

Happy for How Long? How Social Capital and GDP relate to Happiness over Time

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Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Much of the SWB literature focuses on the question:

“How far is general income growth (beyond income levels already achieved) likely to increase average happiness?” (*Layard et al., 2009, p. 1*)

This is a question about time series relationships

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Much of the SWB literature focuses on the question:

“How far is general income growth (beyond income levels already achieved) likely to increase average happiness?” (*Layard et al., 2009, p. 1*)

This is a question about time series relationships

The answer:

SWB does not increase as income grows
(the Easterlin Paradox)

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

- Aspirations: after a while people adapt to their living standard by raising their aspirations. SWB is predicted by past income;
- Social comparisons: people compare themselves with others and set their aspirations accordingly. SWB is predicted by reference income.

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Is GDP on the wane?

Social capital, GDP
and well-being over
time

All-in-all:

| | |
|--------------------------------|---|
| Easterlin paradox | + |
| plausible explanatory theories | + |
| robust empirical evidence | = |

GDP is on the wane

we should dedicate to “something else” the attention and the policy efforts that contemporary societies pour into economic growth (i.e. social capital, social tolerance, political freedom, religiosity and health).

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

don't go that fast...



Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

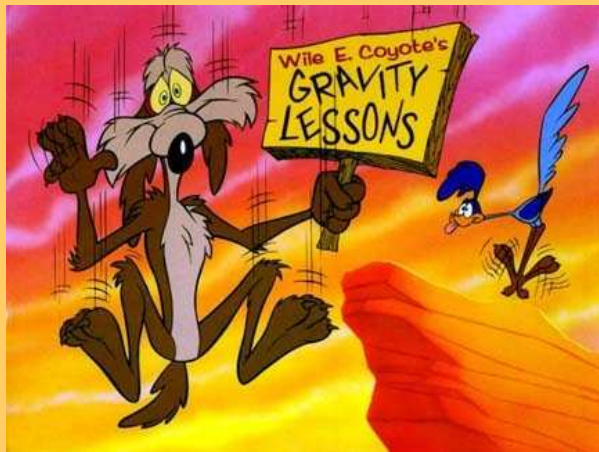
Second conclusion

From the medium to the
short-term

Third conclusion

Conclusion

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Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to the
short-term

Third conclusion

Conclusion

Three new developments

- 1 SWB varies in the long run and it doesn't vary in the same way in every country (*Stevenson and Wolfers, 2008; Inglehart, 2009.*)

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Three new developments

- 1 SWB varies in the long run and it doesn't vary in the same way in every country (*Stevenson and Wolfers, 2008; Inglehart, 2009*).
- 2 average SWB is positively correlated with average income over time *Stevenson and Wolfers (2008) and Sacks et al. (2010)*

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Three new developments

- 1 SWB varies in the long run and it doesn't vary in the same way in every country (*Stevenson and Wolfers, 2008; Inglehart, 2009*).
- 2 average SWB is positively correlated with average income over time *Stevenson and Wolfers (2008) and Sacks et al. (2010)*
- 3 before focusing on “something else” we need to be sure that this something else is not subject to adaptation and social comparisons as GDP (unemployment, marriage, divorce, widowhood, the birth of the first child, health, social capital and religion).

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run
Data 1

First conclusion
From the long to the
medium-term

Data 2
Second conclusion
From the medium to
the short-term
Third conclusion

Conclusion

or is GDP not on the wane?

trends of SWB show international variability +
GDP is a good predictor of this variability +
the alternatives to GDP have the same limitations =

GDP is **not** on the wane

we should not downsize the role of GDP as an indicator of well-being.

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

the Easterlin paradox: a matter of time

Social capital, GDP
and well-being over
time

The paradox **exists!**

- Stevenson et al. fail to distinguish between the short and long-term relationship between SWB and GDP;
- in the short term SWB and GDP are related, but unrelated in the long run.

Easterlin et al. (2008, 2010)

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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Social capital, GDP
and well-being over
time

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Easterlin et al. (2008, 2010)

It's a matter of time spans!

The contrast is not methodological: they use the same bivariate methodology with the variations over time of SWB regressed on GDP variations.

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

The (unanswered) question

If not GDP, what does correlate with the variations of SWB over time?

Social capital, GDP
and well-being over
time

Introduction

**The (unanswered)
question**

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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If not GDP, what does correlate with the variations of SWB over time?

The aim of our work is to analyze the potential of the variations of SC to predict the variations of well-being and compare it with the predictive potential of the variations of GDP.

Social capital, GDP
and well-being over
time

Introduction

**The (unanswered)
question**

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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Since it's a matter of time

Social capital, GDP
and well-being over
time

Introduction

**The (unanswered)
question**

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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Since it's a matter of time

We compare this relationship in the:

Long-term



Medium-term



Short-term



Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to the
short-term

Third conclusion

Conclusion

- we compute trends for each variable in the long, medium and short-term;
- we run the same regressions of Easterlin et al. (2009, 2010) and Stevenson et al. (2008, 2010) substituting for GDP with social capital (SC) trends.

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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formally:

$$S\vec{W}B_j = \alpha + \beta \cdot S\vec{C}_j + \mu_j \quad (1)$$

$$S\vec{W}B_j = \alpha + \beta \cdot \ln\vec{G}DP_j + \mu_j \quad (2)$$

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

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formally:

$$\vec{SWB}_j = \alpha + \beta \cdot \vec{SC}_j + \mu_j \quad (1)$$

$$\vec{SWB}_j = \alpha + \beta \cdot \ln \vec{GDP}_j + \mu_j \quad (2)$$

$$\vec{SWB}_j = \alpha + \beta_1 \cdot \vec{SC}_j + \beta_2 \cdot \ln \vec{GDP}_j + \mu_j \quad (3)$$

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Social capital, GDP and well-being over time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion



The countries included in our sample depends on the availability of internationally comparable time series on social capital variables.



- **WVS/EVS data**
- collected in 6 waves between 1981 and 2009
- all available countries with at least 15 years and 3 obs. in time
- no transition economies
- 27 countries
- 169000 obs

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Subjective well-being:

Happiness: “Taking all things together, would you say you are: [1] very happy ... [4] not at all happy”

Life satisfaction: “All things considered, how satisfied are you with your life as a whole these days?
([1] “dissatisfied”) ... ([10] “satisfied”)

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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Life satisfaction: “All things considered, how satisfied are you with your life as a whole these days?
([1] “dissatisfied”) ... ([10] “satisfied”)

GDP:

log of the GDP per capita (constant 2000 US \$).

Source: World Development Indicators

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

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([1] “dissatisfied”) ... ([10] “satisfied”)

GDP:

log of the GDP per capita (constant 2000 US \$).

Source: World Development Indicators

Social Capital:

Long-term: share of the population participating in at least one group or association.

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

list of associations mentioned in the WVS/EVS

Respondents were asked to mention whether they belonged or were performing unpaid voluntary work for any of the following groups or associations:

social welfare service for elderly;
religious organization;
education, arts, music or cultural activities;
labour unions;
political parties;
local political actions;
human rights;
conservation, the environment, ecology;
other groups.

animal rights;
professional associations;
youth work;
sports or recreation;
women's group;
peace movement;
organization concerned with health;
consumer groups;

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

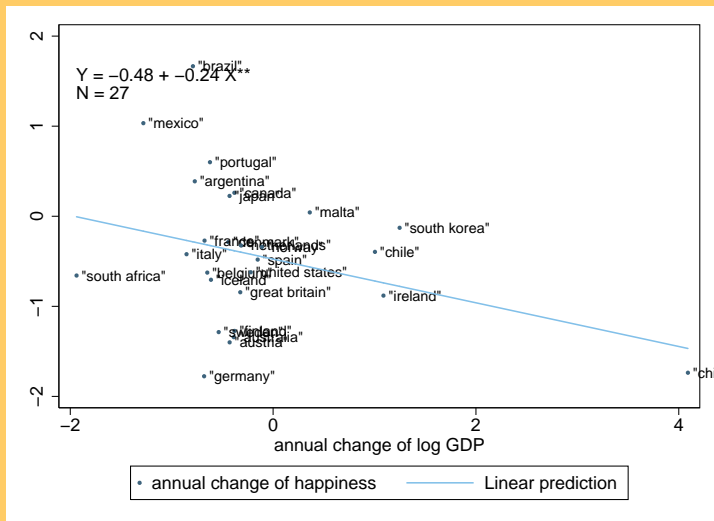
Second conclusion

From the medium to
the short-term

Third conclusion

Final conclusion

Happiness and GDP over at least 15 years



Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

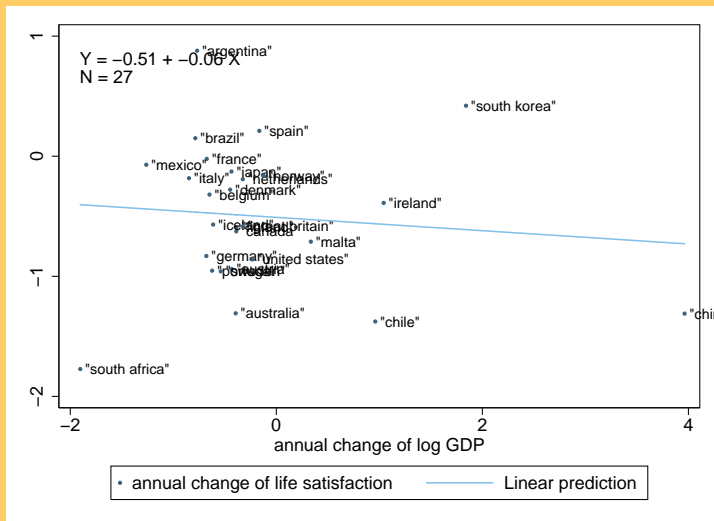
From the medium to the short-term

Third conclusion

Conclusion

Figure: Correlations among long-term trends of happiness and of the logarithm of GDP per capita.

Life satisfaction and GDP over at least 15 years



Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

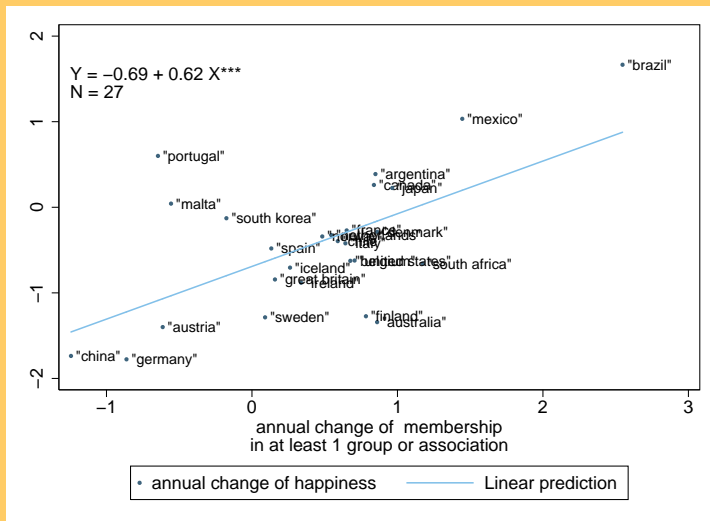
From the medium to the short-term

Third conclusion

Conclusion

Figure: Correlations among long-term trends of life satisfaction and of the logarithm of GDP per capita.

Happiness and group membership over at least 15 years



Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

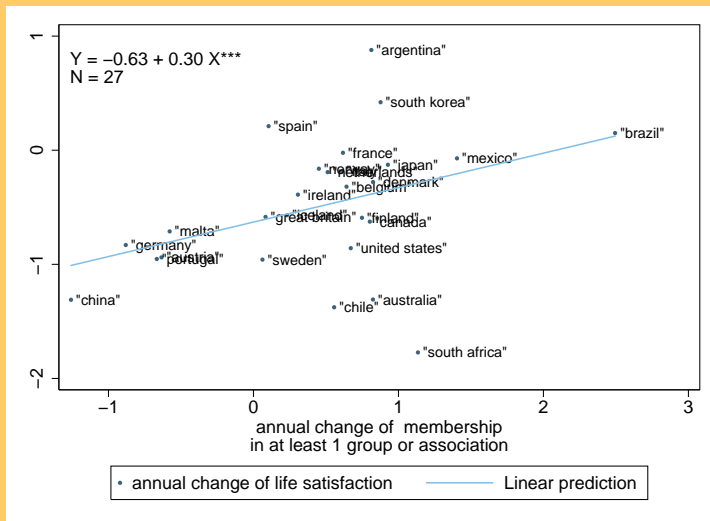
From the medium to the short-term

Third conclusion

Conclusion

Figure: Correlations among long-term trends of happiness and of group membership.

Life satisfaction and group membership over at least 15 years



Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Figure: Correlations among long-term trends of life satisfaction and of group membership.

Tri-variate regressions for long-term trends

Social capital, GDP
and well-being over
time

Table: Trivariate regressions of long-term trends of proxies of subjective well-being over trends of SC and GDP (standardized variables).

| | happiness | life satisfaction |
|------------------------------------|----------------------|----------------------|
| membership in group or association | 0.608** (2.19) | 0.330** (3.58) |
| log GDP | -0.0100 (-0.07) | 0.0447 (0.35) |
| Constant | -0.690*** (-3.88) | -0.634*** (-6.87) |
| Observations | 27 | 27 |
| Adjusted R^2 | 0.302 | 0.087 |

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to the
short-term

Third conclusion

Conclusion

The data used for regressions on SWB are the same in both regressions on social capital and GDP:
the sample and the time span do not vary.

- **in the long run GDP does not matter;**
- **in the long run social capital matters a lot;**

From the long to the medium-term



What does happen if we shorten the time span? Will the results about GDP and social capital change?

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion



- **ESS data**
- collected in 4 waves between 2002 and 2008
- every 2 years
- all available countries
- 24 countries and 58 intervals
- 162000 obs

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Social Capital:

Medium and Short-term: index of social trust using the following 3 items:

- **Most people can be trusted**

"Would you say that most people can be trusted?"

- **Most people are helpful**

"Would you say that most of the time people try to be helpful?"

- **Most people are unfair**

"Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?"

Given the similarities among these 3 questions, we group them to proxy one latent concept.

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Happiness and trust over the medium-term

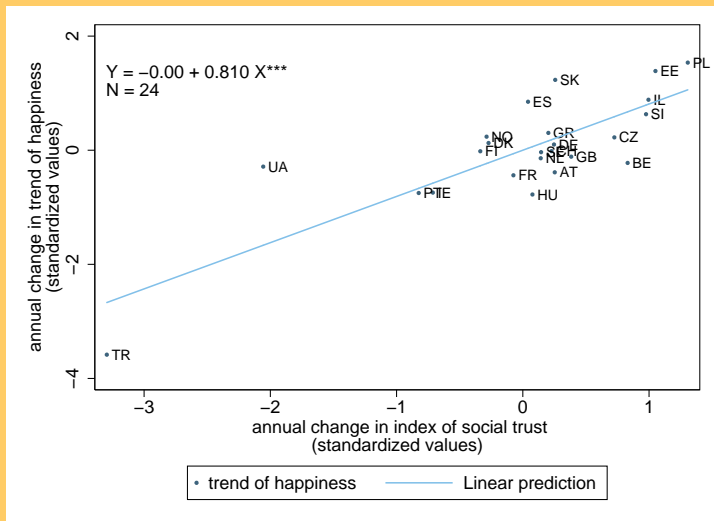


Figure: Correlations among medium-term trends of happiness and of the index of trust.

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Happiness and GDP over the medium-term

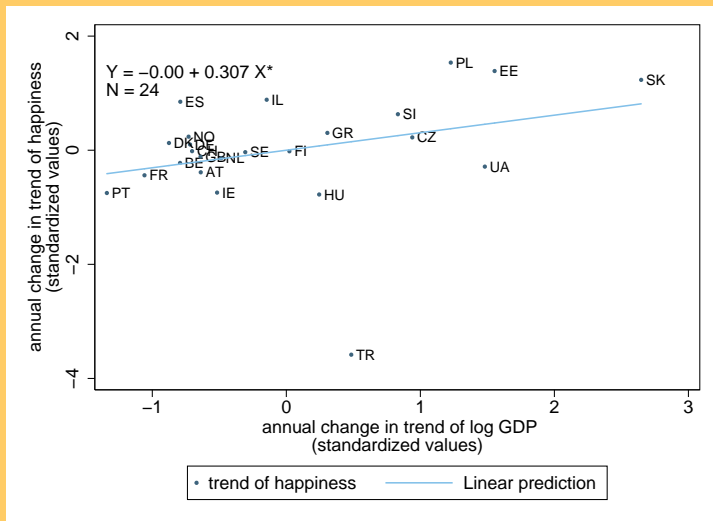


Figure: Correlations among medium-term trends of happiness and of the log of GDP per capita.

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Tri-variate regressions for medium-term trends

Table: Trivariate regressions of trends of subjective well-being over changes of the index of social trust and trends of GDP (standardized variables).

| | (1) happiness | (2) life satisfaction |
|-----------------------|------------------------|--------------------------|
| index of social trust | 0.797*** (4.03) | 0.731*** (8.06) |
| trend of log GDP | 0.268** (2.41) | 0.323* (2.02) |
| Constant | -7.96e - 10 (-0.00) | 5.56e - 10 (0.00) |
| Observations | 24 | 24 |
| Adjusted R^2 | 0.702 | 0.630 |

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

In the medium-term:

- **social capital still matters a lot;**
- **but GDP begins to become relevant!;**

From the medium to the short-term



What does happen if we further shorten the period? Will the results about GDP and social capital change?

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Happiness and trust over the short-term

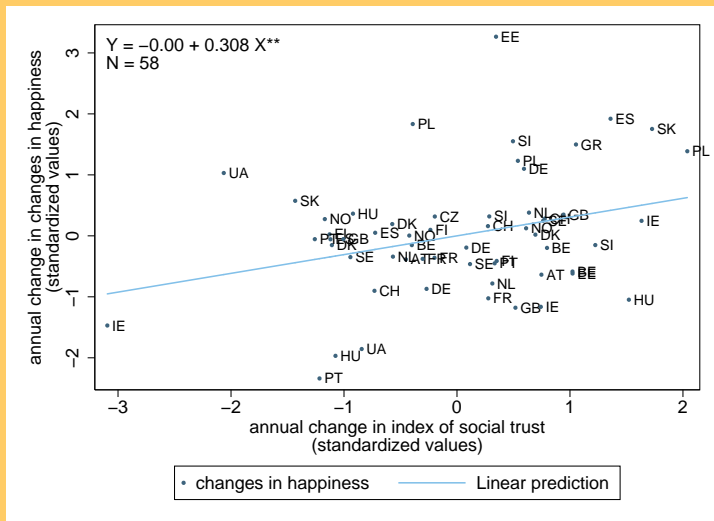


Figure: Correlations among short-term trends of happiness and of the index of trust.

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Happiness and GDP over the short-term

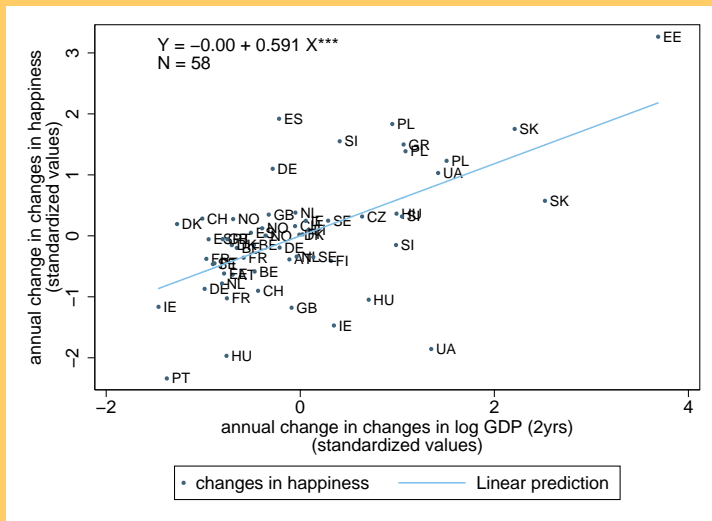


Figure: Correlations among short-term trends of happiness and of the log of GDP per capita.

Social capital, GDP and well-being over time

Introduction

The (unanswered) question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the medium-term

Data 2

Second conclusion

From the medium to the short-term

Third conclusion

Conclusion

Tri-variate regressions for short-term trends

Table: Trivariate regressions of trends of subjective well-being over changes of the index of social trust and trends of GDP (standardized variables).

| | happiness | life satisfaction |
|---------------------------|------------------------|----------------------|
| index of social trust | 0.255** (2.18) | 0.214 (1.58) |
| changes in log GDP (2yrs) | 0.568*** (4.69) | 0.525*** (4.73) |
| Constant | -3.27e - 09 (-0.00) | 1.76e - 09 (0.00) |
| Observations | 58 | 58 |
| Adjusted R^2 | 0.393 | 0.318 |

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

**From the medium to
the short-term**

Third conclusion

Conclusion

Medium and short run compared

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

**From the medium to
the short-term**

Third conclusion

Conclusion

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Table: Medium-term

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Table: Short-term

Third conclusion

In the short run:

- the capacity of social capital to predict SWB weakens sharply;
- and GDP becomes very important.

Social capital, GDP
and well-being over
time

Introduction

The (unanswered)
question

Empirical strategy

Results

The long run

Data 1

First conclusion

From the long to the
medium-term

Data 2

Second conclusion

From the medium to
the short-term

Third conclusion

Conclusion

GDP:

- does not matter for SWB in the long run;
- it begins to be important in the medium-term;
- its importance increases as the period shortens:
short run coefficients are greater and more significant than
medium run coefficients.

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Easterlin seems to be right: **the time span matters!**

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Social capital:

- is strongly correlated to SWB in the long and the medium-term;
- this correlation tends to evaporate in the short run: the coefficients are much smaller and less significant than the medium-term ones.

at least for rich countries:

- do we want a quick effect on happiness which tends to get lost as time goes by?

We should persist being obsessed by economic growth;

- do we want an effect on happiness which is slow and durable?
Policies should target social capital.