

## Examrace

### Competitive Exams: Human Development Index

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Only ten years passed since the PQLI was developed, another index came into being. Since 1990, an agency of the United Nations, viz. The United Nations Development Programme (UNDP) has been publishing every year a report called Human Development Report. This report, besides discussing various aspects of human development, has been ranking various countries according to the level of human development index. Before the human development index is described, it would be an interesting idea to look at the GDP/GNP from a fresh angle. It is pointed out that these measures are measures of activity and they concentrate on production of commodities--goods and services. We should, it is suggested, instead focus on capabilities and measure improvement in capabilities of people. Living long and healthy life is a capability and so is to be able to read and write. With rising capabilities, we have wider choices and development is what if not widening of choices! The idea has an added dimension that these capabilities cannot be accumulated. In a way it is close to PQLI except that now the theoretical scaffolding is strong. But at the same time, a non-physical entity will enter in the making of index and it will create problem for international comparison.

#### The Index

Human Development Index is broadly an average of social aggregates/averages of longevity, knowledge and access to resources. To put it more concretely, it is an equi-weighted average of:

1. Life Expectancy Index (LEI)
2. Education Attainment Index (EAI)
3. Standard of Living Index (SLI)

where the sub-indices were to be calculated by the same old method of the PQLI. In other words.

$$\text{HDI} = \left( \frac{1}{3} \right) (\text{LEI} + \text{EAI} + \text{SLI})$$

#### Components

Life expectancy here refers to life expectancy at birth, not at age one, because infant mortality is not entering this index as a separate indicator. Educational attainment is literacy plus. To begin with, it was only adult literacy. Later on, it became a combination of adult literacy rate and mean years of schooling. In highly developed countries, adult literacy was complete but education level was still rising. This could be reflected through

mean years of schooling or enrolment ratio. Now, mean years of schooling have been replaced by combined enrolment ratio. The weight assigned to adult literacy rate (ALR) is  $\frac{2}{3}$  while that for combined enrolment ratio (CER) is  $\frac{1}{3}$ . Therefore, educational attainment index may be given as:

$$EAI = \left(\frac{2}{3}\right) ALR + \left(\frac{1}{3}\right) CER$$

Standard of living is represented here by a transformation of per capita income. Besides longevity and knowledge, it has been argued, there are many things which people desire. It is difficult to capture them. For living a decent life, people need resources. Per capita national income is the simplest measure of resources at the command of people. Since this exercise has basically been conducted for international comparison, per capita incomes of different nations have per force to be brought to some common denominator. Per capita incomes are first converted into purchasing power parity dollars (PPP \$).

The second step concerns with the fact that the returns to a dollar of income is not the same throughout the whole range of income. The increase in returns should diminish as income increases and should eventually become zero. This idea was handled by the UNDP in a variety of ways. Presently, standard of living is being captured by the log-transform of per capita income (PCI) in PPP \$. In other words.

$$\text{Standard of living} = \log(\text{PCI in PPP \$})$$

At base 10, logarithms of 10, 100, 1000, and 10000 are 1, 2, 3, and 4 respectively. Thus, returns to additions in income are diminishing as income goes on increasing. There could be many other ways to accomplish this feature. The UNDP has tried other formulae in past but thought it proper to change to simple logarithm conversion.

## Normalisation

Since we are using only positive indicators in this index, we can write only one formula for computing the component indices (CI) :

$$CI = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

where CI stands for LEI, ALRI, CER and SLI. It may be noted that ALRI and CER are just ALR and CER respectively, each divided by 100.

## Minimum and Maximum Values

After a lot of debate over years and following the norms for various components, the UNDP has finally fixed the following minimum and maximum values for various components of Human Development Index.

## HDI and India

The United Nations Development Programme (UNDP) has been compiling human development indices for different countries for which it had access to relevant data. These

indices are published in Human Development Report, brought out annually by the UNDP.

Notice that the data compilation takes time. We can also notice Between the last two years, we find, India's rank improved by 13 while number of countries dropped by 12. It is quite possible that most of the countries excluded were above India. We should also notice that India's rank improved by 2 from 123 in 1988 to 121 in 1990 while the HDI value actually fell. It is possible because of change in methodology and components used. Despite these weaknesses, we can see that India's HDI value is improving since 1990 when it recorded its lowest value. Fortunately, HDR 2001 has calculated HDI values for different countries on uniform basis with same methodology by ensuring comparability across nations and over time, at an interval of five years since We should notice that our HDI is improving since the mid-seventies. Perhaps we are improving on all fronts, life expectancy (reflecting health to some extent) , education (including literacy) and general standard of living (represented by per capita income) . The UNDP has been categorising various countries as countries with high human development, with medium human development and with low human development, depending upon whether a country had HDI value above 0.8, between 0.5 and 0.8 or below 0.5. Prior to 2000, India was considered as low human development nation. In 2000, it has become a country with medium human development.

It will not be out of place to inform that some scholars have done interstate comparison for India while some state governments have come out with state-level exercises for human development index. These reports do contain more information on human development than are available in compilation of HDI. Since March 2002, our Planning commission has also come out with a report known as National Human Development Report.

### **Quality of Life Index**

Some economists still feel that, though human development approach talks of many dimensions, the human development index encompasses only very few of them, though important ones. They feel that political and civic dimensions, if not environmental ones, need to be incorporated in any such exercise.

In one such contribution ' On Measuring the Quality of Life ' Dasgupta and Weale have considered six parameters what they have called living standards ' indicators or constituents of well-being. These are:

- per capita income in PPP \$
- life expectancy at birth in years
- infant mortality rate in per thousand live births
- adult literacy rate in per cent of adult population
- index of political rights in seven-point scale

- index of civil rights in seven-point scale.

Civil rights are rights of individuals vis-a-vis the State, while political rights are citizens' right to play a part in governance of their country. Governance will mean who will govern and under what laws. While the first four could be called 'socio-economic' indicators, the last two could be said to be 'political and civil' indicators.

These indicators are aggregated in a peculiar way. First, countries are ranked according to each of the indicators in ascending order from worst to best. Second, the ranks for different indicators of country are added and thus for each country a rank-score is obtained. Third, countries are again ranked according to their rank-scores.

Though, this work was done from late 1970s to early 1990s, using the data relating the results are interesting. Of 48 countries listed, Mauritius comes the best and Sri Lanka, the second best. China and India come 10<sup>th</sup> and 12<sup>th</sup> best from the top, while Bangladesh and Pakistan come 26<sup>th</sup> and 30<sup>th</sup> from the top. In both the pairs, scores in 'socio-economic' indicators are found to diverge from those in 'political and civil' indicators. In 'socio-economic' indicators, China scores better than India, Pakistan and Bangladesh but in 'Political and Civil' indicators, India scores better than China, Bangladesh and Pakistan. Though the story is a bit old, it may hold even today.

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