African Economic Development,

IIB. Economic and Human Development: Concepts and Measurement

May 9, 2012
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See Nnadozie Textbook, Chapter 3 plus class notes.
Note: concepts of income distribution will be examined later]
I. Definitions and Concepts of Development

1. Defining *Economic Development* in relation to Economic Growth

Economic Growth in per capita terms: focuses on volume of economic output or production;
- An imprecise measure of real production and material well-being;
- An even weaker measure of general human well-being.
The “System of National Accounts” and concept of GDP

Originated after World War II in most countries
  - designed to measure key economic variables
  - objective: permit effective economic management

UN Standardizes the System

Measurement of Economic Aggregates is
  - costly;
  - conceptually fuzzy and problematic;
  - vital for effective macroeconomic management
    [and thence for human development and environmental protection]
The Institutional Range of Economic Activities

1A. Home-Based Economic Activities
   – personal services for ourselves;
   – goods and services (G&S) for family members

1B. Services for Friends and Neighbors
   – voluntary services;
   – cooperation with others

2. Informal Activities (Underground or Shadow Economy)
   – small-scale services; “extra-legal”: outside state regulatory framework.”
   – legal G&S, extra-legal production, for tax evasion

3. Formal Economy
   – legal G&S, within regulatory framework of government: included in GDP

4. Criminal Economy
   – illegal G&S, illegal production
## The Range of Economic Activities and their Place in GDP Measures

<table>
<thead>
<tr>
<th>Product</th>
<th>Legality of Product</th>
<th>Legality of Production Process</th>
<th>Inclusion in “GDP”</th>
<th>Reasons for Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Formal Sector” or Economy</td>
<td>Legal products of all varieties</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Underground provision for some activities</td>
<td></td>
<td></td>
<td>No for some activities</td>
</tr>
<tr>
<td>“Informal Sector” or Economy</td>
<td>Many types of services, usually small scale</td>
<td>Yes</td>
<td>Yes</td>
<td>Often No</td>
</tr>
<tr>
<td>Home-Based Economic Activities</td>
<td>Child-care; Home maintenance and repair, Food preparation, Personal Services</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Criminal Activities</td>
<td>Drugs, Prostitution, Gambling of some sorts; Extortion rackets</td>
<td>No</td>
<td>Yes; Maybe yes; Maybe no; No</td>
<td>No</td>
</tr>
</tbody>
</table>
Definition: Gross Domestic Product:

The total market value of all final goods and services produced during a given period of time within a geographical area (country, region, or province, and regardless of the ownership of the income generated.)
GDP, with “Purchasing Power Parity”

Comparison of

- GDPpc at Official Exchange Rates and Prices and
- GDPpc according to Purchasing Power Parity

GDP pc (PPP)
## GDP per capita, 2005; Normal and Purchasing Power Parity

<table>
<thead>
<tr>
<th>Country</th>
<th>GDPpc</th>
<th>GDPpc (PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>845</td>
<td>1.998</td>
</tr>
<tr>
<td>Ghana</td>
<td>485</td>
<td>2,480</td>
</tr>
<tr>
<td>Kenya</td>
<td>547</td>
<td>1,240</td>
</tr>
<tr>
<td>Tanzania</td>
<td>316</td>
<td>744</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>259</td>
<td>2,038</td>
</tr>
<tr>
<td>OECD, High Income</td>
<td>35,616</td>
<td>33,831</td>
</tr>
<tr>
<td>Canada</td>
<td>34,484</td>
<td>33,375</td>
</tr>
<tr>
<td>Norway</td>
<td>63,918</td>
<td>41,420</td>
</tr>
<tr>
<td>China</td>
<td>1,713</td>
<td>6,757</td>
</tr>
</tbody>
</table>

GDP and Economic Well-Being

\textit{GDP Per Person (PPP)} tells us the income and expenditure of the average person in the economy.

- It is an “OK” measure of the \textit{material well-being} of the economy as a whole.
- More Real GDP usually means we have a higher material standard of living by being able to consume more goods and services.
- \textit{It is NOT} intended to be a measure of happiness or quality of life.
GDP and Human Well-Being

GDP and GDP pc (PPP) are weak measures of human well-being.

WHY ??
GDP and Human Well-Being

GDP and GDP pc (PPP) are weak measures:
They ignore:
- Distributional issues
- Factors that lead to a quality environment.
- Ignores activities that takes place outside markets, e.g.
  - child-rearing
  - Volunteer work
  - most home-based economic activities
  - “informal sector” activities are often missed;
  - underground economy (tax evasion) activities are missed;
- Leisure;
  - The duress, or pleasantness of work
  - “Climate-Adjustment”
1. Development = Growth + Equity + Sustainability

Explain
2. Textbook Definitions/Concepts

“Development” =

Growth
+ Improved Quality of Life
+ Economic and Social Structural Transformation

“Growth” of the Economy: rising GDP pc (PPP)
Improved Quality of Life: includes

higher incomes, education;
better health, less poverty
equality of opportunity, better environment
greater freedom

The New Economic View of Development
- Leads to improvement in well-being, more broadly understood

Amartya Sen’s “Capability” Approach
- *Functionings* as what a person is able to do with available “G&S”
- *Capabilities as freedoms* enjoyed in terms of functionings, or control over G&S
- Development and happiness?
- Well being in terms of being well and having freedoms of choice
Some Key “Capabilities”

Some Important “Beings” and “Doings” in Capability to Function:

– Being able to live long
– Being well-nourished
– Being healthy
– Being literate
– Being well-clothed
– Being mobile
– Being able to participate in the life of the community
– Having ample freedom of choice re G & S
– Being free and with inalienable rights (and responsibilities)
– Being happy – as a state of being - may be valued as a functioning
Question:

Does “higher GDP generate happiness?

Does “Development” generate happiness?
Income and Happiness: Comparing Countries

1A. UNDP Human Development Index or HDI
(See HDI Web Site)


- Includes Three Components:
  1. **Income**, as a proxy for the ability of societies to meet the overall needs of their people (33.3%)
  2. **Life Expectancy**, as a proxy for the general health of a people (33.3%)
  3. **Educational attainment** as a proxy for the general empowerment of people through knowledge. (33.3%)

- Short-comings and Advantages of HDI
1B. The United Nations “Human Poverty Index”

Attempts to measure poverty with a composite index including:

1. Probability of not surviving to age 40;
2. Adult illiteracy rate;
3. Population without access to improved water source
4. Underweight children under age five.
1.C The New Human Development Index

Introduced by UNDP HDR 2010, November 2010
Example: China

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>73.5</td>
</tr>
<tr>
<td>Mean years of schooling (years)</td>
<td>7.5</td>
</tr>
<tr>
<td>Expected years of schooling (years)</td>
<td>11.4</td>
</tr>
<tr>
<td>GNI per capita (PPP U.S. $)</td>
<td>7,263</td>
</tr>
</tbody>
</table>

Note: Values are rounded.


\[
\text{Expected years of schooling index} = \frac{11.4 - 0}{20.6 - 0} = 0.553
\]

\[
\text{Education index} = \frac{\sqrt{0.568 \times 0.553 - 0}}{0.951 - 0} = 0.589
\]

\[
\text{Income index} = \frac{\ln(7,263) - \ln(163)}{\ln(108,211) - \ln(163)} = 0.584
\]

\[
\text{Human Development Index} = \sqrt[3]{0.847 \times 0.589 \times 0.584} = 0.663
\]
What is new in the New HDI? Other changes:

1. Gross national income per capita replaces gross domestic product per capita
   - (GDP measures what is earned in the country by foreigners as well as locals) while GNI reflects income earned from all sources, remittances as well as local earnings)

2. Revised education components: now using
   - the average actual educational attainment of the whole population (in place of literacy), and
   - the expected attainment of today’s children (in place of school attendance)
What is new in the New HDI? Other changes:

3. The maximum values in each dimension have been increased to the observed maximum rather than given a predefined cutoff.

4. The lower goalpost for income has been reduced due to new evidence on lower possible income levels.
<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>127</td>
<td>0.371</td>
</tr>
<tr>
<td>Albania</td>
<td>68</td>
<td>0.743</td>
</tr>
<tr>
<td>Algeria</td>
<td>77</td>
<td>0.712</td>
</tr>
<tr>
<td>Argentina</td>
<td>41</td>
<td>0.815</td>
</tr>
<tr>
<td>Armenia</td>
<td>74</td>
<td>0.718</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
<td>0.938</td>
</tr>
<tr>
<td>Austria</td>
<td>19</td>
<td>0.889</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>67</td>
<td>0.746</td>
</tr>
<tr>
<td>Bahrain</td>
<td>33</td>
<td>0.831</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>109</td>
<td>0.497</td>
</tr>
<tr>
<td>Belarus</td>
<td>54</td>
<td>0.777</td>
</tr>
<tr>
<td>Belgium</td>
<td>17</td>
<td>0.893</td>
</tr>
<tr>
<td>Benin</td>
<td>115</td>
<td>0.473</td>
</tr>
<tr>
<td>Bolivia (Plurinational State of)</td>
<td>86</td>
<td>0.673</td>
</tr>
<tr>
<td>Botswana</td>
<td>93</td>
<td>0.655</td>
</tr>
<tr>
<td>Brazil</td>
<td>59</td>
<td>0.764</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>26</td>
<td>0.865</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>53</td>
<td>0.780</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>126</td>
<td>0.374</td>
</tr>
<tr>
<td>Burundi</td>
<td>132</td>
<td>0.345</td>
</tr>
<tr>
<td>Cambodia</td>
<td>103</td>
<td>0.544</td>
</tr>
<tr>
<td>Cameroon</td>
<td>108</td>
<td>0.501</td>
</tr>
<tr>
<td>Canada</td>
<td>5</td>
<td>0.903</td>
</tr>
</tbody>
</table>
2. “Genuine Progress Indicator” or GPI

http://www.rprogress.org/sustainability_indicators/genuine_progress_indicator.htm

Major critique of “GDP” as a concept
Attempts to measure human progress in broad terms
Includes:

- Personal consumption Plus
  
  - Economic Benefits excluded from GDP:
    - the value of housework,
    - caring for children and the elderly,
    - volunteerism and community activities
    - the hours spent on free time or family
  
  - all of which can be viewed as "good for the economy and society, despite no money changing hands]"
- Economic Costs otherwise excluded: commuting costs,
- Social Costs:
  - crime, divorce,
- The contribution of the natural world, such as
  - clean air and water,
  - fertile soil,
- Damage to the environment and resource depletion
  - Loss of wetlands, farmlands, deforestation, fisheries, air pollution, ozone depletion etc.
# Measures of Perceptions of Well-Being and Happiness

<table>
<thead>
<tr>
<th>Perceptions of Individual Well-Being and Happiness</th>
<th>Liberia</th>
<th>Kenya</th>
<th>USA</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Life Satisfaction</td>
<td>3.4</td>
<td>3.7</td>
<td>7.5</td>
<td>8.0</td>
</tr>
<tr>
<td>Min 0 to 10 Max</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with Standard of Living (%)</td>
<td>46</td>
<td>25</td>
<td>75</td>
<td>87</td>
</tr>
<tr>
<td>Happiness:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purposeful Life</td>
<td>100</td>
<td>98</td>
<td>95</td>
<td>91</td>
</tr>
<tr>
<td>Happiness:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treated with Respect</td>
<td>82</td>
<td>78</td>
<td>94</td>
<td>93</td>
</tr>
<tr>
<td>Negative Life Experience</td>
<td>17</td>
<td>19</td>
<td>28</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: UNDP Human Development Report 2010
Other Indices of Human Well-Being:

Some Examples:

UNDP Gender Adjusted HDI:

Political:

e.g. Freedom House, Human Freedom Index
4. Environmental:

e.g.  Yale Environmental Sustainability Index


4b. D. Suzuki Foundation Index
5. UNDP Technology Achievement Index
   (from UNDP HDR 2001)

6. Transparency International:
   Corruption Perceptions Index

(Note: discussion of measurement of poverty and income
distribution will come later)
Part (a) shows world income distribution by percentiles. The huge share controlled by the top percentiles.