Chapter 1: The facts to be explained

Measurement of economic development: GDP versus PPP

The indicator commonly used to examine the degree of development of a country's economy is the **Gross Domestic Product (GDP).** It measures the market value of all services or final goods produced in a country during a year. It can be calculated as either the total income earned in a country or the value of the output produced in a country.

Economic measurement with the GDP (output or national income) also includes potential problems. For instance, GDP also includes foreign investment and does then not represent wealth in that Country, but the foreign investment value. In addition, many aspects of economic wealth cannot be measured by GDP.

The source of a high total GDP value could be extensive population density, because more people are available as labour force. Therefore, when comparing countries with different population sizes it is advisable to compare the GDP per capita (GDP earned per capita). Despite these potential problems, GDP remains a rough estimate for comparing different living standards.

A further potential problem when comparing GDP values of different countries, is the influence of exchange rates, which are only determined by international traded goods. Therefore, converting different incomes in one exchange rate can create a wrong picture of the true purchasing value of a currency.

Therefore, the **Purchasing Power Parity (PPP)** provides a measurement of national income based on the relative purchasing power of a currency, measured by the price of a standardized basket, which contains a set of traded and non-traded goods and services. The PPP corrects the GDP per capita measures.

Measurement: growth rates of national income

A country's growth rate of income can be used as a measurement of the speed of development/growth. The growth rate is important because a country that grows fast will move to a higher level of income in the future.

When working with income growth rates, two concepts of graph scales need to be considered:

- **The ratio scale** (also called *logarithmic scale*) is mainly used for plotting variables like growth rates which grow over time. Spaces on the vertical axis correspond to proportionality differences in the variable.
- The common **linear scale** uses equal spaces on the vertical axis, corresponding to equal differences in the variable.

The main difference between those concepts is visible when plotting a constant growing rate over time. The linear scale curve is exponential and the ratio scale curve is straight.(See p.31)

The rule of 72 can be used for dealing with growth rates. It is a formula for estimating the amount of time it takes for something to double given its growth rate. It holds that the *doubling time* ≈ 72/g, where g is the percentage annual growth.

Income growth rates vary among countries and also vary during recent decades. The difference between increased output due to business cycles or due to economic growth is mainly time related. Growth is characterized as a long-run trend, whereas business cycles can be defined as short term fluctuations, like recessions, i.e. deviations from the long run trend.

The total income inequality in the world is the result of two inequalities:

1. The difference in income between countries (*Between country inequality)*
2. Inequality of per capita income within a single country (*Within country inequality).*

The findings from inequality measurement:

- Total inequality highly increased during the period 1820-1950, slowed down 1950-1992 and declined after 1980.
- Today 60% of world total inequality is a result of *between* country inequality.
- In 1820 87% of world inequality caused by *within* country inequality.

Growth during different periods:

- *Growth Before 1820*
  Only few data is available for the period before 1820. Still, a significantly low GDP per capita growth rate is characteristic for an economy, which was driven by strong fluctuations due to the dependency on harvest conditions or armed conflicts. However, the income difference gap between countries is still very small. The world political order is dominated by the rapidly progressing Western Europe expansion.
- *Growth Since 1820*
  Worldwide income growth accelerates, with highly increasing average GDP growth per capita, but also the gap between country equality increases. Compare: In 1820 the ratio of comparing wealth between rich and poor countries was 3:1 (3 times as rich), in 1998 the ratio increased to 19:1.
- *Growth during the last 35 years*
  During the last 35 years some countries have experienced high growth rates while others dealt with negative growth rates. The chart on page 35 gives an overview of the growth rates from country-groups in the period between 1975 and 2009. So called “growth miracles” like China face an average annual growth rate of between7,5 % to 8 %. Whereas “growth disasters” like Liberia and Zimbabwe have to face a rate between -4.5 % and -3 %.