



Philosophy of Economics

Lecture 8, 25 November 2014

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Today's agenda

- Today we'll begin with Part II of the book on Methodology
- Specifically, we'll look at the generation of socio-economic data: how are socio-economic indicators measured?
- All statistical analysis depends on the availability of good data on, say, inflation, income, educational attainment, longevity, corruption *etc.*
- We'll look at one case study in detail; but first examine the concept of observation more generally

Division of labour

- When they use observational methods, economists frequently take a doubly passive role:
 - they do not design and execute an experimental intervention but exploit patterns of covariation in the data using their background knowledge
 - they take their data from statistical offices rather than constructing their own variables (by and large!)

Observation and scientific progress

- We have seen earlier that empiricists think that all our (genuine, scientific...) knowledge must be based on observation (e.g., Hume's fork)
- Isn't this a severely outdated demand?
- Aren't most things advanced sciences talk about today – even our best sciences! – unobservable: neutrinos, black holes, chemical bonds, genes, EHEC bacteria – but also preferences, inflation rate, financial crisis, global savings glut (or imbalance)?

Scientific instruments

- The key to scientific progress is the development of instruments that help make 'observable' what previously was inaccessible to human cognition

What counts as observable?

- One way to reconcile the (plausible!) empiricist idea that there is something special about claims that can be ascertained by observation and the fact that most of science deals in things that are unobservable with the naked eye is to change our concept of 'observable'
- This seems to be what scientists do
- 'Observable' doesn't mean 'perceivable by the unaided senses' but rather 'reliably measurable' or 'measurable on the basis of background knowledge we have no reason to doubt'

A Case Study: The HDI

- We therefore test our theories not against anything that is observable with the naked eye but rather against phenomena that have been established on the basis of reliable methods
- Here I want to look at one such phenomenon that is established by the United Nations Development Program (UNDP): The 'Human Development Index' (HDI)
- Of huge importance:
 - For economic/social/normative analysis: Which countries are the poorest? Which are the most deserving of our aid? Which countries have advanced the most over time?
 - For policy: Does aid work? Where should we invest?

Background

- It is quite obvious that the level of well-being among individuals and societies differs significantly both between individuals within given societies, between societies and within societies over time
- But while perhaps obvious to any reader of the news, ‘well-being’ is not a quantity that is observable, not for an individual, much less for a society
- So to get any empirical grasp on the matter, an indicator has to be constructed that
 - represents the quantity of interest – ‘well-being’ – correctly
 - and uses (ultimately) observable inputs – in the right way.

Background

- That is, there are both:
 - Conceptual issues, and
 - Measurement issues
 - and the two are entangled.
- Example:
 - For policy, international comparisons, development aid decisions *etc.* we need a measure that is comparable across many countries.
 - For assessing whether a society is getting better over time, a local measure may be more appropriate.
- Lesson 1: **Purpose matters**. Never address questions like ‘What is *X*?’ and ‘How do we measure *X*?’ without a purpose in mind (on pain of producing nonsense!)

Background

- On the concept...
- There are three main families of theories of well-being
 - Hedonism (well-being = happiness)
 - Preference satisfaction theories
 - Objective-list theories (well-being = health + longevity + knowledge + friendship +...)
- They all have problems, as we shall see next term
- Amartya Sen has a theory that combines elements from (2) and (3): persons are well off to the extent that they are able to do all the things they value: ('capabilities approach')

Background

- Problem: a 'capability' is not something that is observable; I can decide to remain ignorant even though my intelligence and material resources would enable me to know a lot; I can be of ill health even though my material resources and social status would allow me to have good health because I prefer to smoke and drink and...
- Sen: there are three ways to measure capabilities
 - The **direct approach** (measure *vectors* of things people value – health, longevity, education...)
 - The **supplementary approach** (supplement information on income by information on other aspects of well-being such as health)
 - The **indirect approach** (adjust traditional income measures by information on other aspects of well-being: discount income by illiteracy, say)
- Note that Sen assumes that on average people do what they value (clearly, if a population is very healthy, it must be the case that it has the capability of being healthy; Sen assumes that if a population is characterised by low health measures, it is deprived in its health capabilities)

The HDI: Basics

- The HDI is an example of the 3rd approach
- Here an income measure is one component in an index; the other two components are **life expectancy** and **educational attainment**
- Specifically, the HDI (from 2010) is composed of the following three subindices:
 - Life Expectancy Index (LEI) = $(\text{Life expectancy at birth} - 20) / (82.3 - 20)$
 - Education Index (EI) = $\sqrt{(\text{Mean years of schooling} / 13.2 * \text{Expected years of schooling} / 20.6)}$
 - Income Index (II) = $(\ln(\text{GNI per capita}) - \ln(100)) / (\ln(107,721) - \ln(100))$
- $\text{HDI} = \sqrt[3]{\text{LEI} * \text{EI} * \text{II}}$

Comments

- These seemingly complicated formulas are simple transformations
 - ... into percentages
 - e.g., UK life expectancy = 79.53 years; Japan 82.3; LEI for UK = 95.6%
 - Central African Republic = 45.91 years; LEI for CAR = 41.6%
 - and for income into natural logarithm (this is because of decreasing marginal utility of money)
 - e.g., UK GNIpc = \$38,250; top = 107,721; II for UK = 85.17%

Criticisms

- The HDI has been criticised on numerous grounds; here is a selection
- Sen, even though instrumental in its original idea and construction later distanced himself from it – he doesn't think that well-being (etc.) can be represented by a single number (as we'll see...)
- Some have criticised that the HDI is strongly correlated with income measures; moreover, the components of the HDI are mutually correlated – the index is therefore redundant!
- But notice how purpose matters: different indices give different (even if similar) rankings

Criticisms

- Others have criticised that the index is biased towards egalitarianism (because increases in income are strongly discounted); others again that it ignores central aspects of human development such as ecological considerations and moral development
- Notice that many of the arguments given are evaluative in nature

Conclusions

- Human development cannot be measured adequately without taking a substantive stance on some issues:
 - regarding facts (e.g., what do people actually value?)
 - regarding values (e.g., what concept of well-being is correct?)
 - regarding measurement purpose (e.g., international comparison or changes over time?)
- Because economists know these things best, they should take a more active role in the design of measurement procedures
- Note also that this is an example of a fact/value entanglement