Discussion: Alternative Approaches to Measuring the Quality of Life

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Assessing Quality of Life

1. Important question: how do we measure whether a society is improving living standards for its citizens?
2. Our best indicator: income
3. What else?
   1. Revealed Preference
   2. Subjective assessments of quality of life
   3. Attitudinal measures
Life Evaluation

- The subjective measure most studied by economists

What we know?

- Highly correlated ~80 percent
- Richer people have greater life satisfaction than poorer people between within a country, richer countries have people with greater average life satisfaction, and on average economic development leads to increases in life satisfaction.
A tight fit both between and across countries
United States: Within Country Comparison

“Taken all together, how would you say things are these days?”

<table>
<thead>
<tr>
<th>Family income</th>
<th>Very happy</th>
<th>Pretty happy</th>
<th>Not too happy</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$12,500 (bottom 10%)</td>
<td>21%</td>
<td>53%</td>
<td>26%</td>
</tr>
<tr>
<td>$12,500-$49,999</td>
<td>25%</td>
<td>61%</td>
<td>13%</td>
</tr>
<tr>
<td>$50,000-$149,999</td>
<td>40%</td>
<td>54%</td>
<td>6%</td>
</tr>
<tr>
<td>≥$150,000 (top 10%)</td>
<td>53%</td>
<td>45%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: U.S. General Social Survey

“When we plot average happiness versus income for clusters of people in a given country at a given time, we see that rich people are in fact much happier than poor people. It’s actually an astonishingly large difference. There’s no one single change you can imagine that would make your life improve on the happiness scale as much as to move from the bottom 5 percent on the income scale to the top 5 percent.”
- Robert Frank (2005)
Satisfaction and Family Income

Lowess fits for the 25 Largest Countries; Gallup World Poll

Figure shows the central 90% of the income distribution for each country.
Satisfaction and Log(Family Income)

Lowess fits for the 25 Largest Countries; Gallup World Poll

Figure shows the central 90% of the income distribution for each country.

A tight fit both between and across countries
Revealed Preference

- We can measure quality of life by looking at people’s choices.
- If a city has a high quality of life people will pay more to live there.
- Willingness to pay is a function of preferences and income.
- Those with lower incomes live in lower quality of life areas because “quality of life” is a normal good and people buy more of it with more income.
- On the margin: The marginal person should be indifferent between paying a lot to get high quality of life “amenities” and paying less and getting fewer amenities.
- In other words, conditional on income, people aren’t necessarily better off living in higher quality of life areas.
Revealed Preference Meets Subjective Well-Being

Figure 8.3. County-level life satisfaction across the United States. White means no data available; other shades of gray reflect the satisfaction quartile of the county, with darker colors reflecting higher satisfaction.

Quality of Life Measures

- Life satisfaction is going to be driven by income and not quality of life measures, conditional income.

- But what if some of the assumptions are violated? Like people aren’t mobile? Or don’t know what amenities are offered? Or have had their preferences themselves shaped by the communities in which they were raised?

- When we see a community with low housing prices we know either that there aren’t a lot of amenities or that the people living in it are low-income. But how does this information help us better understand disparities across America?
Subjective Well-Being

1. It can be hard to disentangle the relationship between well-being and GDP from other measures of living standards because GDP is so correlated with other things

2. But some important things in life are highly correlated with GDP...some less so
OECD recommends four categories of questions on subjective well-being

1. Life evaluation.
2. Affect.
3. Eudaimonic well-being.
4. Domain evaluation.

Hedonism versus eudaimonism

- Psychologists describe two distinct concepts of well-being that they describe a revolving around distinct philosophies.

- Hedonism (associated with Kahneman) is the idea that well-being consists of pleasure or happiness.

- Eudaimonism (associated with Waterman) is the idea that well-being is the actualization of human potentials.

- Assessments of economic development and well-being have primarily focused on measures of well-being associated with hedonism.
The past is very similar

Life Satisfaction 5 years ago
Correlation: 0.79 [p=0.000]

Please imagine a ladder with steps numbered from zero at the bottom to ten 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. On which step of the ladder would you say you personally feel you stand at this time.
Gallup World Poll, 2006-2008, n=347926 in 137 countries
People are optimistic

Expected Life Satisfaction in 5 years
Correlation: 0.39 [p=0.000]

Please imagine a ladder with steps numbered from zero at the bottom to ten 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. On which step of the ladder would you say you personally feel you stand at this time.

Gallup World Poll, 2006-2015, n=1371751 in 159 countries

y = 4.42 + 0.26 * log(GDP per capita)
Positive Affect

- Enjoyment
- Happiness
- Calm
- Smiling
Happiness
Correlation: 0.31 [p=0.000]

Share who experienced this feeling during a lot of the day, yesterday

\[ y = 0.39 + 0.03 \times \log(\text{GDP per capita}) \]

Average GDP per person, PPP (log scale)

Gallup World Poll, 2008-2012, n=785385 in 153 countries
Did you feel calm all day yesterday?

Correlation: 0.19 [p=0.005]

y = 0.51 + 0.02 * log(GDP per capita)

Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt.

Gallup World Poll, 2010-2010, n=118499 in 110 countries
Did you smile or laugh a lot yesterday?

Correlation: 0.29 [p=0.000]

Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt.

Gallup World Poll, 2006-2015, n=1395511 in 159 countries
Enjoyment
Correlation: 0.36 [p=0.000]

Share who experienced this feeling during a lot of the day, yesterday

\[ y = 0.38 + 0.04 \times \log(\text{GDP per capita}) \]

Average GDP per person, PPP (log scale)

Gallup World Poll, 2006-2015, n=1434398 in 158 countries
In Sum

- Hedonism—or as most people call it happiness—is strongly related to income across countries (and within countries)
- Richer countries have people who are more satisfied with their life, are happier, experience more enjoyment, and are calmer
Negative Affect

- Pain
- Depression
- Fear
- Anger
- Sadness
- Stress
- Worry
Physical Pain
Correlation: -0.25 [p=0.000]

Share who experienced this feeling during a lot of the day, yesterday

\[ y = 0.48 + -0.02 \times \log(\text{GDP per capita}) \]

GDP per person, PPP (log scale)

Gallup World Poll, 2006-2015, n=1432561 in 159 countries
Depression
Correlation: -0.25 [p=0.001]

Share who experienced this feeling during a lot of the day, yesterday

$y = 0.24 + 0.01 \times \log(\text{GDP per capita})$

Gallup World Poll, 2006-2011, n=590843 in 143 countries
Anger
Correlation: -0.07 [p=0.405]

Share who experienced this feeling during a lot of the day, yesterday

$y = 0.24 + -0.00 \times \log(\text{GDP per capita})$

Average GDP per person, PPP (log scale)

Gallup World Poll, 2006-2015, n=1413664 in 159 countries
Sadness
Correlation: -0.09 [p=0.167]

Share who experienced this feeling during a lot of the day, yesterday

\[ y = 0.27 + 0.01 \times \log(\text{GDP per capita}) \]

Gallup World Poll, 2006-2015, n=1428625 in 159 countries
Worry
Correlation: 0.02 [p=0.783]

Gallup World Poll, 2006-2015, n=1431497 in 159 countries
Worried About Money
Correlation: -0.68 [p=0.000]

Average satisfaction score (1-5 scale)

Strongly agree

Neutral

Strongly disagree

Average GDP per person, PPP (log scale)

$500 $1,000 $2,000 $4,000 $8,000 $16,000 $32,000 $64,000

y = 5.91 + -0.30 * log(GDP per capita)

Thinking about your life in general, please rate your level of agreement with each of the following using a 5-point scale.
Gallup World Poll, 2013-2014, n=279055 in 145 countries
Stress
Correlation: 0.34 [p=0.000]

Share who experienced this feeling during a lot of the day, yesterday

\[ y = 0.03 + 0.03 \times \log(\text{GDP per capita}) \]

Average GDP per person, PPP (log scale)

Gallup World Poll, 2006-2015, n=1333419 in 159 countries
Negative affect

- Many measures of negative affect—anger, sadness, worry—are uncorrelated with GDP per capita
- Stress is a measure of negative affect that rises as countries get richer
- A specific form of worry—worrying about money—is strongly negatively related to GDP per capita
- Both depression and fear fall with GDP per capita, but both have clear potential relationships with GDP per capita
  - Depression is a treatable illness
  - Fear may be driven by violence, which is negatively associated with GDP per capita
Eudaimonic well-being

Actualization of human potential

- Meaning
- Learning
- Control
Were you proud of something you did yesterday?
Correlation: -0.01 [p=0.954]

Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt.
Gallup World Poll, 2006-2008, n=220638 in 127 countries
Boredom
Correlation: -0.04 [p=0.258]

Share who experienced this feeling during a lot of the day, yesterday

$y = 0.31 + -0.01 \times \log(\text{GDP per capita})$

Average GDP per person, PPP (log scale)

Gallup World Poll, 2006-2008, n=237069 in 130 countries
Felt Active and Productive
Correlation: 0.27 [p=0.000]

Thinking about your life in general, please rate your level of agreement with each of the following using a 5-point scale.
Gallup World Poll, 2013-2014, n=278447 in 145 countries
Like What You Do Each Day
Correlation: 0.27 [p=0.000]

Thinking about your life in general, please rate your level of agreement with each of the following using a 5-point scale.
Gallup World Poll, 2013-2014, n=279427 in 145 countries
Did you learn or do something interesting yesterday?

Correlation: 0.17 [p=0.069]

Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt.

Gallup World Poll, 2006-2015, n=1425531 in 159 countries
Were you able to choose how you spent your time all day?

Correlation: 0.19 [p=0.076]

Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt.

Gallup World Poll, 2006-2010, n=281050 in 127 countries
Summary of Subjective Well-Being

- Much clearer relationship between well-being and income across countries when one focuses on hedonic measures of well-being.
- A much less clear relationship between well-being and income across countries when one focuses on eudaimonic measures.
  - Is this because these measures do a worse job at capturing a consistent concept across countries?
  - Or is it because the ways to improve eudaimonic well-being are less related to the resources to which one has access?
Income/GDP isn’t everything, but it’s pretty good...

- GDP is correlated with high-levels of subjective well-being
- But it doesn’t have to lead to higher subjective well-being
- Instant increase to GDP: no vacation for anyone this year
- Not an instant increase in well-being!

GDP is a proxy variable

- What are we trying to measure?
- *Our budget constraint*, not where we choose to be on it
- If we choose leisure we aren’t producing stuff but we are producing well-being
- Measurement problems: if we choose to care for a family member rather than hiring someone GDP goes down even though total work doesn’t change
Work Has Declined

Annual Hours Worked

- France
- Germany
- Japan
- United Kingdom
- United States
Conclusion

- Income inequality tells us a lot about the disparities across the United States.
- If we want successful alternative measures, it’s useful to look at what is not correlated with income.
- Is it declining work or wage stagnation that is causing the divisions.
- Recent NYT opinion piece digs into a town in Arkansas where the residents want fewer government services. They question the value of a library, wonder if its fair if they don’t use it. This article describes changing preferences, a place economists are often loath to go.