

## Equality-adjusted Happiness<sup>1,2,3</sup> in Nations: Trend 1946-2003

Rise/decline

Cases

Technical details

Cite as

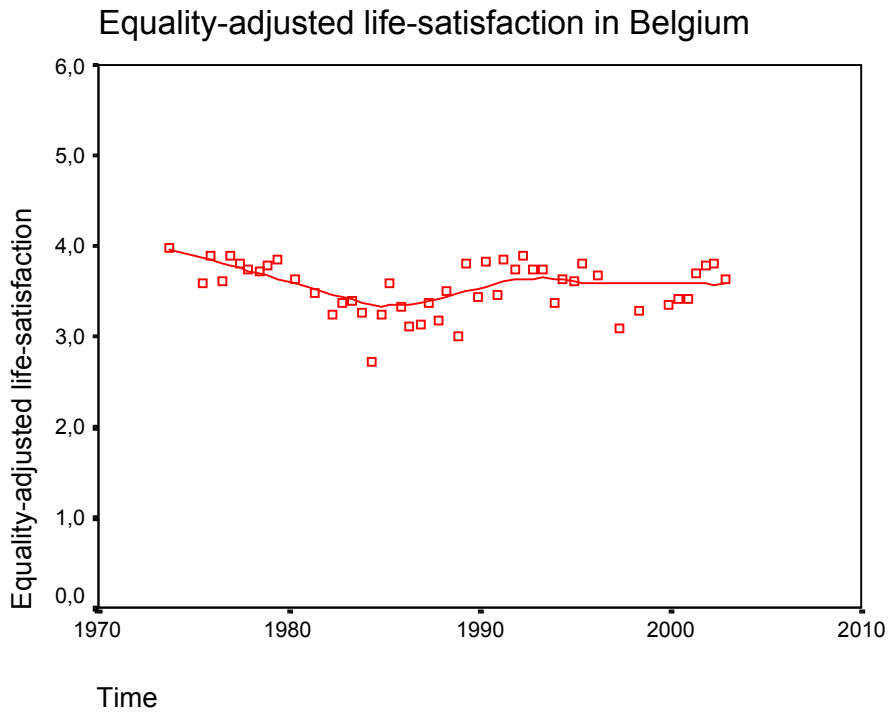
### Rise/decline

Expressed in regression coefficient<sup>4</sup> Equality-Adjusted Happiness - Year

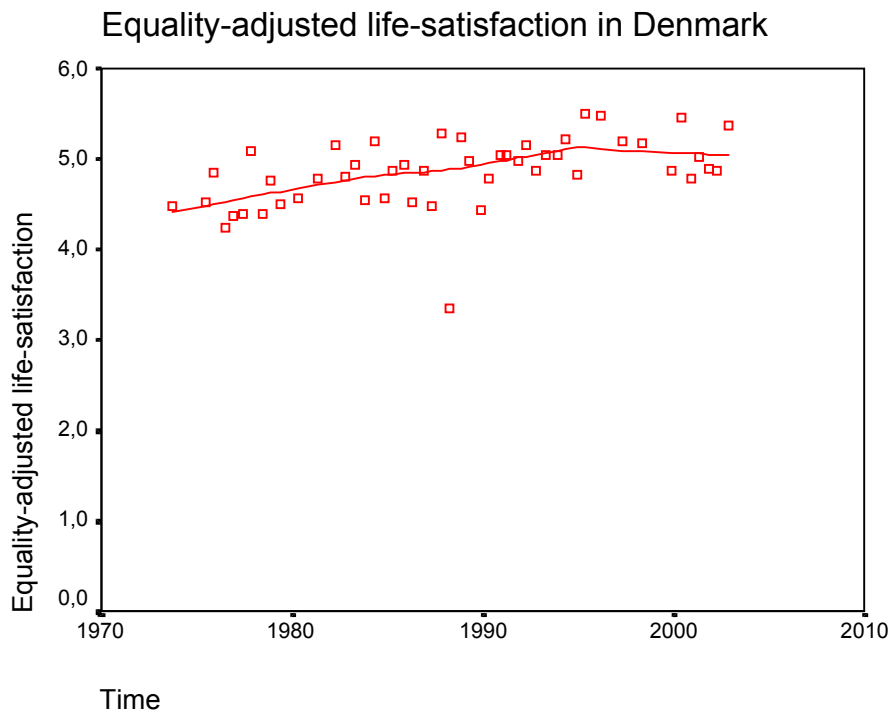
<i>Rise</i> Significant increase		<i>Stable</i> Not significant		<i>Decline</i> Significant decrease	
Spain 1986-2002	+0.056	West Germany 1973-2002	+0.004	Germany (reunited) 1990-2002	-.026
Italy 1973-2002	+0.036	Portugal 1986-2002	+0.003	East Germany 1990-2002	-.027
Japan 1958-2003	+0.026	Belgium 1973-2002	-.003		
Denmark 1973-2002	+0.023				
Ireland 1980-2002	+0.020				
Luxembourg 1973-2002	+0.017				
Greece 1981-2002	+0.015				
United States 1946-1998	+0.012				
France 1973-2002	+0.010				
Netherlands 1973-2002	+0.009				
Great Britain 1973-2002	+0.009				

The number of nations in which equality-adjusted happiness increased is significantly greater than the number of countries that show a decline (binominal test,  $p < 0.021$ ).

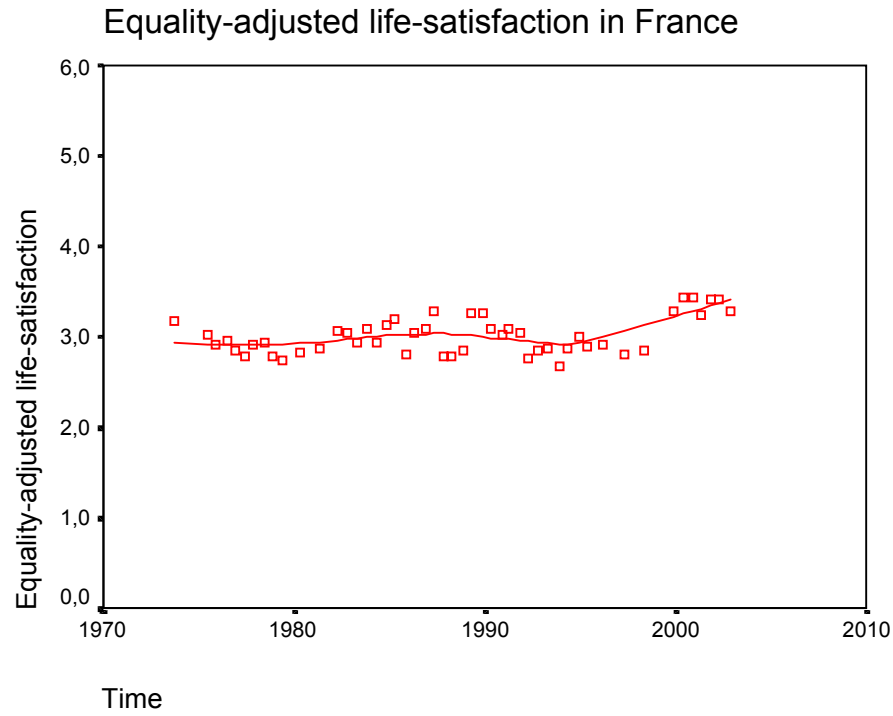
## All cases, alphabetic



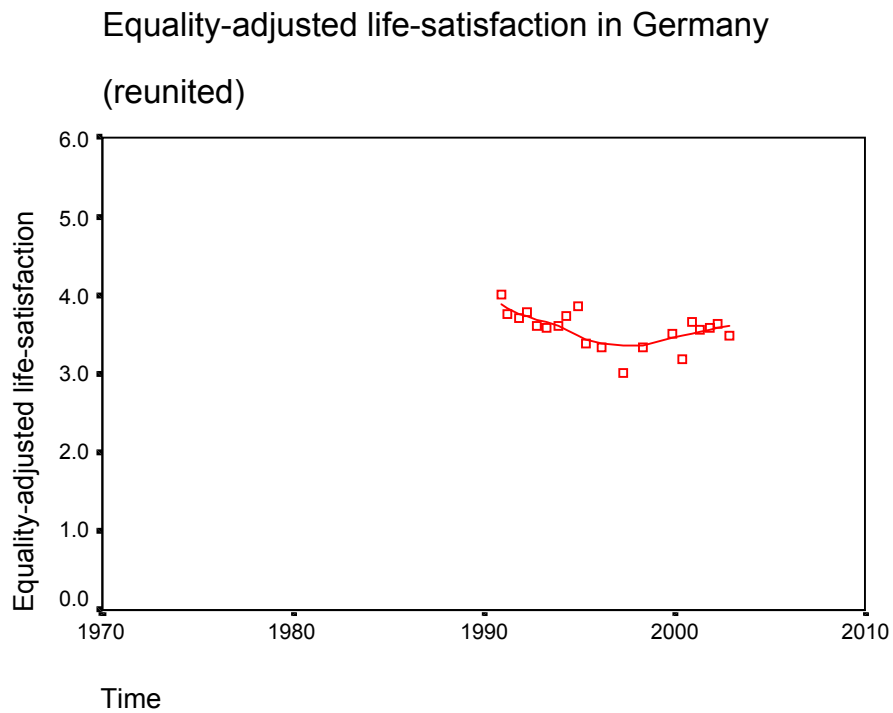
The linear regression coefficient in Belgium is:  $-0.003$ . 95% confidence interval:  $[-0.013, +0.007]$



The linear regression coefficient in Denmark is:  $+0.023$ . 95% confidence interval:  $[+0.011, +0.035]$

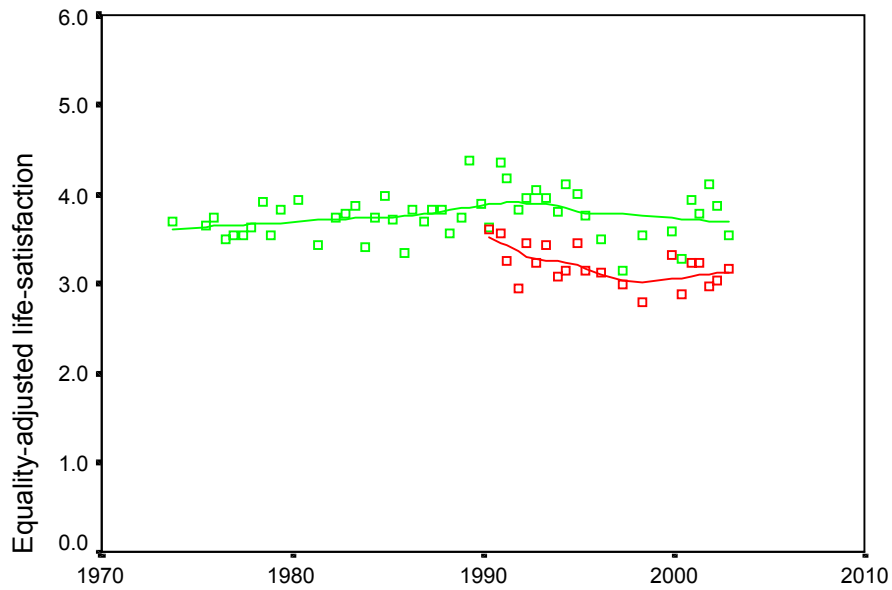


The linear regression coefficient in France is:  $+0.010$ . 95% confidence interval:  $[+0.004,+0.017]$



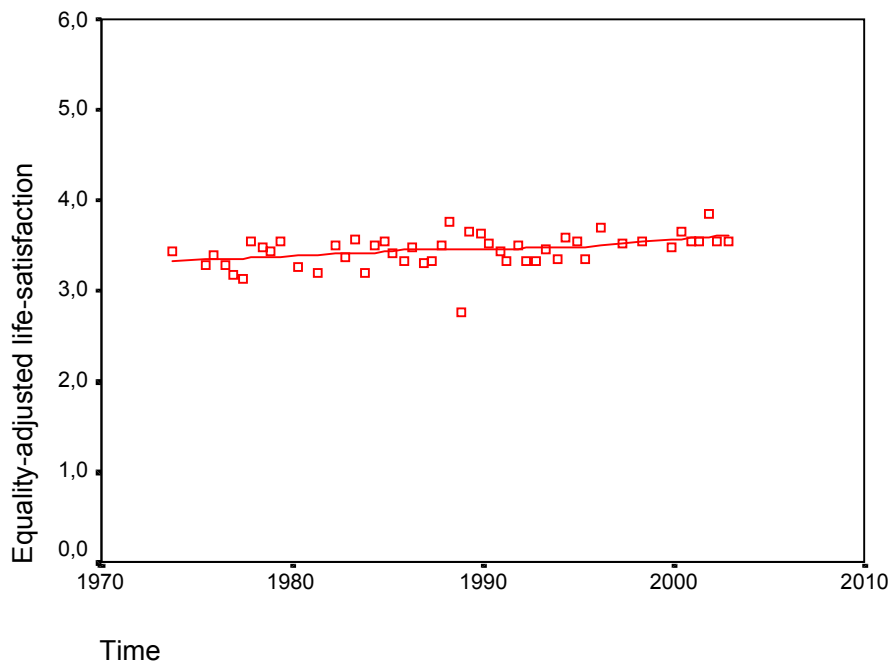
The linear regression coefficient in reunited Germany is:  $-0.026$ . 95% confidence interval:  $[-0.051,-0.001]$

### Equality-adjusted life-satisfaction in Germany East and West (separately)



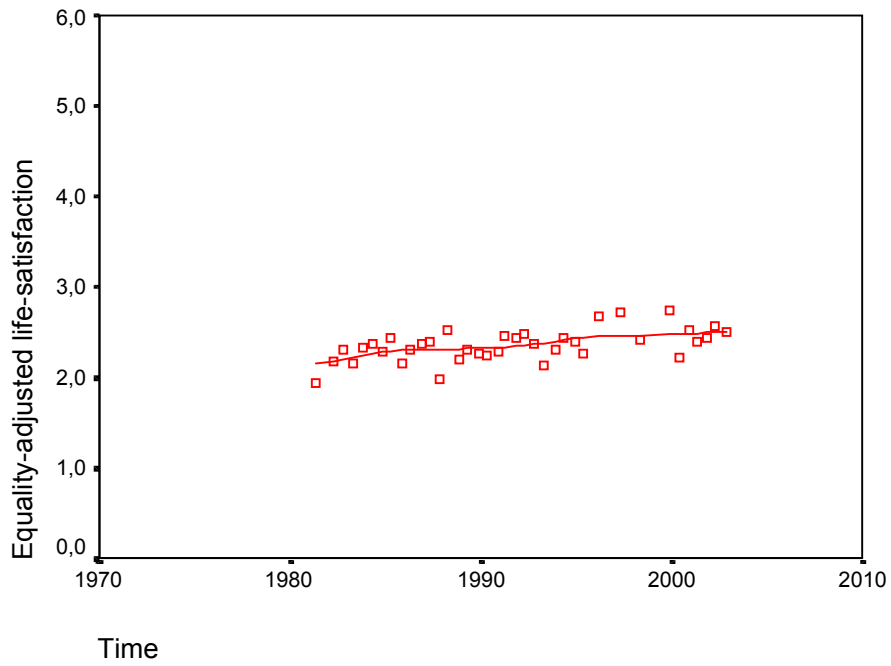
The linear regression coefficient in East Germany is:  $-.027$ . 95% confidence interval:  $[-.049, -.005]$   
 The linear regression coefficient in West Germany is:  $+.004$ . 95% confidence interval:  $[-.005, +.013]$

### Equality-adjusted life-satisfaction in Great Britain



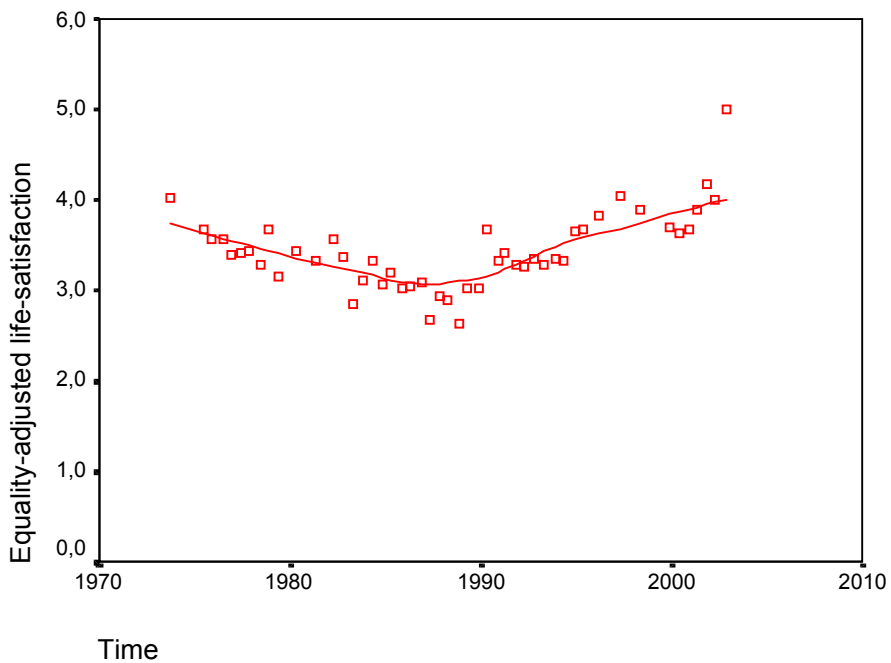
The linear regression coefficient in Great Britain is:  $+.009$ . 95% confidence interval:  $[+.003, +.015]$

### Equality-adjusted life-satisfaction in Greece

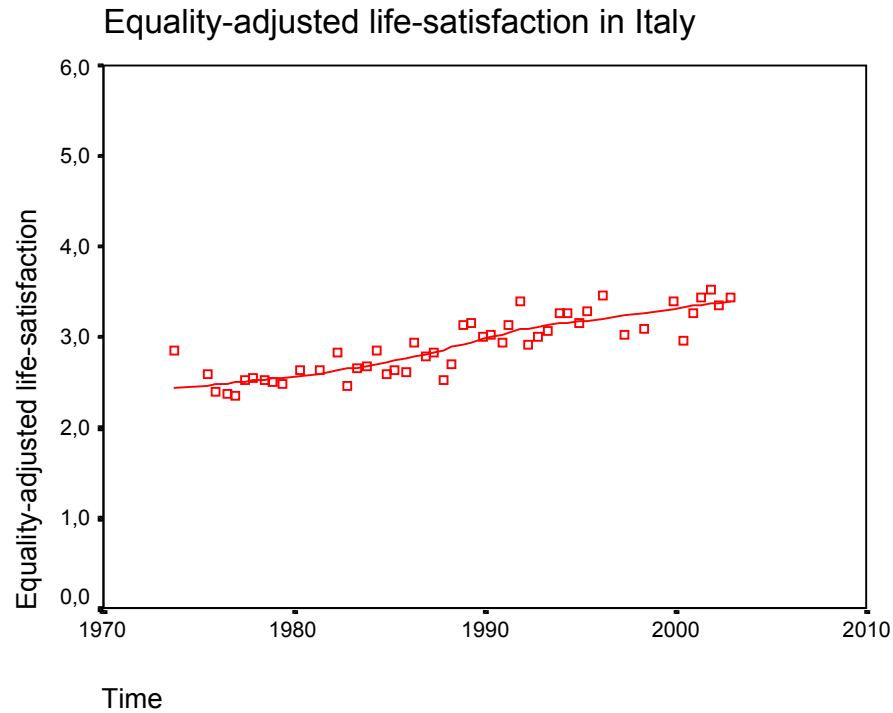


The linear regression coefficient in Greece is:  $+0.015$ . 95% confidence interval:  $[+0.008,+0.023]$

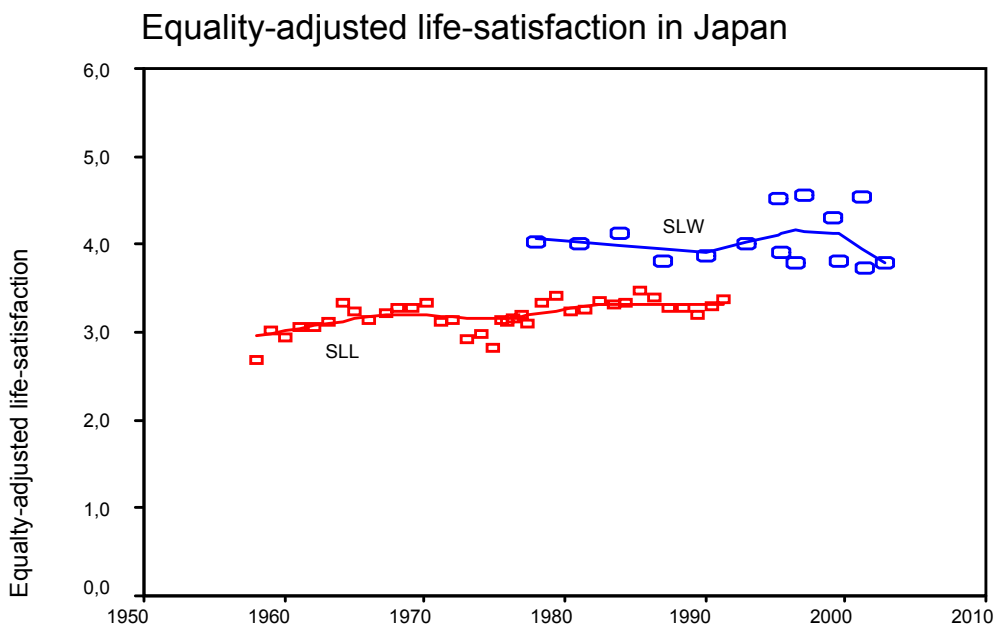
### Equality-adjusted life-satisfaction in Ireland



The linear regression coefficient in Ireland is:  $+0.020$ . 95% confidence interval:  $[+0.006,+0.034]$

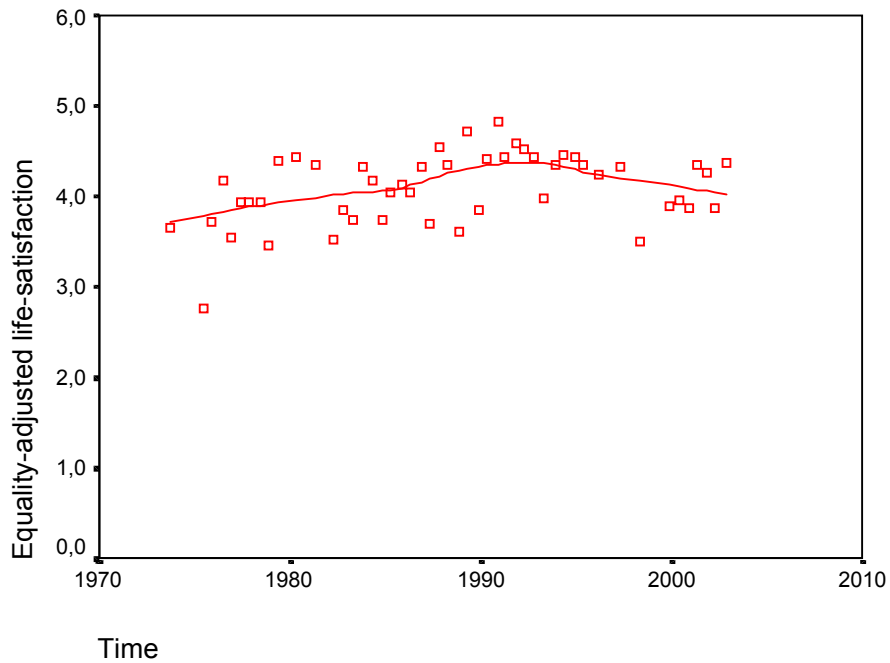


The linear regression coefficient in Italy is:  $+0.036$ . 95% confidence interval:  $[+0.030, +0.042]$



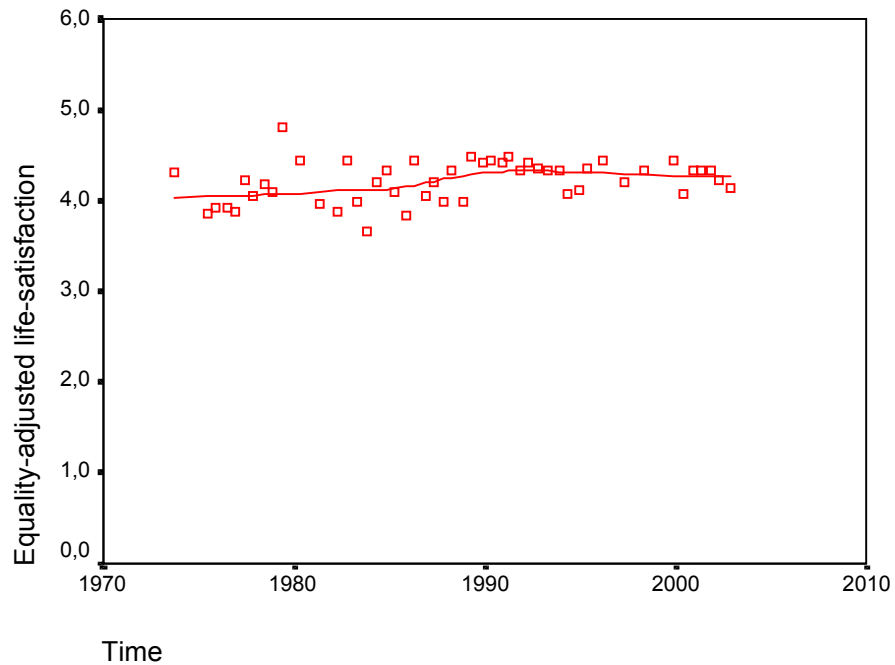
The linear regression coefficient based on item O-SLL/u/sq/v/4 1958-1991 is:  $+0.010$ ; CI95  $[+0.005, +0.015]$   
 The linear regression coefficient based on item O-SLW/u/sq/4/51978-2003 is:  $+0.003$ ; CI95  $[-0.019, +0.026]$   
 The linear regression coefficient based on combined items 1958-2003 is:  $+0.026$ ; CI95  $[+0.019, +0.033]$

### Equality-adjusted life-satisfaction in Luxembourg

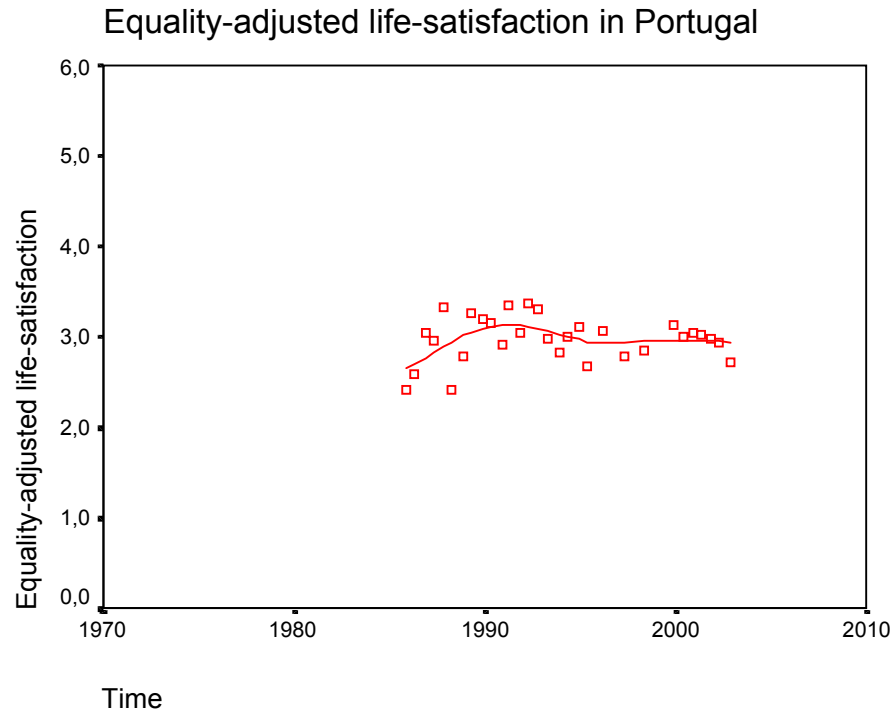


The linear regression coefficient in Luxembourg is:  $+0.017$ . 95% confidence interval:  $[+0.004, +0.030]$

### Equality-adjusted life-satisfaction in The Netherlands



The linear regression coefficient in The Netherlands is:  $+0.009$ . 95% confidence interval:  $[+0.001, +0.016]$

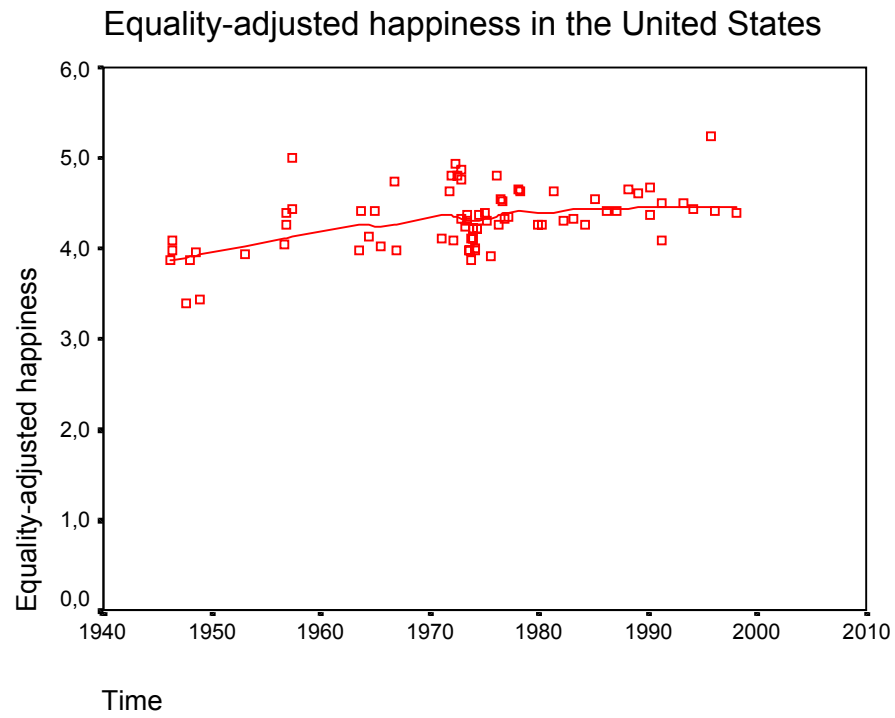


The linear regression coefficient in Portugal is:  $+0.003$ . 95% confidence interval:  $[-0.015, +0.021]$



The linear regression coefficient in Spain is:  $+0.056$ . 95% confidence interval:  $[+0.040, +0.073]$





The linear regression coefficient in the USA is:  $+0.012$ . 95% confidence interval:  $[+0.007,+0.018]$

## Technical details

1. Equality-adjusted Happiness is calculated using the following formula:  

$$\text{Equality-adjusted Happiness} = \text{Average Happiness} / \text{Standard Deviation of Happiness}$$
2. Happiness assessed by means of surveys in general public samples. This list is based on standard surveys that used the same question over the years.
3. The trend lines in this report are based on slightly different questions:
  - In the EU-nations, happiness was assessed by a single item on life-satisfaction:  
 "How satisfied are you with the life you lead?"
    - Very satisfied (4)
    - Fairly satisfied (3)
    - Not very satisfied (2)
    - Not at all satisfied (1)
 This question is categorized as type 121B, subtype O-SLu/u/sq/v/4/b.
  - In Japan a similar question on life-satisfaction was used:  
 "On the whole, are you.. with the life you lead?"
    - Fully satisfied (4)
    - Not fully, but to some extend satisfied (3)
    - As yet unsatisfied (2)
    - Very dissatisfied (1)
 This question is categorized as O-SLL/u/sq/v/4/c. Two slightly different variant have been used: in 1958-63 version a, and since 1987 version b. The precise wording of these variants can be found in the item bank.

From 1978 on, the following question has also been used in Japan  
 Overall, how satisfied are you with your present life?

  - Very satisfied (5)
  - Fairly satisfied (4)
  - Neither satisfied nor dissatisfied (3)
  - Fairly dissatisfied (2)
  - Very dissatisfied (1)

This question is categorized as O-SLW/u/sq/v/5 and has also been used in slightly different variants (a, g, k, l). The precise wording of which can be found in the item bank.

  - In the USA the question asked about happiness:  
 "Taken all together, how would you say things are these days?  
 Would you say you are....:"
    - Very happy (3)
    - Pretty happy (2)
    - Not too happy (1)
 This question is categorized as type 111A, subtype O-HL/c/sq/v/3/aa.
  - The original scores on these questions were transformed linearly to a comparable 0-10 point scale.

- Section 4/3 of the introductory text provides more detail about the classification of items and transformation of scores.
4. The regression-coefficient stands for the size of the angle of the linear regression line through the dots in the time charts. A positive coefficient denotes a rise in equality adjusted happiness, and a negative coefficient a decline. A regression-coefficient of +.01 means 0.01 point increase on this equality-adjusted happiness scale per year, which implies that a one point rise of equality-adjusted happiness would take hundred years at this pace of change.

Continuation of the trend in the US would mean that the level of equality-adjusted happiness rises from 4.40 in 1998 to 5.02 in 2050.

**Cite as:**

Veenhoven, R., *Equality-adjusted Happiness in Nations: Trend 1946-2003*, World Database of Happiness, Trend Report 2004-4, Internet: [www.eur.nl/fsw/research/happiness](http://www.eur.nl/fsw/research/happiness)

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