GDP per capita is a poor predictor of national well-being

Adrien Fabre (CNRS, CIRED)

January 2024

t

Introduction

What makes a country happy?

Which country is the happiest?

What makes a country happy?

Which country is the happiest?

The answer is often in Scandinavia.

What makes a country happy?

Which country is the happiest?

The answer is often in Scandinavia.

What do we mean by “happy”?

What makes a country happy?

Which country is the happiest?

The answer is often in Scandinavia.

What do we mean by “happy”?

What makes a country happy?

Which country is the happiest?

The answer is often in Scandinavia.

What do we mean by “happy”? Subjective well-being.

Literature

The literature finds an increasing relationship between GDP pc and well-being.

Literature

The literature finds an increasing relationship between GDP pc and well-being.

We challenge this finding.

Primer of the results

Income is only weakly correlated with national well-being.

Primer of the results

Income is only weakly correlated with national well-being.

The relationship heavily depends on the well-being indicator chosen.

Primer of the results

Income is only weakly correlated with national well-being.

The relationship heavily depends on the well-being indicator chosen.

Primer of the results

Income is only weakly correlated with national well-being.

The relationship heavily depends on the well-being indicator chosen.
For some indicators, the happiest country is in Africa or Latin America.

Primer of the results

Income is only weakly correlated with national well-being.

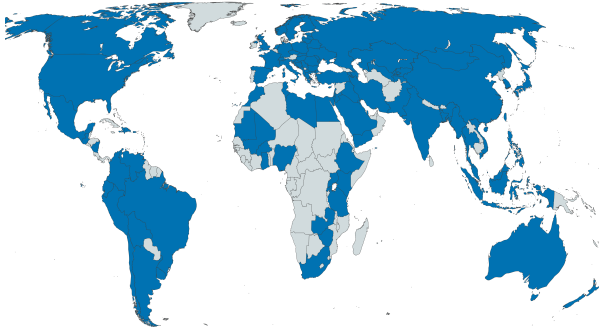
The relationship heavily depends on the well-being indicator chosen.
For some indicators, the happiest country is in Africa or Latin America.

Another simple variable, the country's (macro) region, is a better predictor of national well-being.

Design

Data

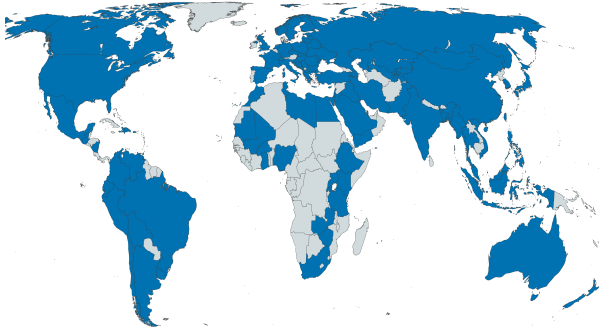
World Values Survey (WVS): representative surveys on 440,000 respondents over 108 countries.



Data

World Values Survey (WVS): representative surveys on 440,000 respondents over 108 countries.

304 country $\times$ year observations among 7 waves from 1981 to 2022.

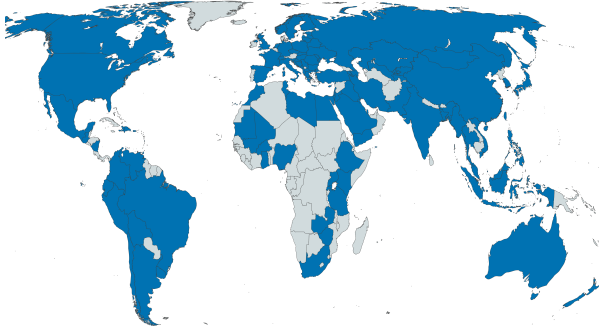


Data

World Values Survey (WVS): representative surveys on 440,000 respondents over 108 countries.

304 country $\times$ year observations among 7 waves from 1981 to 2022.

Two subjective well-being questions:



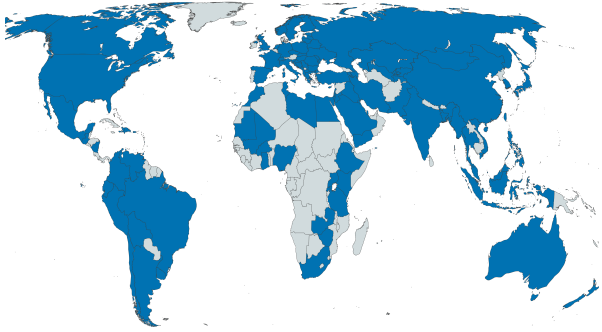
Data

World Values Survey (WVS): representative surveys on 440,000 respondents over 108 countries.

304 country $\times$ year observations among 7 waves from 1981 to 2022.

Two subjective well-being questions:

Happiness: "Taking all things together, would you say you are:"
Very happy; *Quite happy*; *Not very happy*; *Not at all happy*; PNR



Data

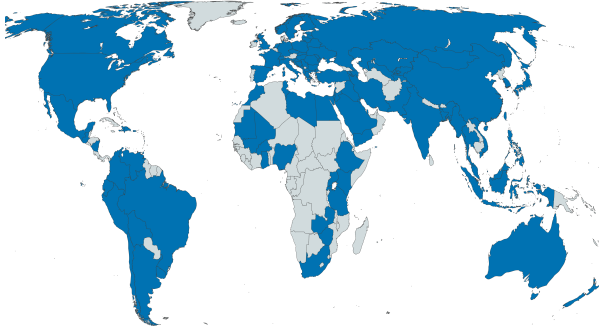
World Values Survey (WVS): representative surveys on 440,000 respondents over 108 countries.

304 country $\times$ year observations among 7 waves from 1981 to 2022.

Two subjective well-being questions:

Happiness: "Taking all things together, would you say you are:"
Very happy; *Quite happy*; *Not very happy*; *Not at all happy*; PNR

Satisfaction: "All things considered, how satisfied are you with your life as a whole these days?"
1-Completely dissatisfied – 10-Completeley satisfied; PNR



What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; +1; +3

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; $+1$; $+3$

Happy: share answering *Quite* or *Very happy*

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; +1; +3

Happy: share answering *Quite* or *Very happy*

Very Happy: share answering *Very happy*

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; +1; +3

Happy: share answering *Quite* or *Very happy*

Very Happy: share answering *Very happy*

Very Unhappy: share answering *Very unhappy*

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; $+1$; $+3$

Happy: share answering *Quite* or *Very happy*

Very Happy: share answering *Very happy*

Very Unhappy: share answering *Very unhappy*

Very Happy over Very Unhappy: ratio of **Very Happy** over **Very Unhappy**

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; $+1$; $+3$

Happy: share answering *Quite* or *Very happy*

Very Happy: share answering *Very happy*

Very Unhappy: share answering *Very unhappy*

Very Happy over Very Unhappy: ratio of **Very Happy** over **Very Unhappy**

Satisfaction (mean): mean satisfaction

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; $+1$; $+3$

Happy: share answering *Quite* or *Very happy*

Very Happy: share answering *Very happy*

Very Unhappy: share answering *Very unhappy*

Very Happy over Very Unhappy: ratio of **Very Happy** over **Very Unhappy**

Satisfaction (mean): mean satisfaction

Satisfied: share answering 6 to 10 at satisfaction

What is national well-being?

With the two well-being questions, we can define various national indicators (all weighted using survey weights, all excluding PNR).

Happiness (mean): mean happiness recoded into -3; -1; $+1$; $+3$

Happy: share answering *Quite* or *Very happy*

Very Happy: share answering *Very happy*

Very Unhappy: share answering *Very unhappy*

Very Happy over Very Unhappy: ratio of **Very Happy** over **Very Unhappy**

Satisfaction (mean): mean satisfaction

Satisfied: share answering 6 to 10 at satisfaction

Happy–Satisfied: average of **Happy** and **Satisfied**
This is the variable used by Inglehart & Klingemann (2000)

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)
We also use discrete indicators:

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)
We also use discrete indicators:

Income group: quantile of income (6 quantiles)

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)
We also use discrete indicators:

Income group: quantile of income (6 quantiles)

Income cluster (k = **5**, **6** or **7**): income cluster, with the k clusters found by the k-means algorithm

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)
We also use discrete indicators:

Income group: quantile of income (6 quantiles)

Income cluster (k = **5**, **6** or **7**): income cluster, with the k clusters found by the k-means algorithm

For robustness, we also run our analyses using the log *nominal* GDP pc (constant 2015 $, World Bank) and corresponding income group and clusters.

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)
We also use discrete indicators:

Income group: quantile of income (6 quantiles)

Income cluster (k = **5**, **6** or **7**): income cluster, with the k clusters found by the k-means algorithm

For robustness, we also run our analyses using the log *nominal* GDP pc (constant 2015 $, World Bank) and corresponding income group and clusters.

We manually impute missing income data using IMF data.

How we measure income

Our preferred *income* indicator is the **log** GDP per capita (pc) in **PPP** (constant 2017 $, World Bank)
We also use discrete indicators:

Income group: quantile of income (6 quantiles)

Income cluster (k = **5**, **6** or **7**): income cluster, with the k clusters found by the k-means algorithm

For robustness, we also run our analyses using the log *nominal* GDP pc (constant 2015 $, World Bank) and corresponding income group and clusters.

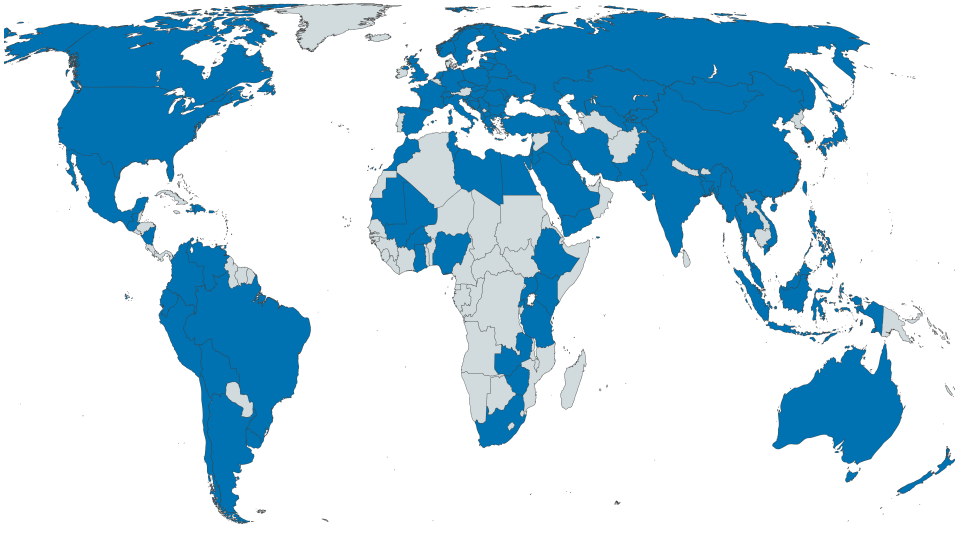
We manually impute missing income data using IMF data.

For robustness, we also run our analyses without this imputation (excluding countries with missing GDP data).

National well-being and income

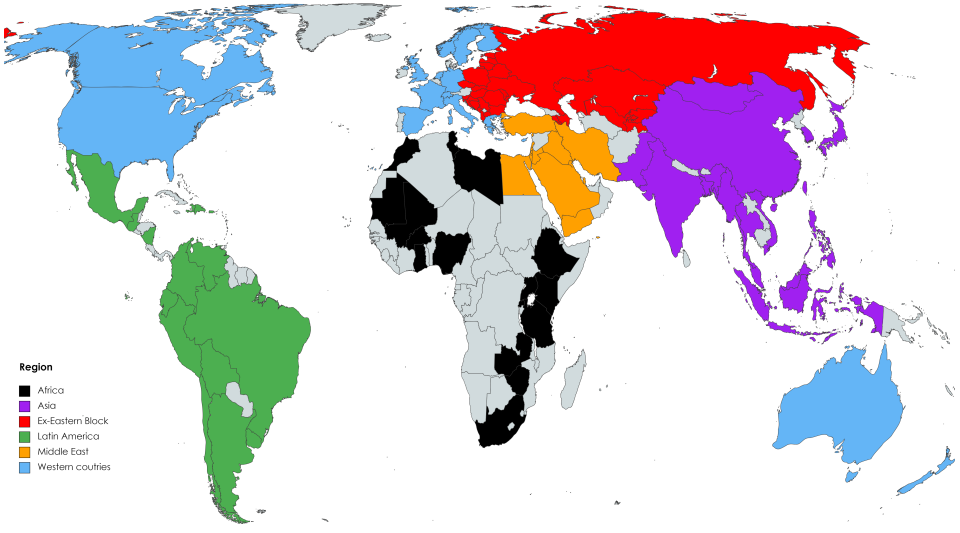
Graphical evidence

Caption



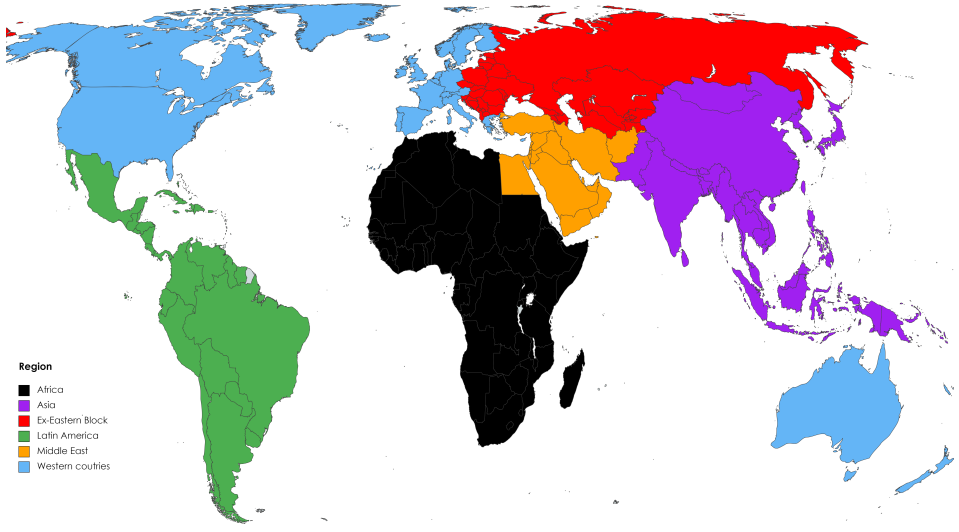
Graphical evidence

Caption



Graphical evidence

Caption



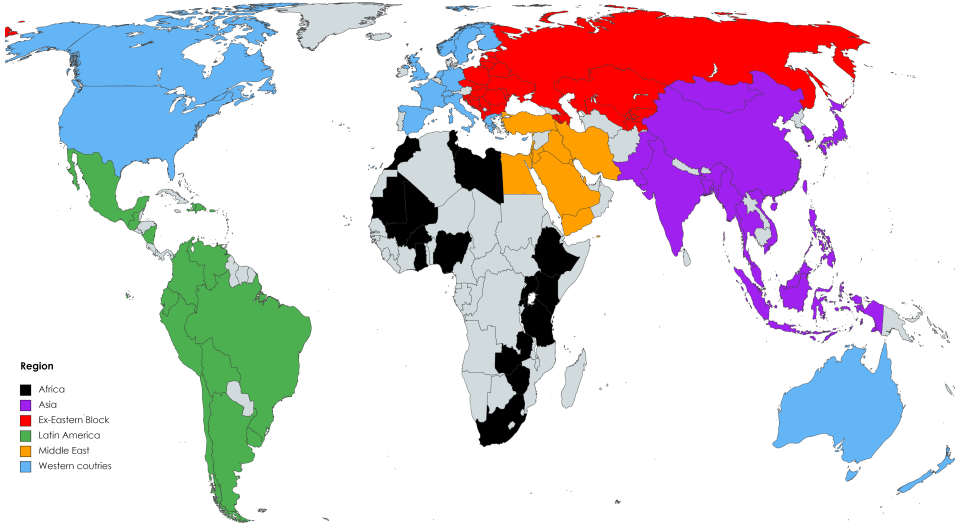
Share of the variance explained by GDP pc

What are the happiest countries?

Region vs. GDP per capita as predictor of well-being

Region grouping

WVS countries grouped into six world regions.



Region is a better predictor of national well-being than income

Conclusion