

RANK	COUNTRY	LIFE EXPECTANCY	WELL BEING	ECOLOGICAL FOOTPRINT	HPI SCORE
143	LUXEMBOURG	● 82.3 years	○ 7.4/10	○ 12.59 gha/p	31.7
144	TRINIDAD & TOBAGO	● 73.5 years	○ 6.19/10	○ 8.24 gha/p	31.6
145	CHAD	○ 54.2 years	○ 4.25/10	● 1.67 gha/p	30.4
146	AFGHANISTAN	○ 64.8 years	○ 2.38/10	○ 0.73 gha/p	29.4
147	SIERRA LEONE	○ 54.7 years	○ 3.45/10	○ 0.97 gha/p	29.0
148	ZIMBABWE	○ 61.5 years	○ 2.69/10	○ 0.98 gha/p	28.6
149	LESOTHO	○ 54.3 years	○ 3.51/10	○ 1.45 gha/p	27.3
150	CENTRAL AFRICAN REPUBLIC	○ 53.3 years	○ 3.08/10	○ 1.21 gha/p	25.2
151	MONGOLIA	● 69.9 years	● 5.56/10	○ 10.08 gha/p	24.5
152	QATAR	○ 80.2 years	○ 6.37/10	○ 15.04 gha/p	24.3



What about you? What matters most to you?

Rate the topics according to their importance to you:

	Housing	<input type="range" value="7"/>
	Income	<input type="range" value="1"/>
	Jobs	<input type="range" value="8"/>
	Community	<input type="range" value="2"/>
	Education	<input type="range" value="6"/>
	Environment	<input type="range" value="7"/>
	Civic Engagement	<input type="range" value="3"/>
	Health	<input type="range" value="4"/>
	Life Satisfaction	<input type="range" value="8"/>
	Safety	<input type="range" value="4"/>
	Work-Life Balance	<input type="range" value="6"/>

Yale's Most Popular Course in History Teaches You to Be Happy—and It's Available Online

"Psychology and the Good Life" attracted nearly one out of four Yale undergraduates. Now you can enroll.

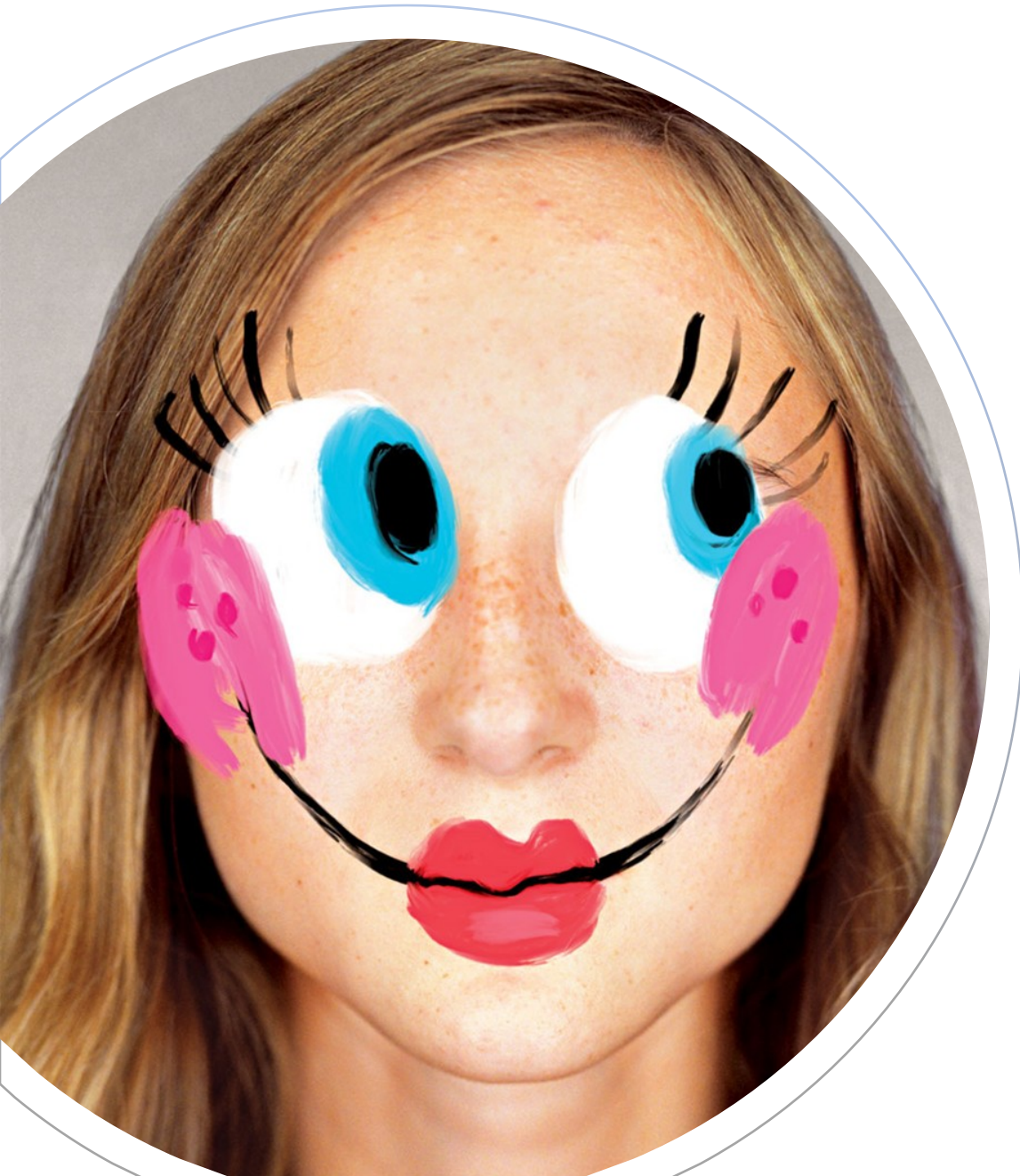


BY SAM DANGREMOND — MAR 2, 2018



When Yale psychology professor Laurie Santos launched "Psychology and the Good Life" on the New Haven campus earlier this year, 1,200 students—about one-fourth university's undergraduate population—enrolled. And now Santos is taking the course to an even wider audience as it's set to launch online this month.

Correlates of High Life Satisfaction and Happiness



Smiling frequency

Smiling with the eyes (“unfakeable smile”)

Ratings of one’s happiness made by friends

Frequent verbal expressions of positive emotions

Sociability and extraversion

Sleep quality

Happiness of close relatives

Self-reported health

High income, and high income rank in a reference group

Active involvement in religion

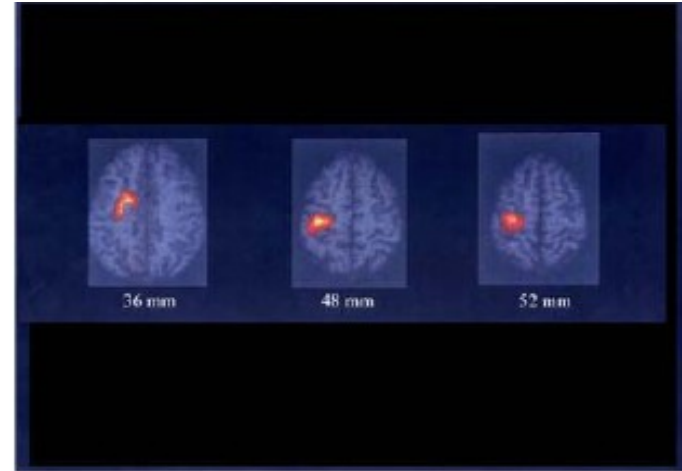
Recent positive changes of circumstances

(increased income, marriage)

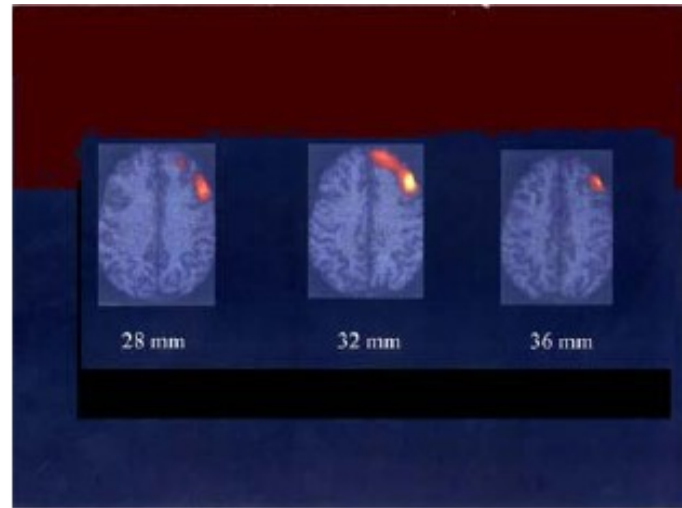
Sources: Diener and Suh (1999), Layard (2005) and Frey and Stutzer (2002).

The Brain Responses to Two Pictures (MRI Scan)

Happy



Sad



Source: Richard Davidson, University of Wisconsin

The measure of well-being

- “How satisfied are you with your life?”
- *“All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are “completely dissatisfied” and 10 means you are “completely satisfied” where would you put your satisfaction with life as a whole?”*
- “Taking all things together, how satisfied are you with your life as a whole these days? Are you very satisfied, satisfied, not very satisfied, not at all satisfied?”
- Data reveals: Surveys asking people about life satisfaction and happiness do measure subjective well-being with reasonable accuracy.

Cantril's Ladder

- Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. If the top step is 10 and the bottom step is 0, on which step of the ladder do you feel you personally stand at the present time?



Named after Albert Hadley Cantril (1906-1969), who developed and used it in surveys.

Cantril's Ladder

Figure III:1
LADDER DEVICE



Here is a picture of a ladder. Suppose we say that the top of the ladder (POINTING) represents the best possible life for you and the bottom (POINTING) represents the worst possible life for you.

- (C) Where on the ladder (MOVING FINGER RAPIDLY UP AND DOWN LADDER) do you feel you personally stand at the *present* time? Step number _____
- (D) Where on the ladder would you say you stood *five years ago*? Step number _____
- (E) And where do you think you will be on the ladder *five years from now*? Step number _____

Named after Albert Hadley Cantril (1906-1969), who developed and used it in surveys.

Figure 2.1: The Geography of Happiness

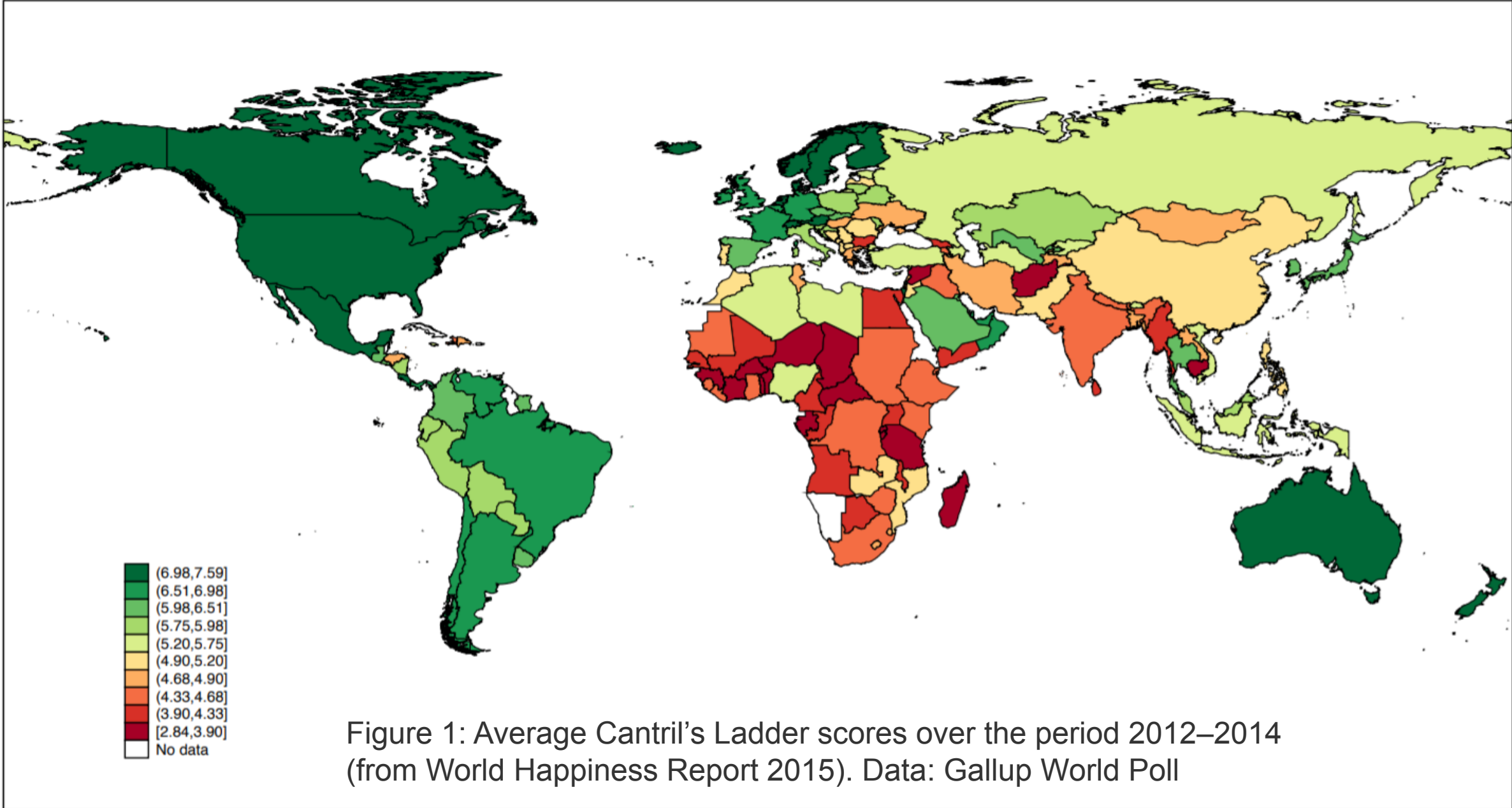
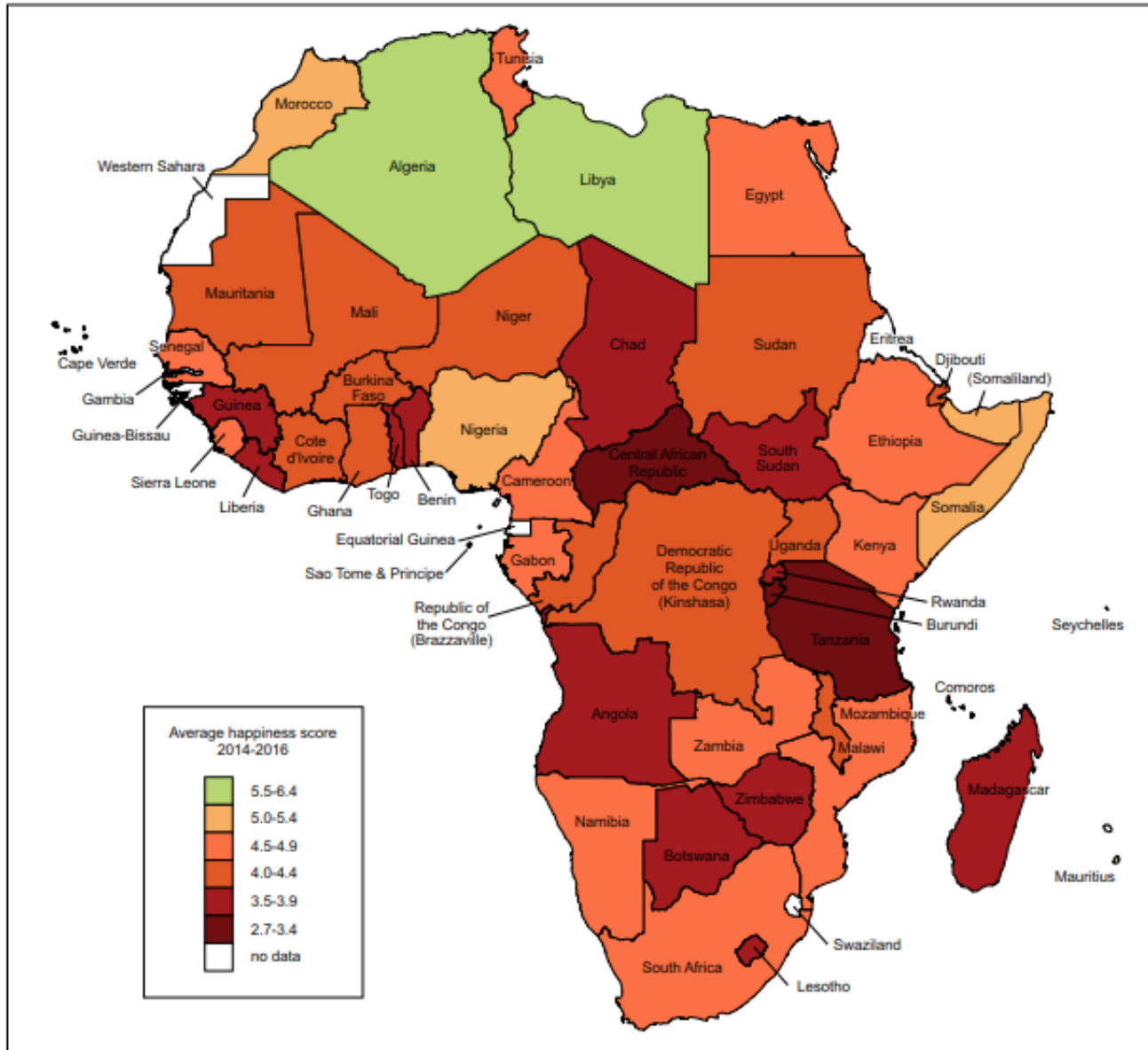


Figure 1: Average Cantril's Ladder scores over the period 2012–2014 (from World Happiness Report 2015). Data: Gallup World Poll

Figure 4.3: Map of Africa with Average Happiness Scores

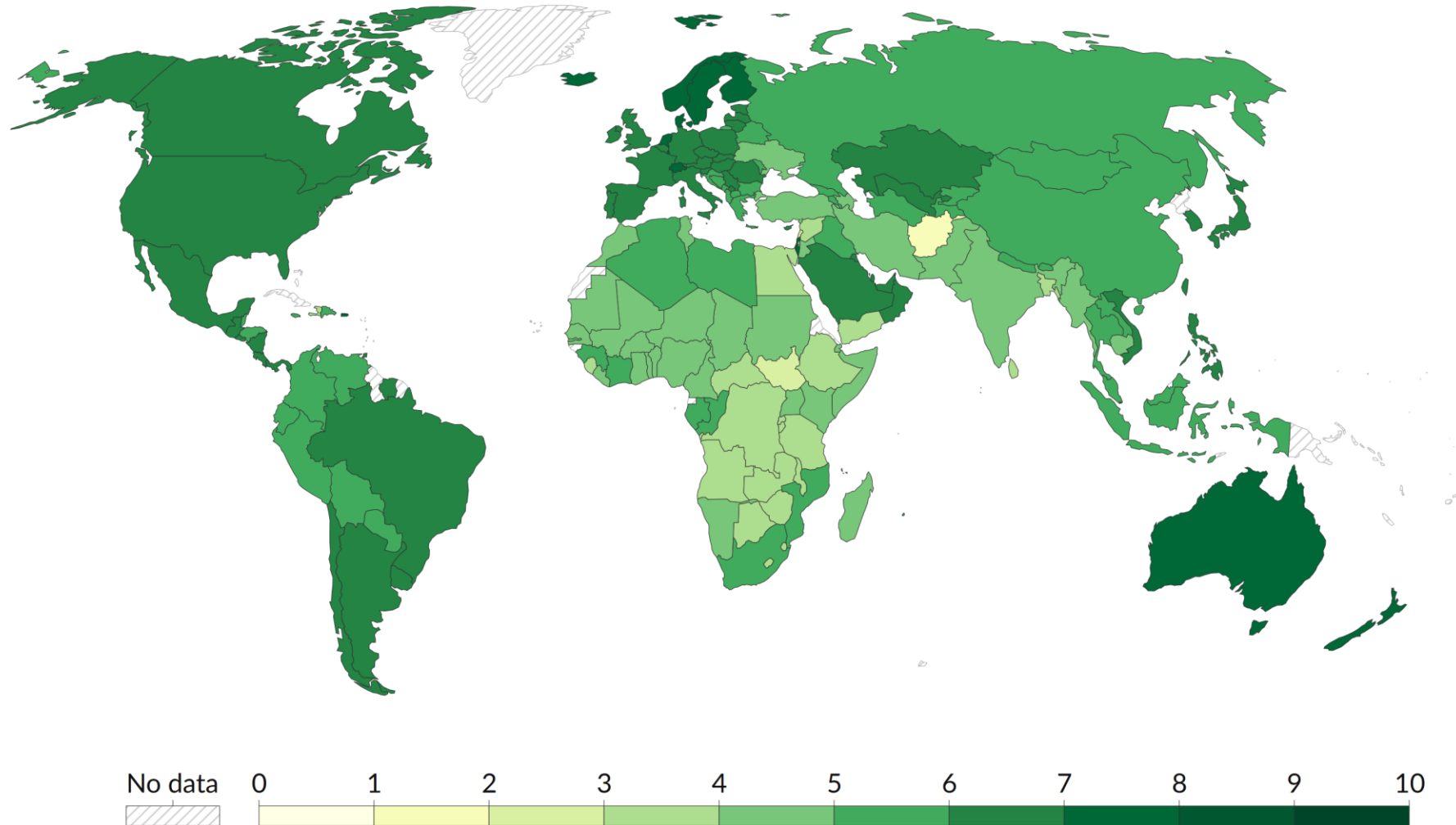


Source: Gallup World Poll data

- Africa's History of Depressed Happiness
- There is a strong negative association between happiness and lived poverty.
- Poor infrastructure
- High religiosity
- Optimist future life evaluations

Self-reported life satisfaction, 2023

Average of responses to the 'Cantril Ladder' question in the Gallup World Poll. The survey asks respondents to think of their current place on a ladder, with the best possible life for them being a 10, and the worst possible life being a 0.



Distribution of self-reported life satisfaction by world region

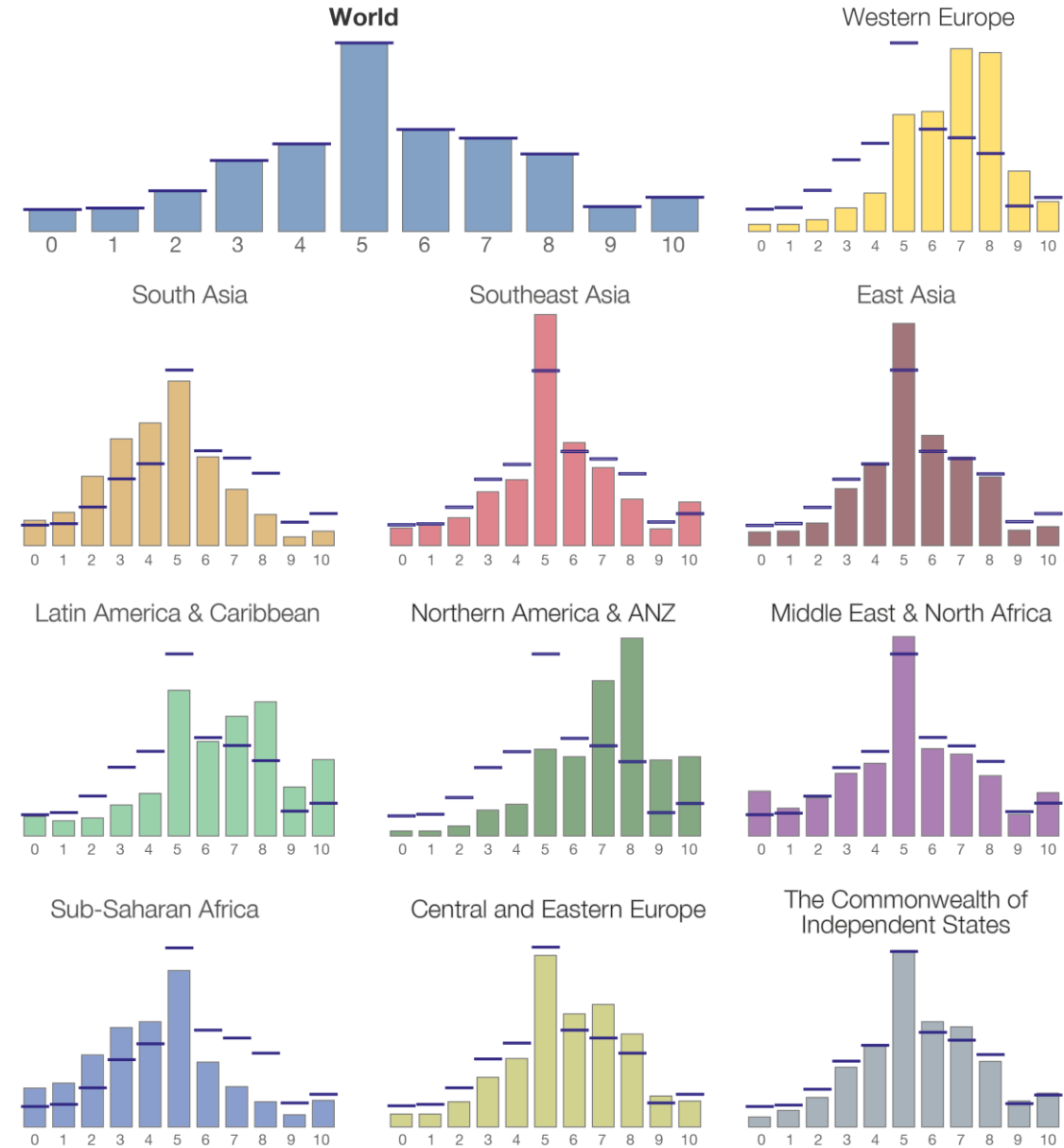


Life satisfaction was reported on a scale from 0 to 10 (with 10 representing the highest satisfaction).

Each colored distribution corresponds to a different world region.

For each region the world distribution has been overlaid (blue markers).

In every case, the height of bars is proportional to the frequency of answers at each score.



The Happiest Countries in Europe

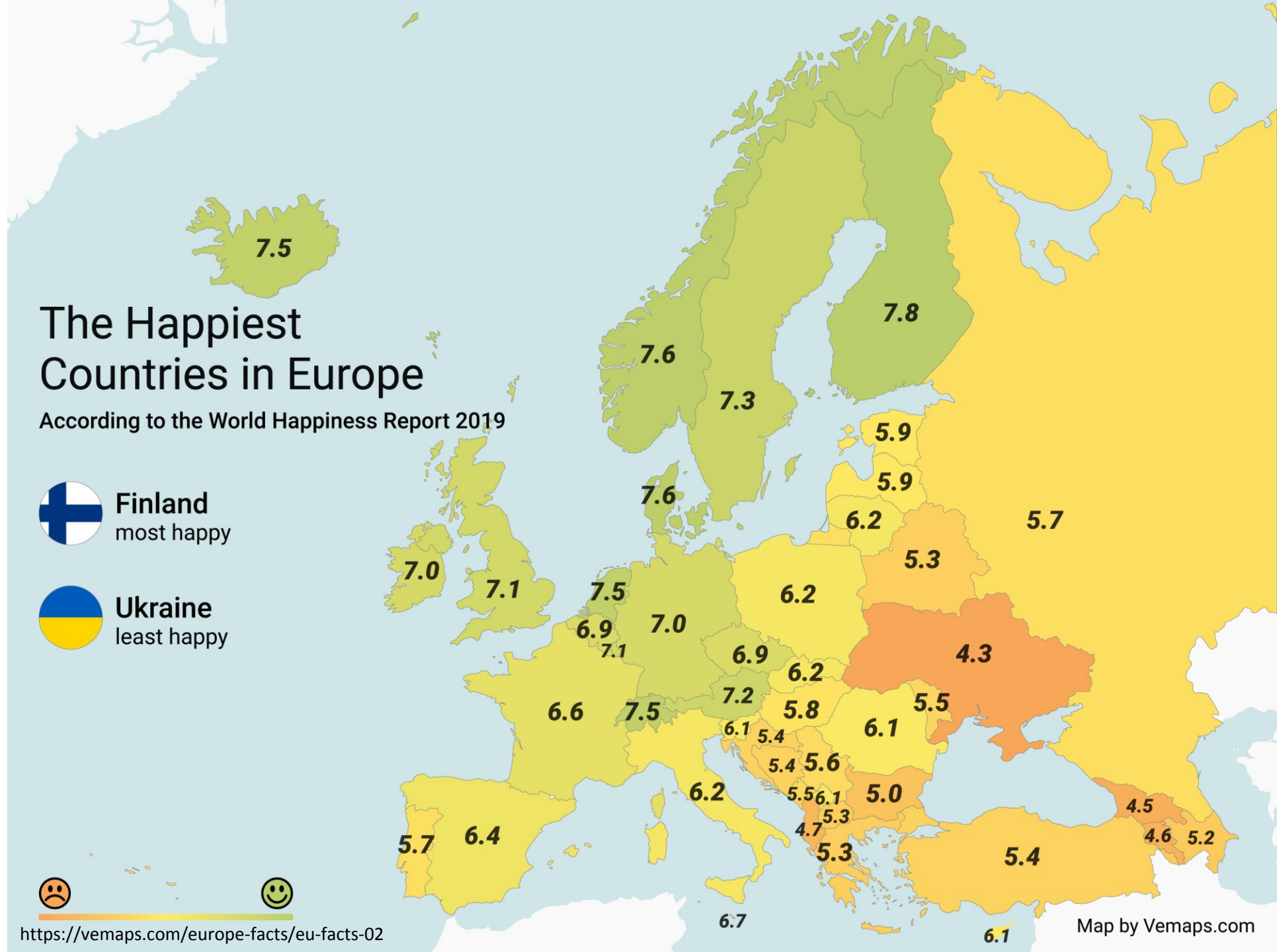
According to the World Happiness Report 2019



Finland
most happy



Ukraine
least happy

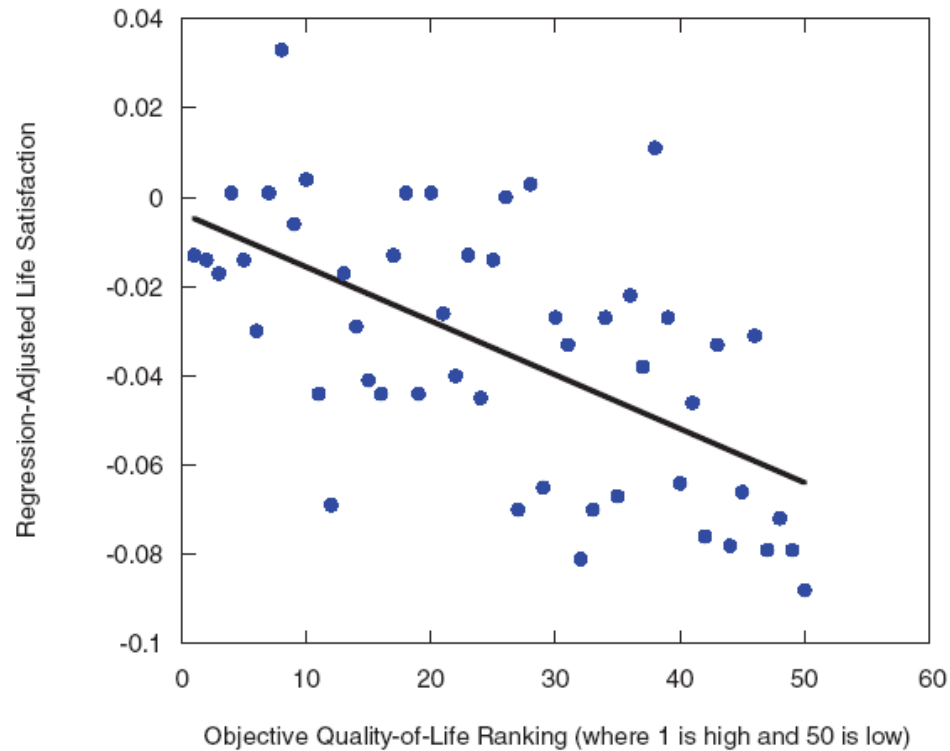


Are objective and subjective data on quality-of-life correlated?

Fig. 1. Fitted equation: Adjusted Life Satisfaction = $-0.0035 - 0.0012$ Objective Rank; $r = 0.598$. Each dot is a state. The correlation is significant at $P < 0.001$ on a two-tailed test. This figure plots state dummy coefficients from a life-satisfaction equation against state rank in quality of life from the compensating-differentials results, based on objective amenities like sunshine hours, of Gabriel *et al.* (24). Life satisfaction is coded for each individual from a score of 4 (very satisfied) to 1 (very dissatisfied). On the y axis, the regression controls for household income, as well as the survey respondent's gender, age, age squared, education, marital status, employment status, and race, and also year dummies and month-of-interview dummies. Alabama is included. Washington, DC, is omitted from (24) and thus from here. The bottom right-hand observation is New York. Wording of the question in the BRFSS questionnaire (questionnaire line 206):

In general, how satisfied are you with your life?

- 1 Very satisfied
- 2 Satisfied
- 3 Dissatisfied
- 4 Very dissatisfied



- 1.3 million randomly sampled Americans 2005 to 2008
- Quality of life is based on data on Precipitation, Humidity, Heating Degree Days, Cooling Degree Days, Wind Speed, Sunshine, Coast, Inland Water, Federal Land, Visitors to National Parks, Visitors to State Parks, Number of hazardous waste sites Environmental Regulation Leniency, Commuting Time, Violent Crime Rate, Air Quality-Ozone, Air Quality-Carbon Monoxide, Student-teacher ratio, State and local taxes on property, income and sales and other, State and local expenditures on higher education, public welfare, highways, and corrections, Cost-of-living

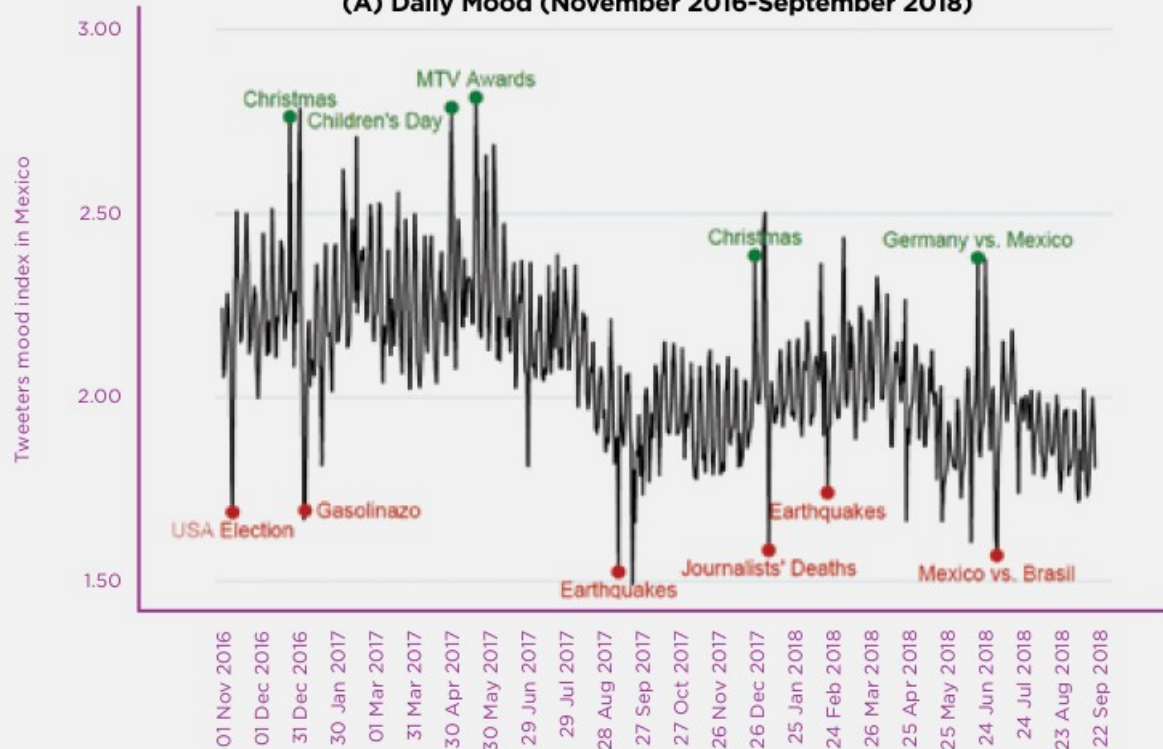


Across US states:

There is a match between life-satisfaction scores (subjective data) and the quality of life calculated using (only) non-subjective data.

Big data as a complement to survey-based well-being measures

(A) Daily Mood (November 2016-September 2018)

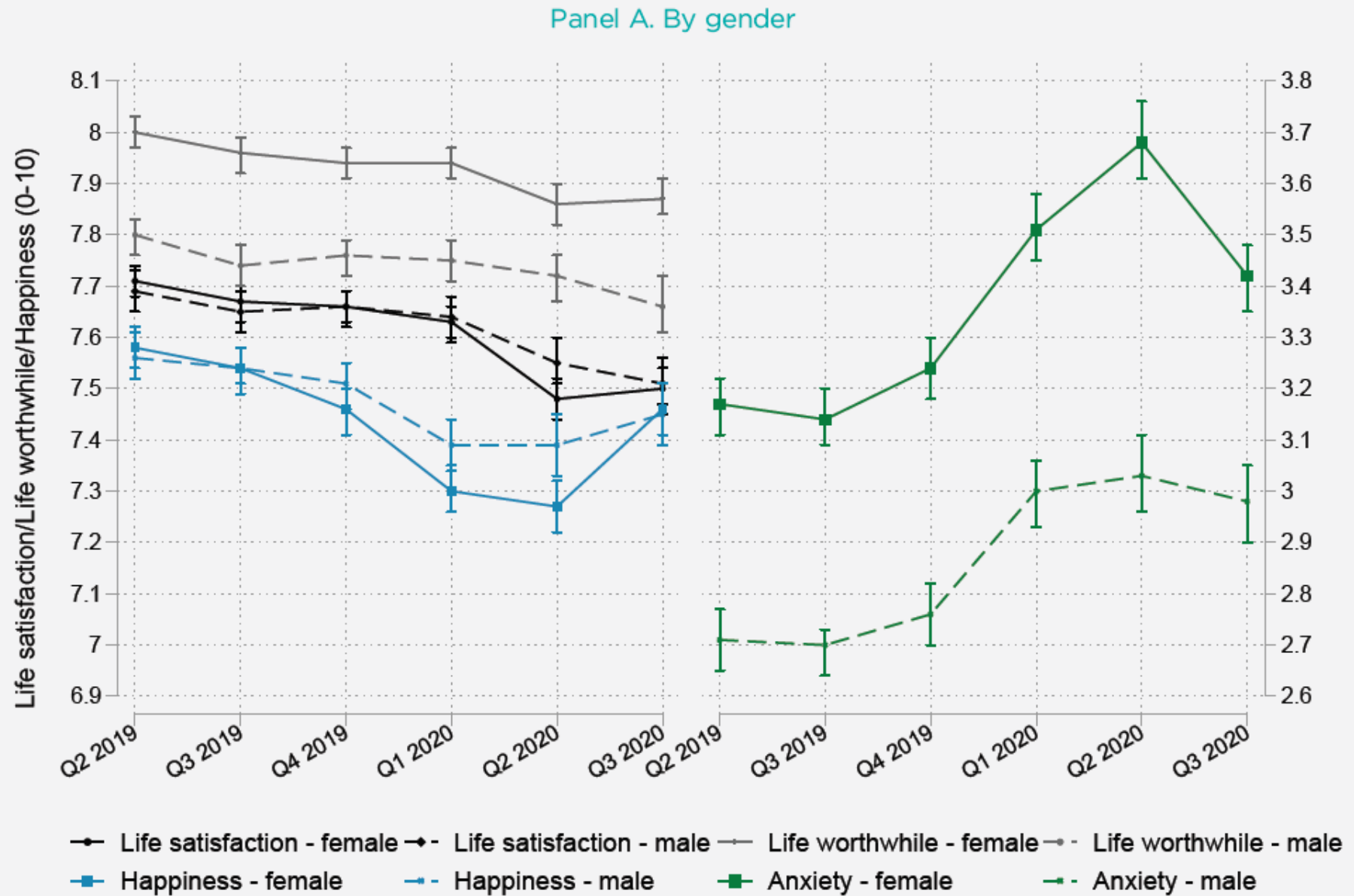


(B) Mexico-Germany Game (Minute-by-Minute Mood)



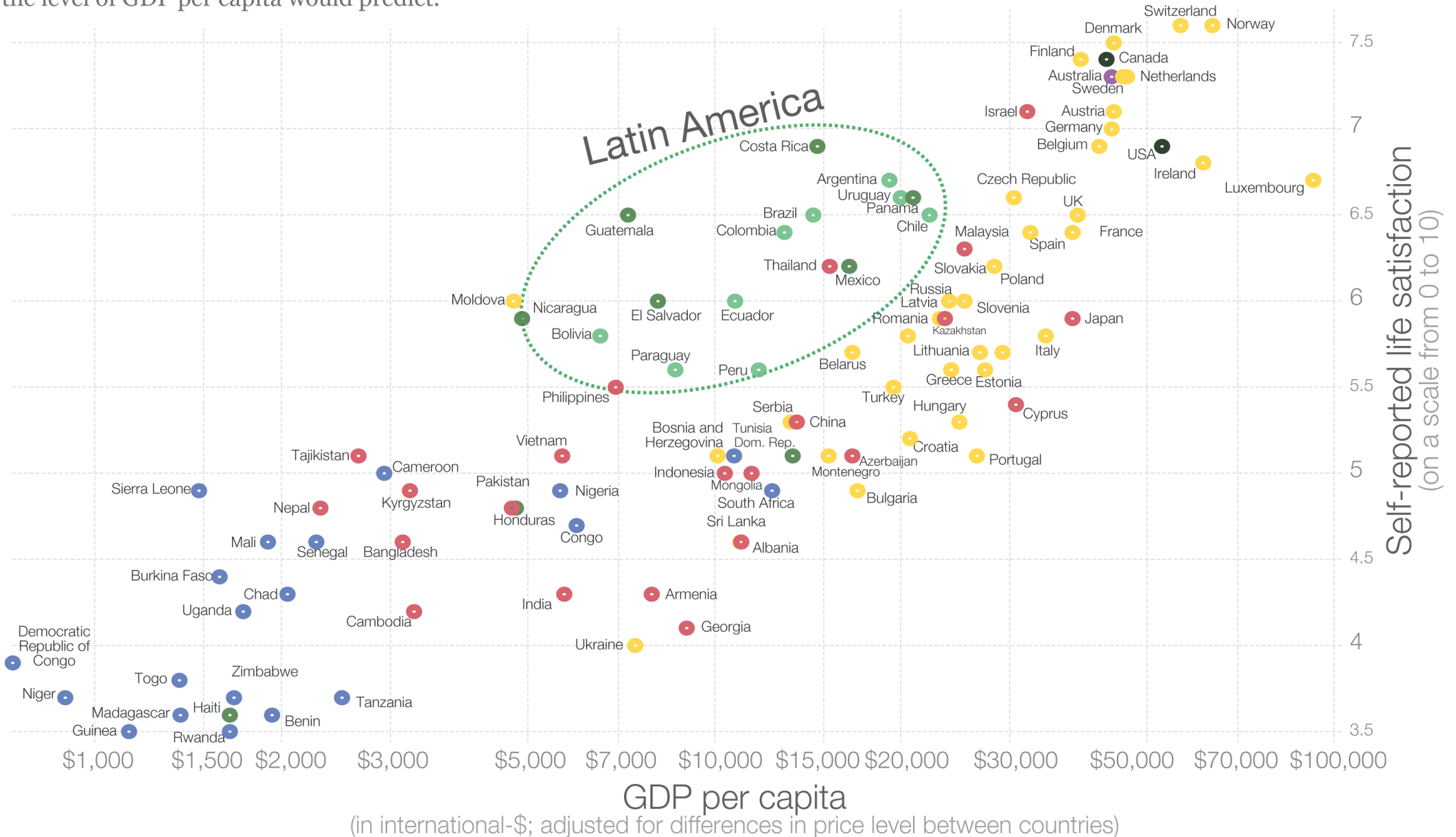
Notes: We thank Gerardo Leyva from Mexico's National Institute of Statistics and Geography (INEGI) for generously sharing his data, which were based on the subjective well-being surveys known as BIARE and the big data research project "Estado de Animo de los Tuiteros en Mexico" (The mood of twitters in Mexico), both carried out by INEGI. These data are part of a presentation given by Gerardo Leyva during the "2° Congreso Internacional de Psicología Positiva "La Psicología y el Bienestar", November 9-10, 2018, hosted by the Universidad Iberoamericana, in Mexico City and in the "Foro Internacional de la Felicidad 360", November 2-3, 2018, organized by Universidad TecMilenio in Monterrey, Mexico.

Figure 2.3: Quarterly estimates of four UK well-being measures, 2019-2020



Self-reported life satisfaction vs GDP per capita, in 2015

The color represents the continent of the country. People in many Latin American countries report higher life-satisfaction than the level of GDP per capita would predict.



Data sources: World Bank for GDP per capita; Gallup World Poll for self-reported life satisfaction.

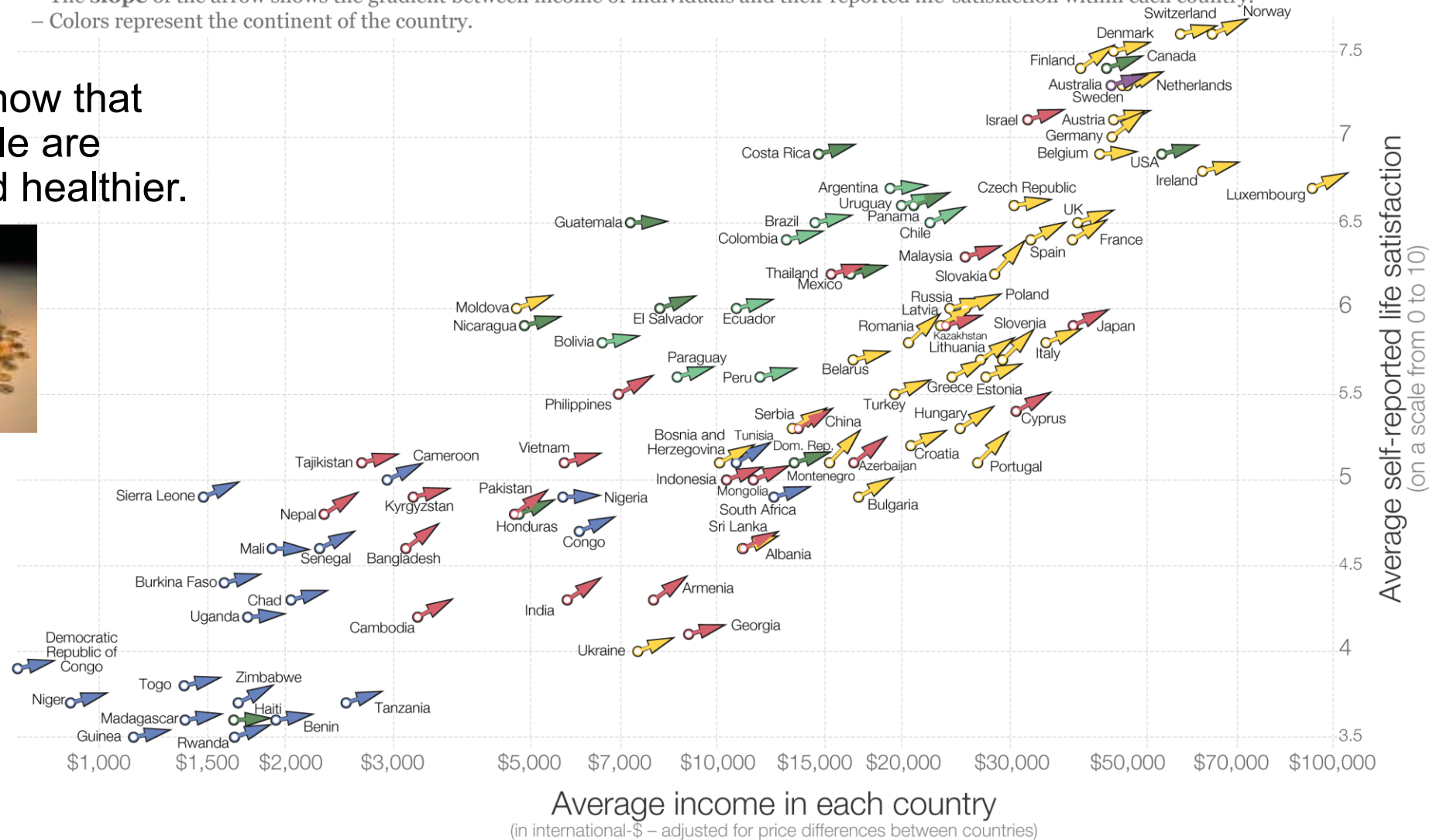
The data visualization is available at [OurWorldinData.org](https://ourworldindata.org). There you find the research and more visualizations on this topic.

Licensed under CC-BY-SA by the author Max Roser.

People in richer countries tend to be happier and within all countries richer people tend to be happier

- The **position** of the arrow shows the average life satisfaction reported by the population of a country (vertical axis) and the average income of that country (horizontal axis).
- The **slope** of the arrow shows the gradient between income of individuals and their reported life-satisfaction within each country.*
- Colors represent the continent of the country.

The data show that richer people are happier and healthier.



* The gradients correspond, country by country, to the regression coefficients between income quintiles and the related average life satisfaction reported by people within each income quintile.
Data sources: *World Bank* for data on incomes by quintile (based on income shares by quintile and GDP per capita as the mean income); *Gallup World Poll* for life satisfaction by income quintile. The visualization is available at OurWorldinData.org. There you find the research and more visualizations on life satisfaction. Licensed under [CC-BY-SA](http://creativecommons.org/licenses/by-sa/4.0/) by the author Max Roser.

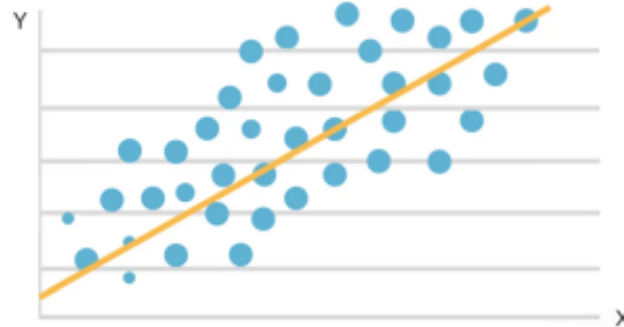
In summary

- **Cross-country analysis:** positive relation between Life Satisfaction and GDP per capita.
- **Cross-section and panel** analysis based on individual data: strong relation between individual income and well-being.
- **Aggregate time-series:** no correlation between Life Satisfaction and GDP per capita.
- **The Easterlin Paradox is related to the time-dimension.**

Microeconomics of human well-being

Regression equations

Subjective well-being = f(Age, gender, education level, income, marital status, friendship network, region, year,)



Big effects

Unemployment

Divorce

Marriage

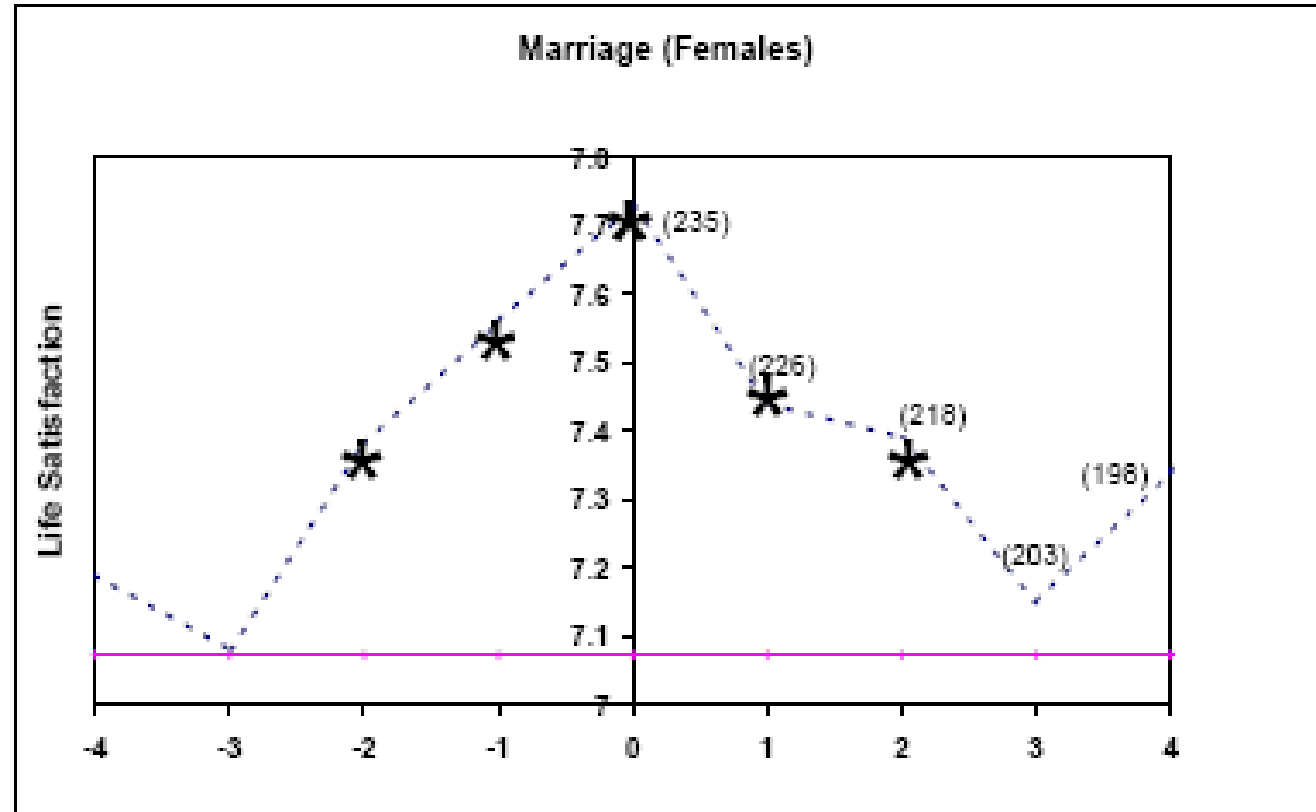
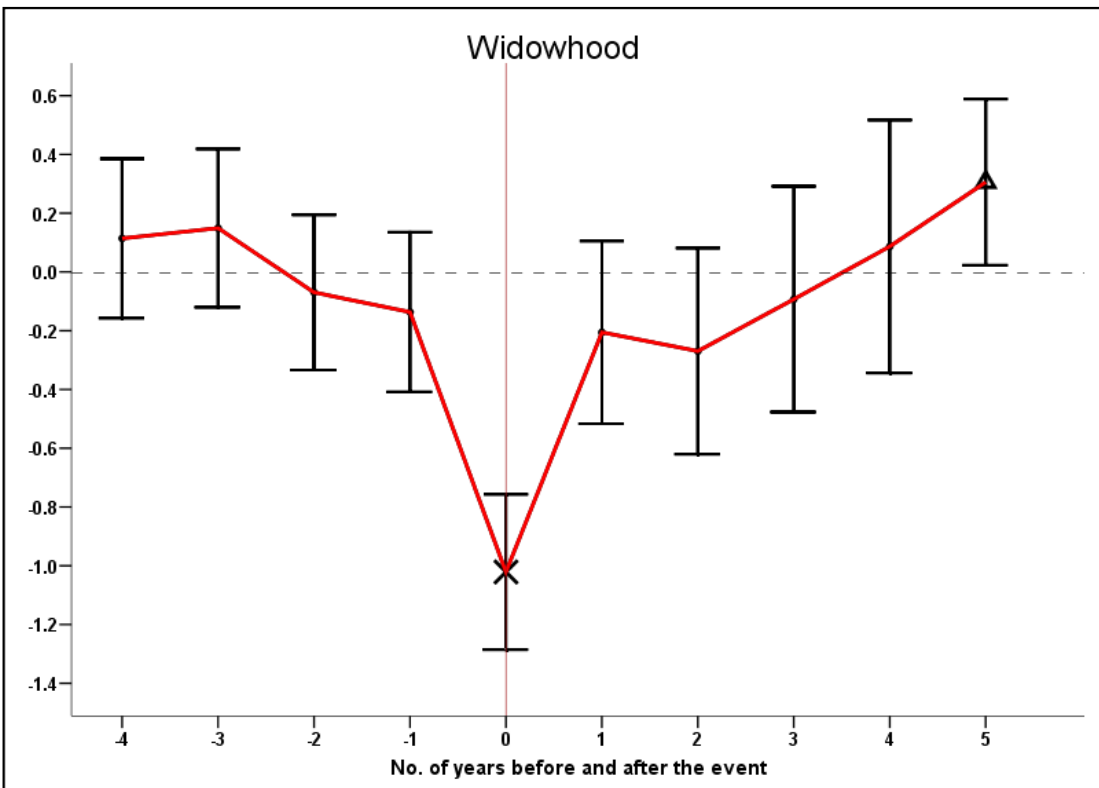
Bereavement (the death or loss of a loved one)

Friendship networks

Health

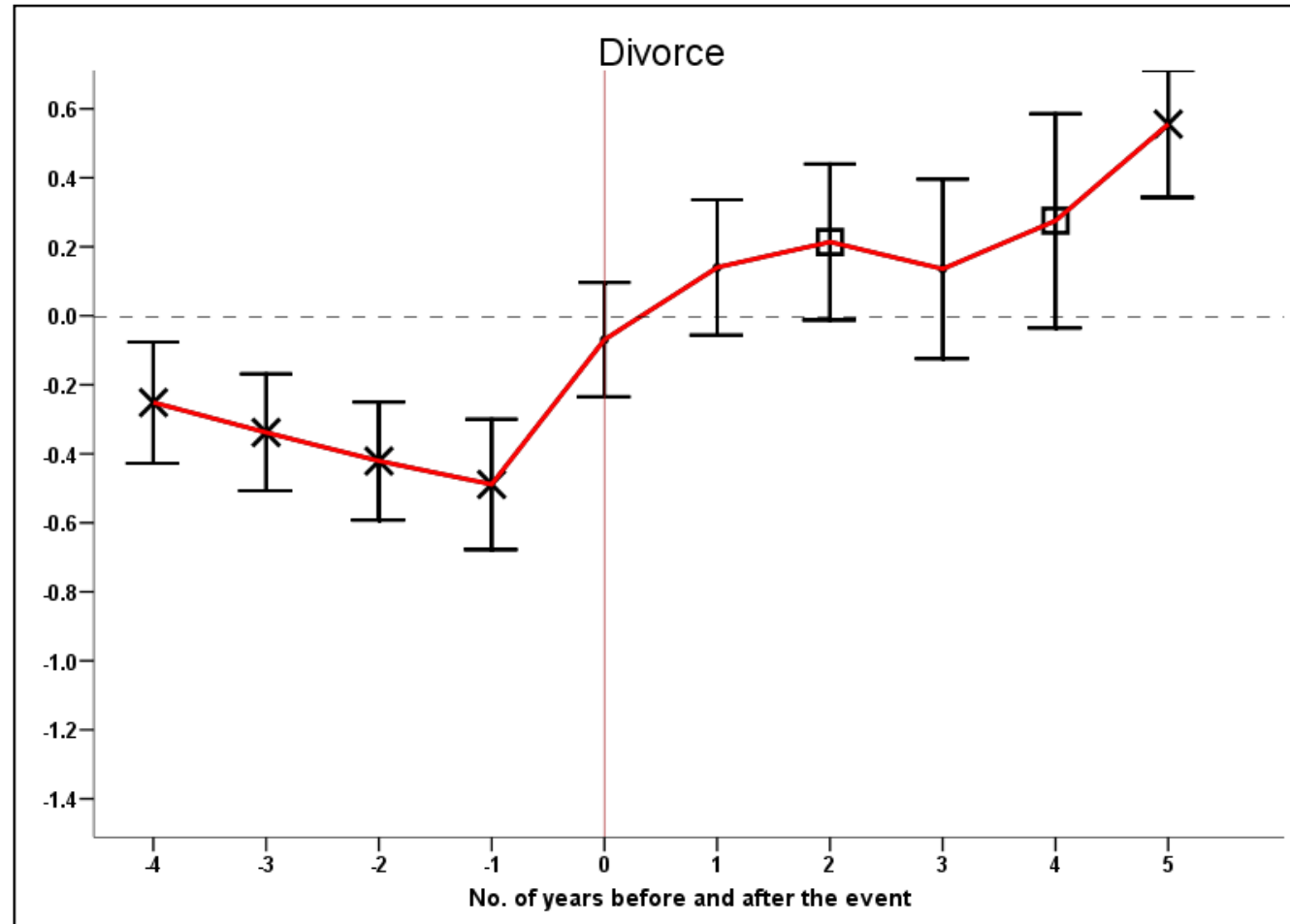
Children

- Important life events such as marriage or divorce do affect our happiness, but have surprisingly little long-term impact. The evidence suggests that people tend to adapt to changes.

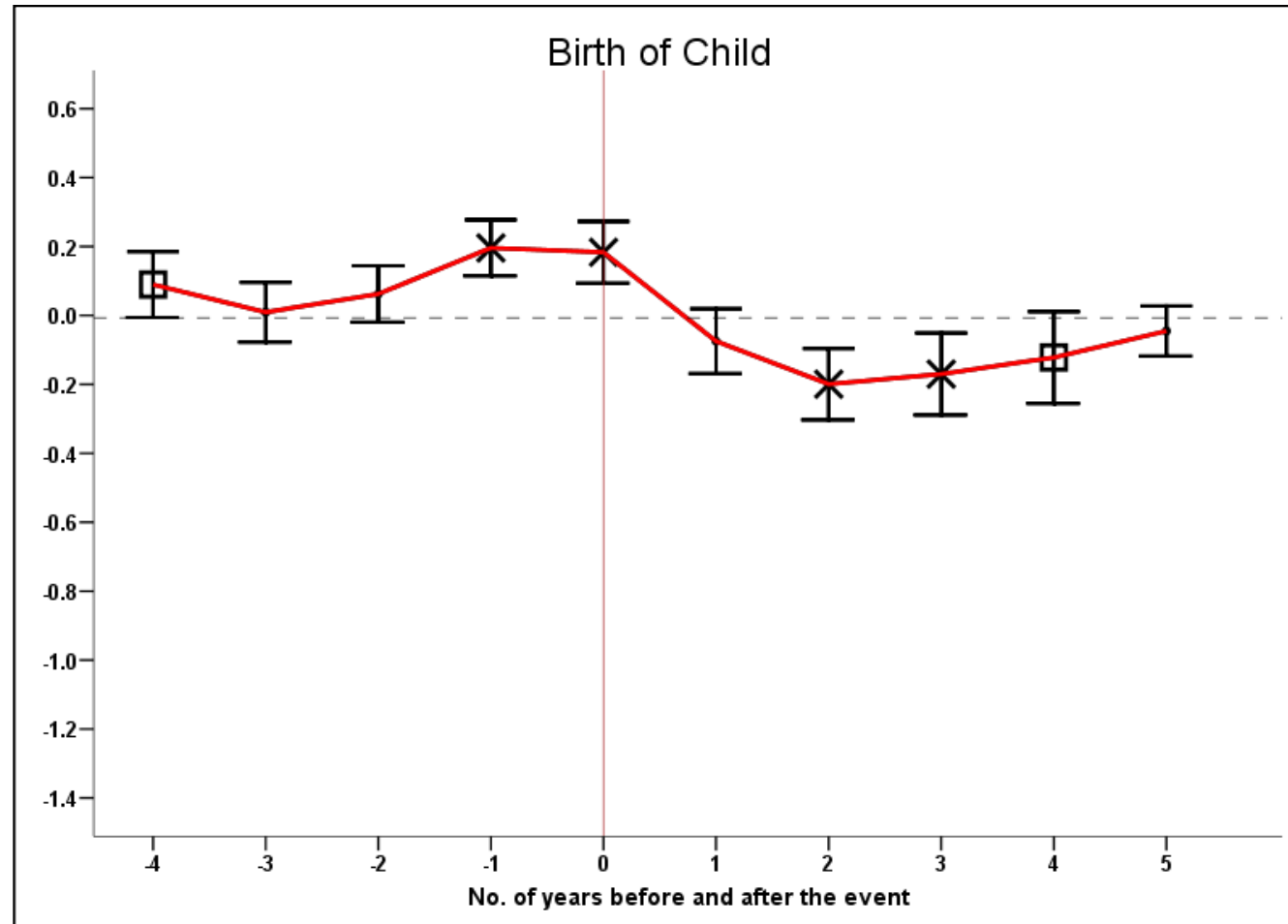


Note: Research follows the same people over time.

Divorce (eventually) makes people happier



Happiness and children



The effect of life events on life satisfaction

In each individual plot, the red line marks the estimated effect of the corresponding event at a given point in time.

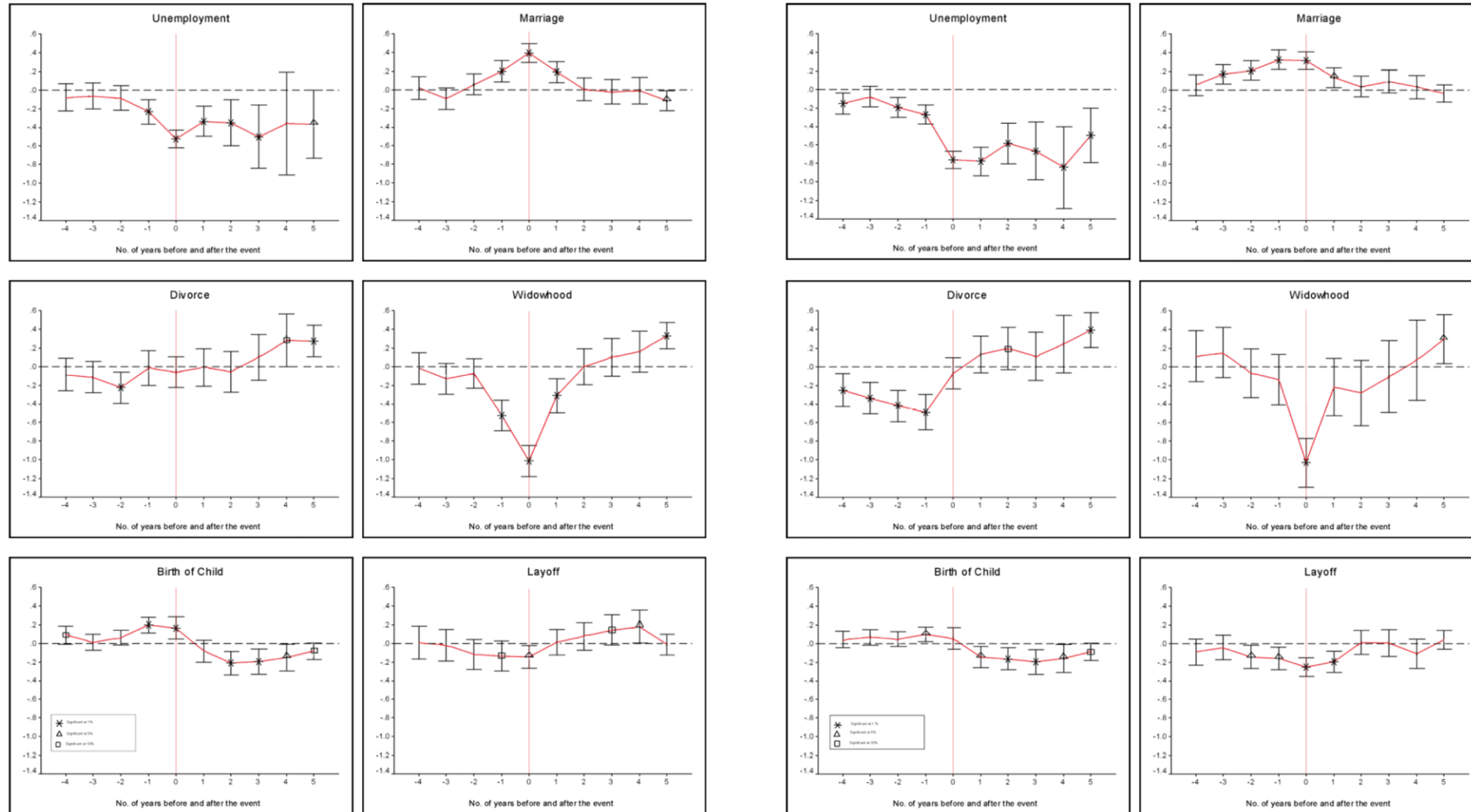
'Whiskers' denote the range of confidence around estimates.

Time is labeled so that 0 marks the point when the event took place. Negative and positive values denote years before and after the event.

All estimates control for individual characteristics, so the figures show the effect of the event after controlling for other factors, such as changes in income etc.

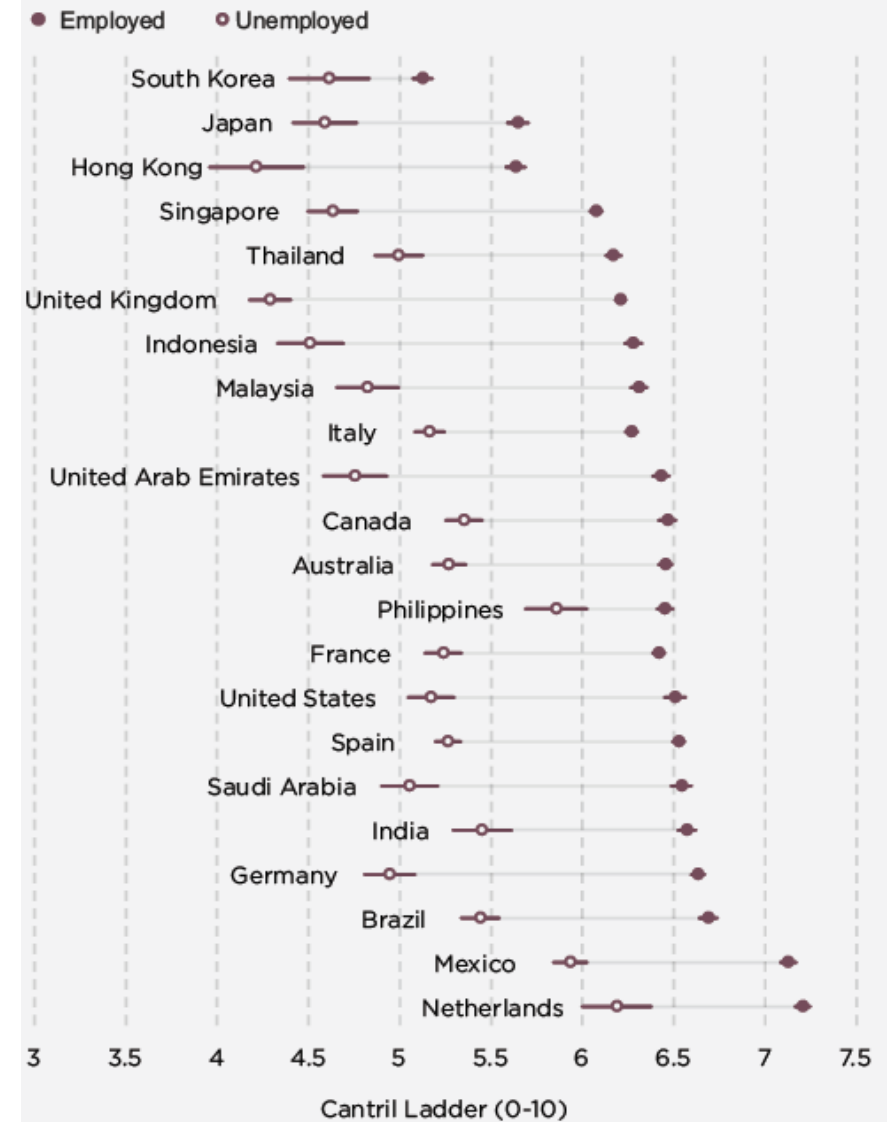
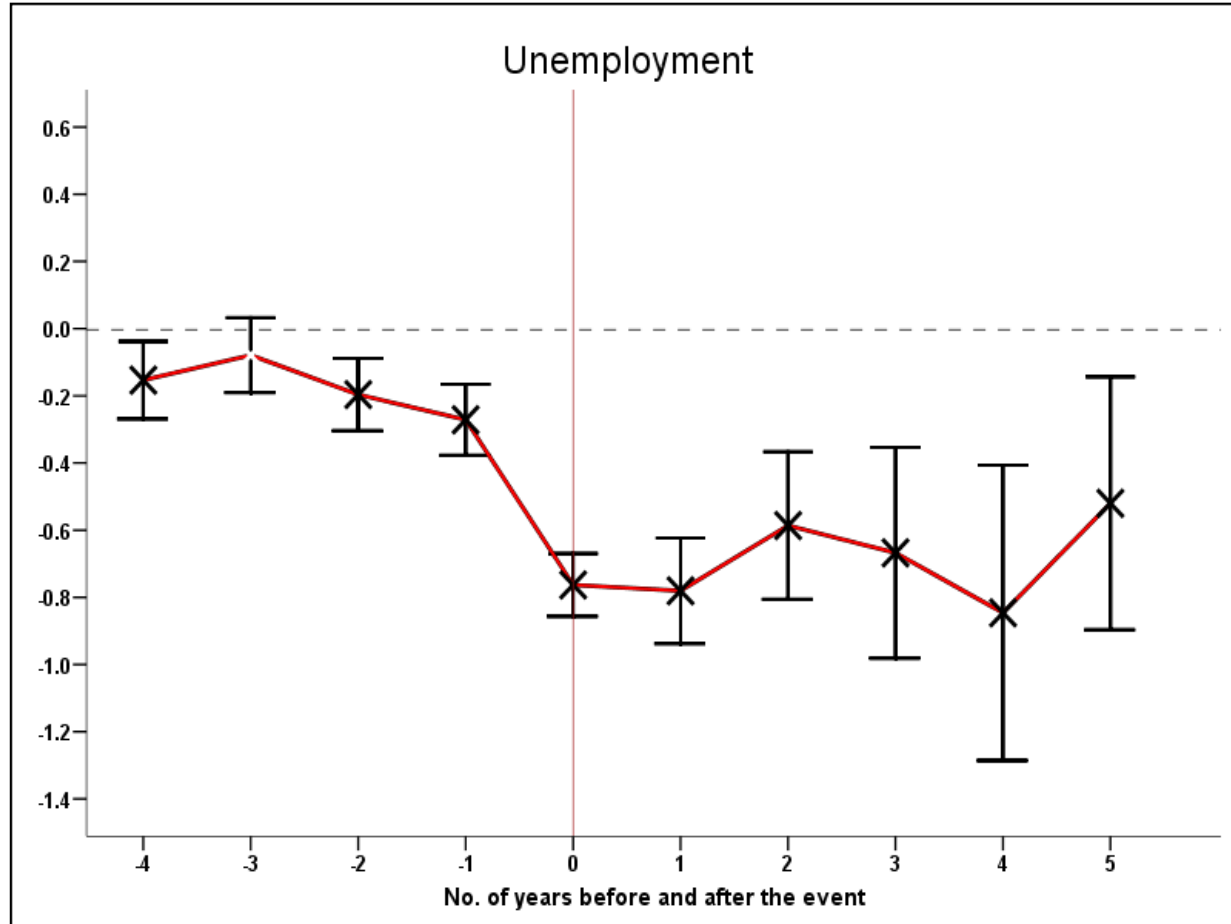
on women

on men



But people do not seem to adapt to jobs

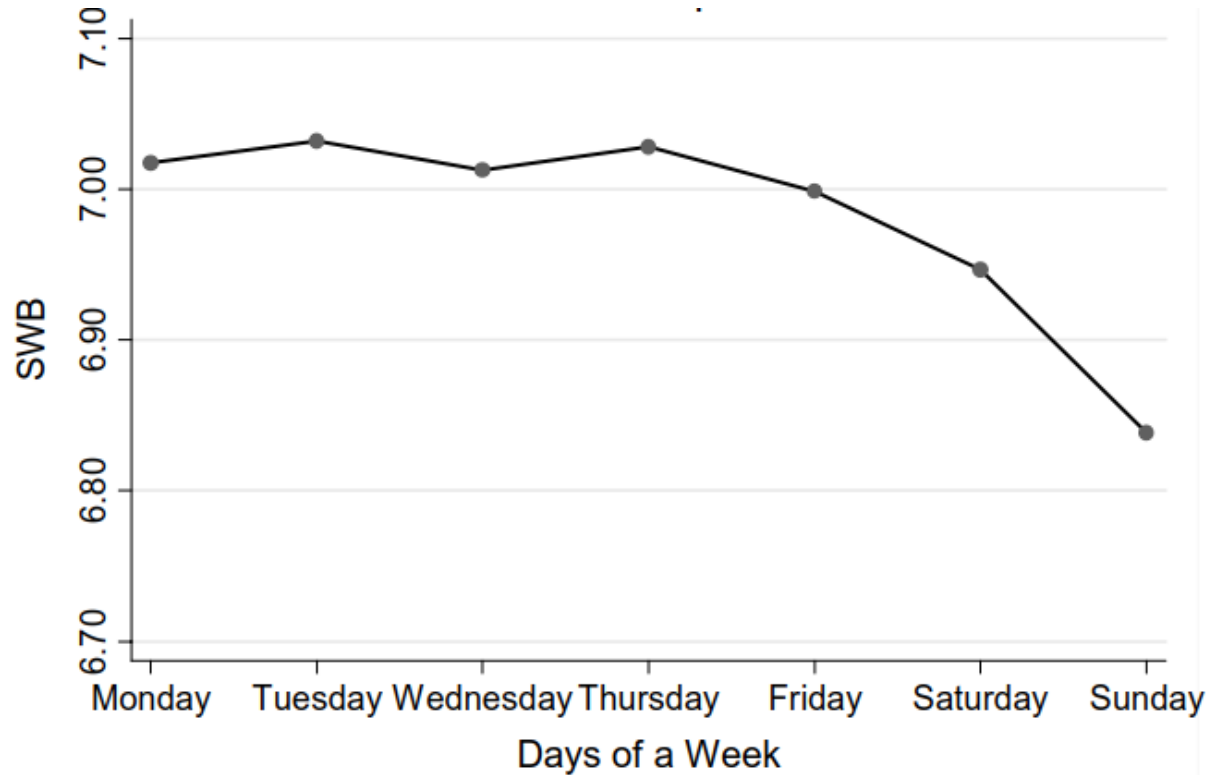
Figure 7.6: Life satisfaction by employment status around the world (2020)



The evidence suggests that when a person is made unemployed:

- 20% of the fall in mental well-being is due to the decline in income**
- 80% is due to non-pecuniary things (loss of self-esteem, status..).**

The effects of the day of the week on subjective well-being among people



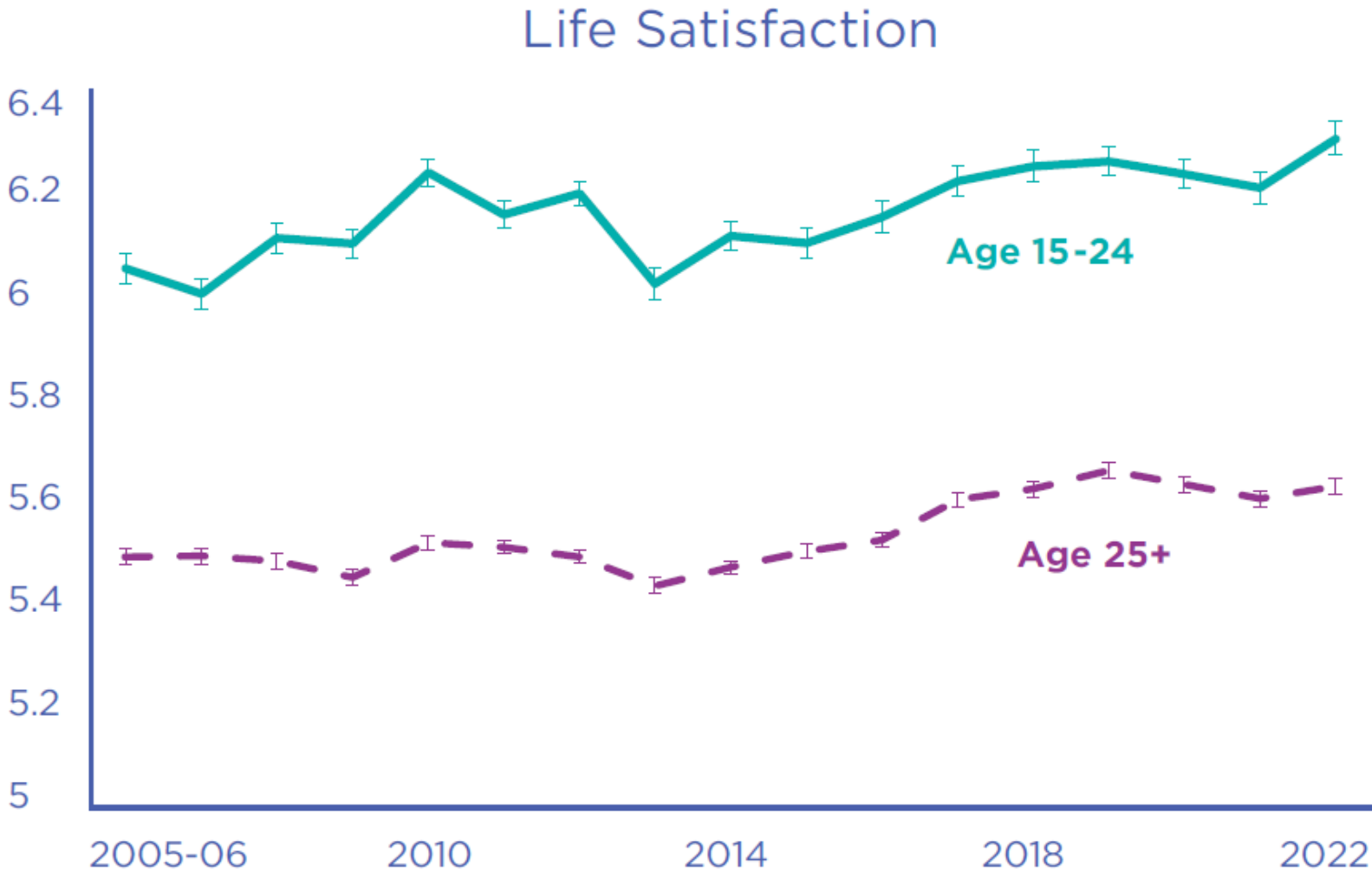
Sundays are found to be the bluest day

Intriguing life cycle pattern of well-being

<https://www.youtube.com/watch?v=VKTXSBS4Ok8>

Fig. 3.1A: Global levels and trends in life satisfaction from 2006 through 2022.

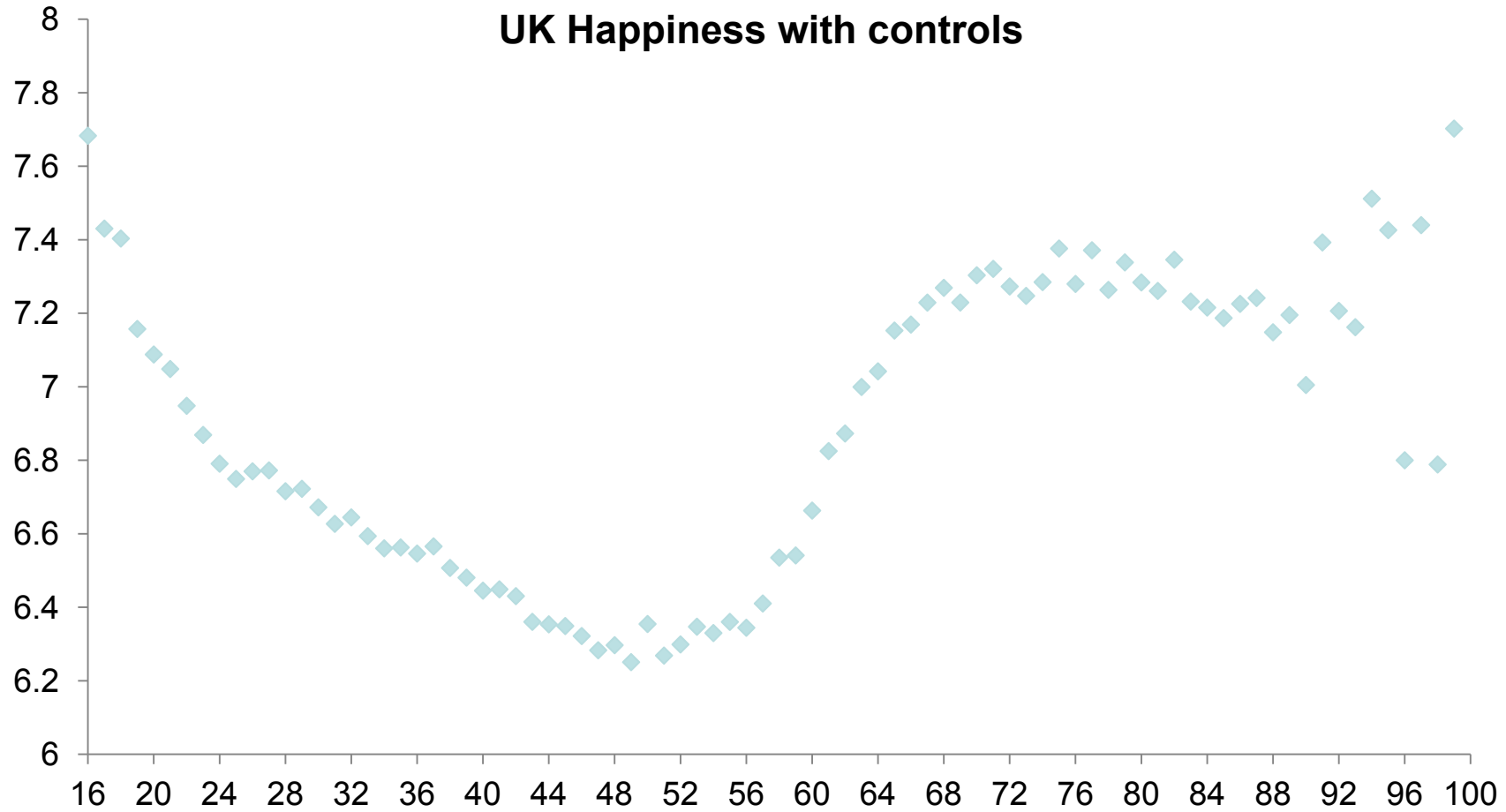
Gallup World Poll (age 15-24 vs. age 25+)



The latest UK government data

(Sample: 100,000 Britons)

Blanchflower-Oswald estimates

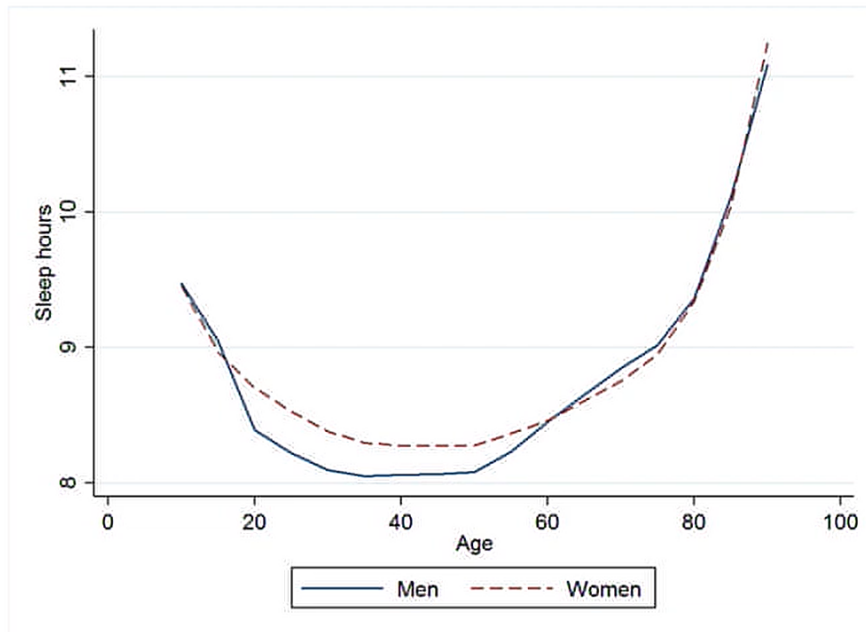


Sleeping problems

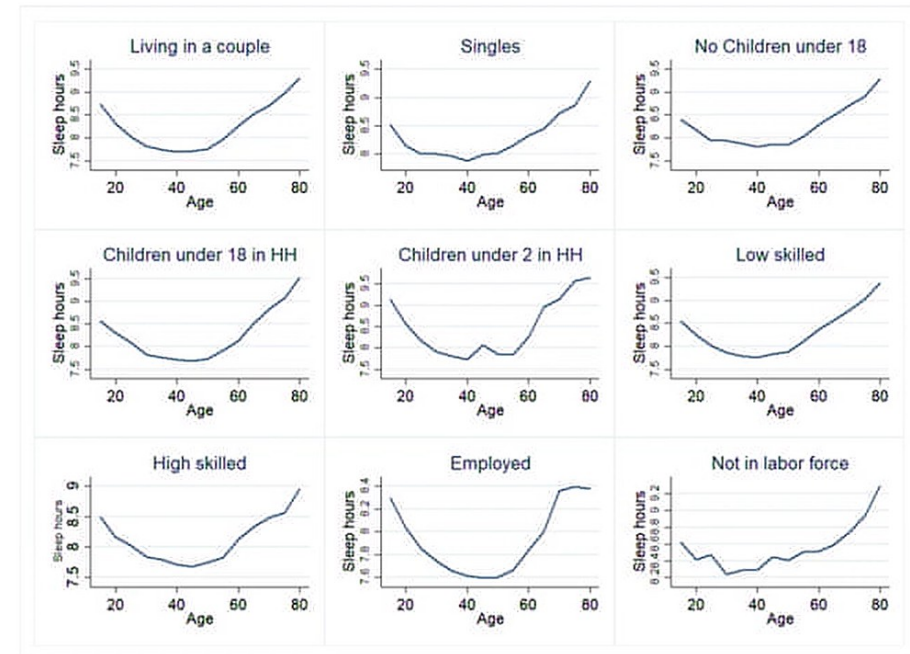
- Sleeping problems are a marker of internal mental distress

A midlife sleep low (pooling 9 nations)

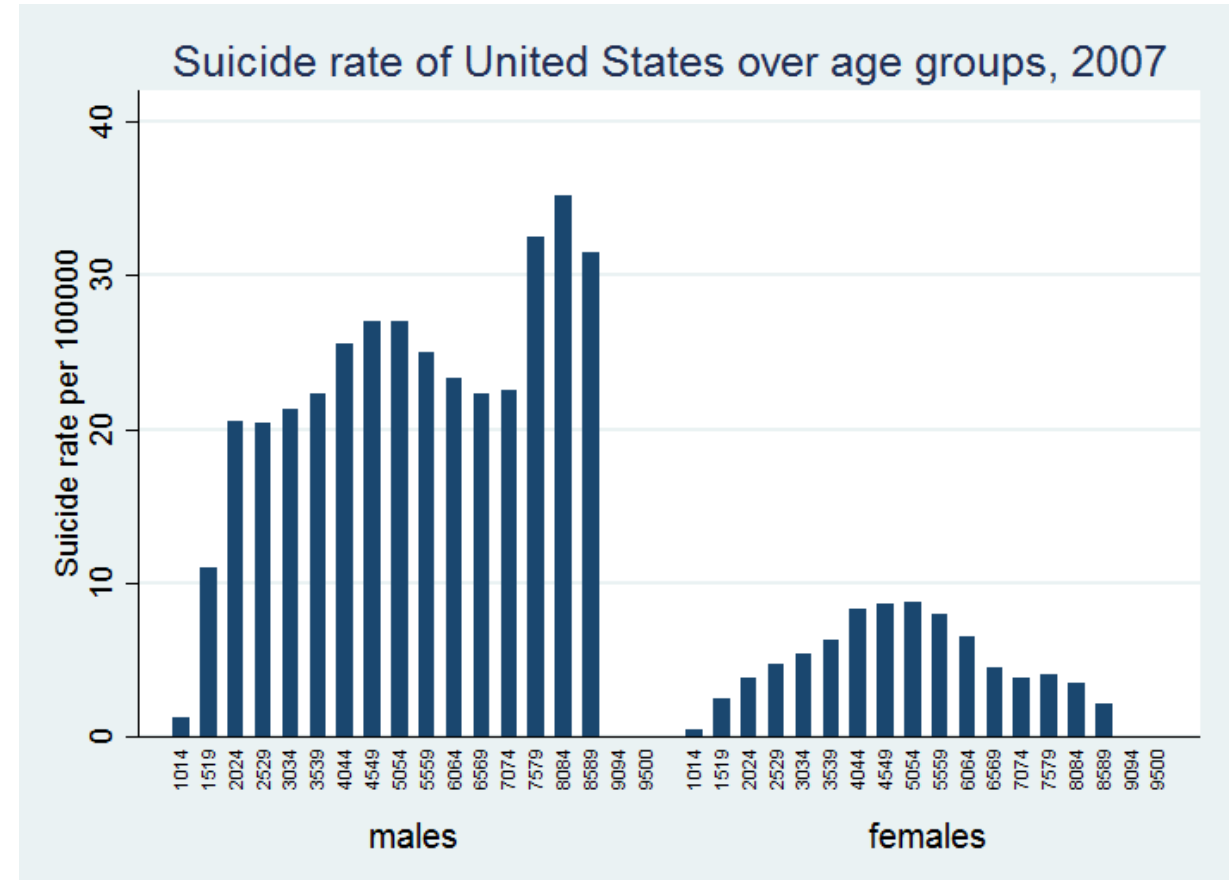
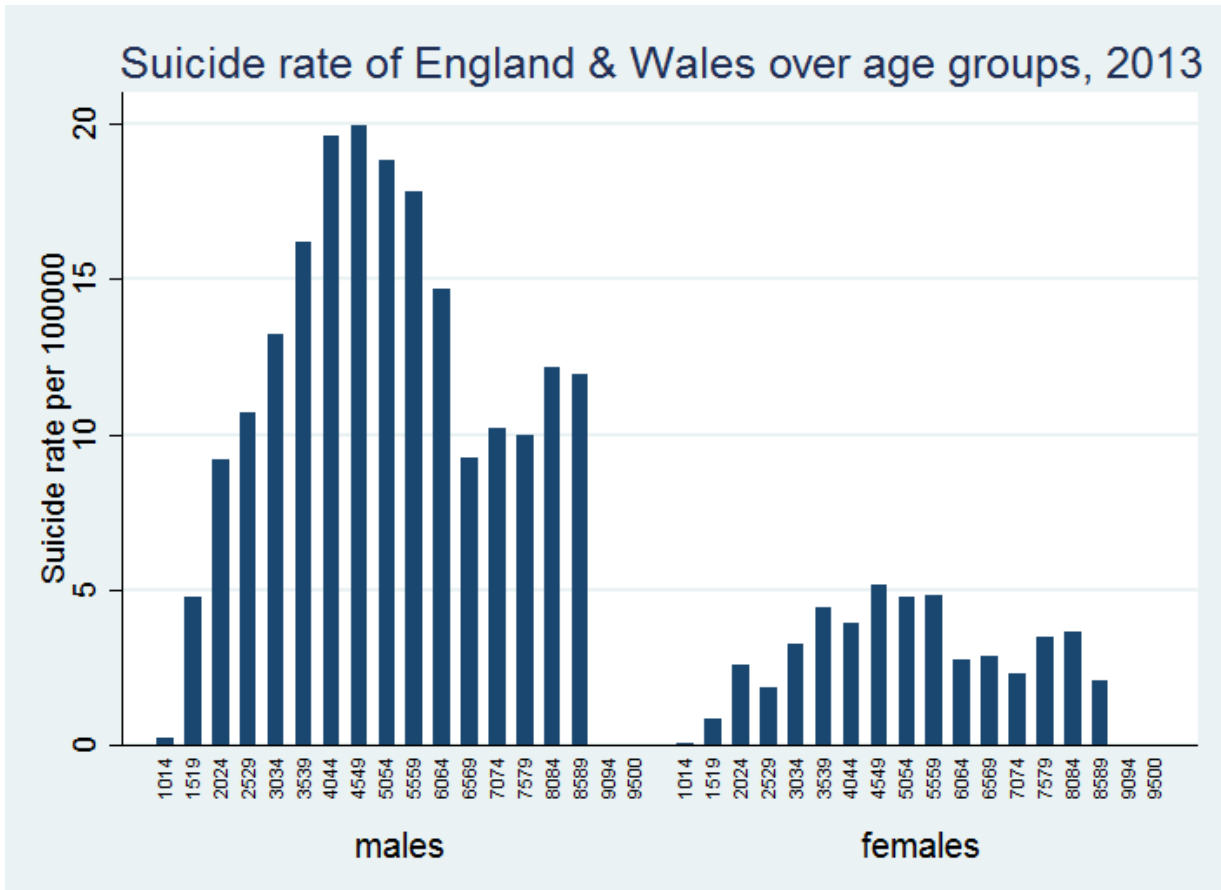
Time-use data for Austria, Canada, Finland, France, Germany, Netherlands, Spain, United Kingdom, and the United States were collected using the multinational time-use study extract builder (MTUS-X) (Fisher et al., 2012, reference 30) and cover the 1965-2012 period.



Sleep and age: For different groups

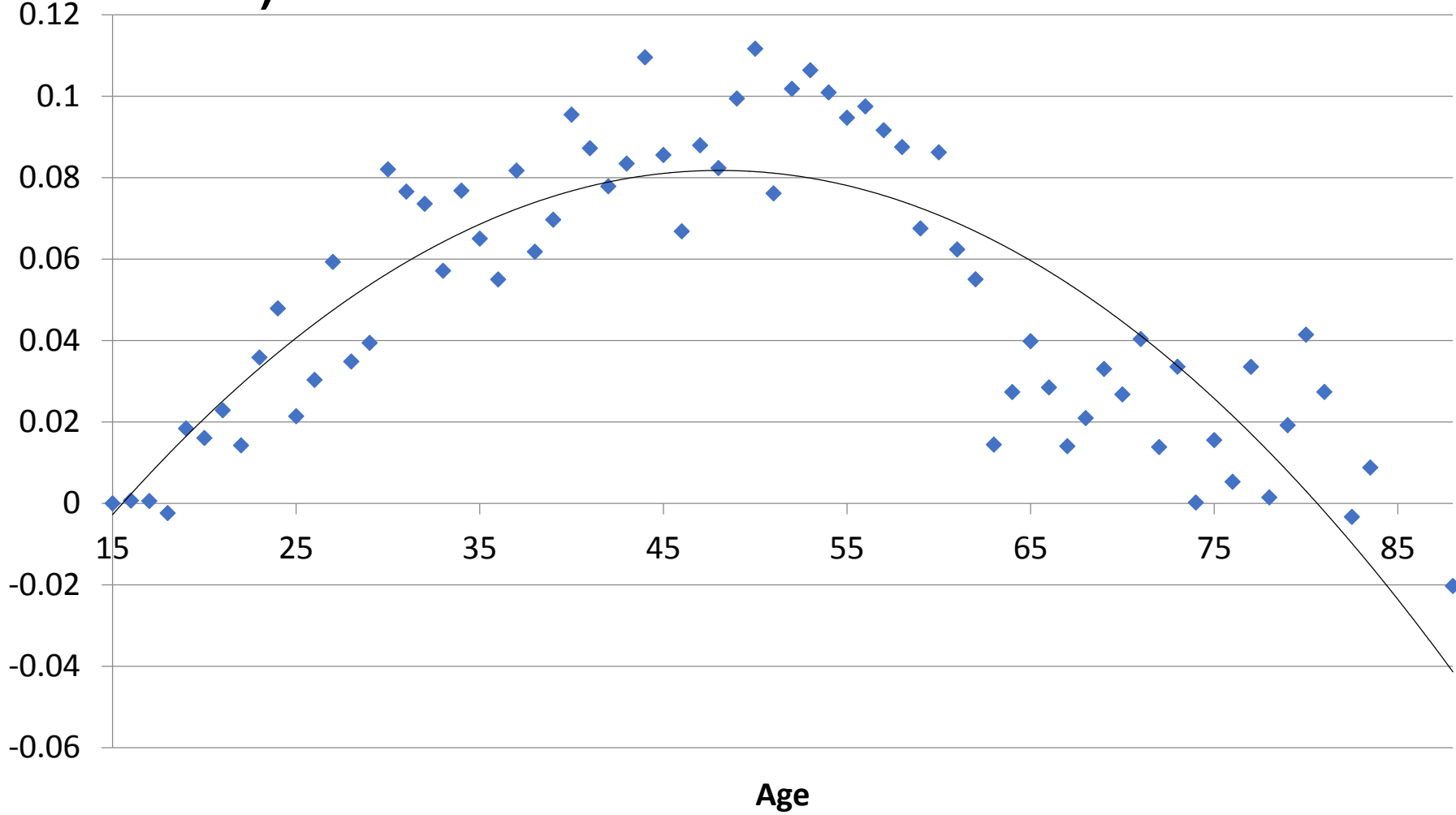


The hill-shaped pattern of suicide



Middle age population has at least two times higher risk relative to teenagers

The Relationship Between the Probability of Antidepressant Use and Age (European nations)



The scientific evidence for a midlife crisis

- **There really is a midlife low**
- **It seems to happen equally in men and women**
- **It is scientifically unexplained**
- **There is a possibility that it is somehow biological (research with apes).**

A fundamental paradox

- People reach peak earnings around the age of 50, with almost no illness, and this is the richest (healthiest & safest) era in history.

Job satisfaction

Day Reconstruction Method (DRM)

Alternative approach

- A study by Daniel Kahneman and his colleagues on 1,000 working women in Texas (see Kahneman et al., 2004)
- These women were asked to divide the previous day into 15 episodes. They were then asked what they were doing in each episode, and who were they doing it with, and how they felt during each episodes.
- Data on people's emotional experiences at various times of the day

Happiness in Different Activities

Activity	Time spent (hours)	Happiness Index
Intimate relations	0.23	4.83
Socializing after work	1.14	4.15
Relaxing	2.17	3.96
Dinner	0.81	3.94
Lunch	0.57	3.91
Exercising	0.22	3.85
Praying/worship	0.45	3.78
Socializing at work	1.12	3.78
Watching TV	2.19	3.65
Phone at home	0.93	3.52
Napping	0.89	3.35
Cooking	1.15	3.27
Shopping	0.41	3.23
Computer (non-work)	0.51	3.22
Housework	1.12	2.99
Childcare	1.1	2.99
Evening commute	0.61	2.77
Working	6.89	2.68
Morning commute	0.47	2.09

Happiness index is the average of three positive adjectives (happy, warm/friendly, enjoying myself) less the average of six negative adjectives (frustrated/annoyed, depressed/blue, hassled/pushed around, angry/hostile, worried/anxious, criticized/put down). All of the adjectives are reported on a 0 to 6 scale, ranging from 0 “not at all” to 6 “very much.” Sample consists of one day in the life of 909 employed women in Texas.

Happiness while Spending Time with Different People

Interacting with:	Average happiness
Friends	3.3
Parents/relatives	3.0
Spouse	2.8
My children	2.7
Co-workers	2.6
Clients/customers etc	2.4
Alone	2.2
Boss	2.0

The average reported feelings across 1,000 people correspond well with activities predicted to be good for us, as well as activities predicted to be bad for us

- Literature identifies that long working hours, irregular working schedules and long work commutes have strong detrimental effects on overall worker life quality.
- Workers largely underestimate the negative effects of commuting on the quality of their life when making decisions about commuting
- Job characteristics such as occupation prestige and a proper skill match have a positive effect on life satisfaction and job satisfaction.
- Past unemployment experience often has a persistent negative effect on life satisfaction.

Overview of well-being research findings:

- (1) Well-being involves more than happy feelings
- (2) Well-being can be validly measured
- (3) Income influences well-being, up to a point
- (4) High quality relationships are essential for well-being
- (5) Genes and personality influence well-being
- (6) People adapt to many circumstances, but it takes time
- (7) Culture and society influence well-being
- (8) There are important benefits of experiencing well-being beyond feeling good (e.g. health, longevity, career success)

The broader message for today

- Policy may need to concentrate on non-materialistic goals
- We should measure what people care about.
- Design policies that will raise people happiness and mental health.

Search for a keyword(s) or time series ID

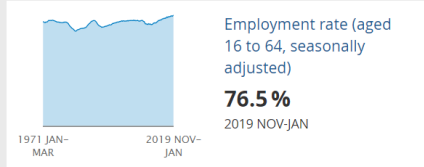
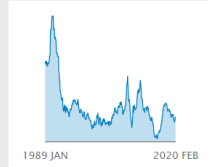
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Wellbeing statistics: September 2020 quarter

15 November 2020, 10:45pm



Wellbeing statistics give a picture of social wellbeing in the New Zealand population. They are based on people's assessments of their own lives, such as how satisfied they are, along with objective information, such as their labour force status.

From the June 2020 quarter until the March 2021 quarter, we are including a selection of wellbeing questions as part of a supplement to the household labour force survey (HLFS). These questions allow us to measure key wellbeing outcomes for New Zealanders every quarter. The information in this release highlights key results from the September 2020 quarter and shows wellbeing outcomes remain fairly stable for most New Zealanders.

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