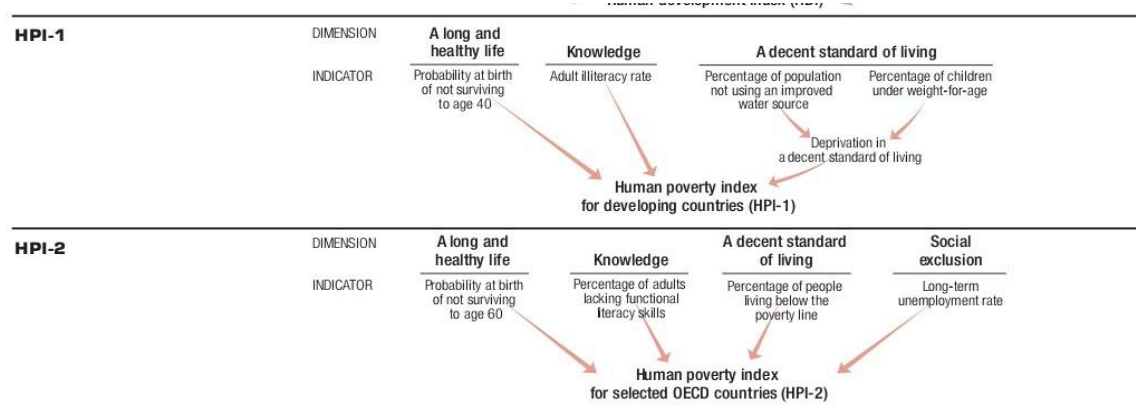# Human Poverty Index

If human development is about enlarging choices, poverty means that opportunities and choices most basic to human development are denied. Thus a person is not free to lead a long, healthy. and creative life and is denied access to a decent standard of living, freedom, dignity, self-respect and the respect of others. From a human development perspective, poverty means more than the lack of what is necessary for material well-being.

For policy-makers, the poverty of choices and opportunities is often more relevant than the poverty of income. The poverty of choices focuses on the causes of poverty and leads directly to strategies of empowerment and other actions to enhance opportunities for everyone. Recognising the poverty of choices and opportunities implies that poverty must addressed in all its dimensions, not income alone.

The Human Development Report 1997 introduced a human poverty index (HPI) in an attempt to bring together in a composite index the different features of deprivation in the quality of life to arrive at an aggregate judgment on the extent of poverty in a community. In 2010, it was supplanted by the UN's Multidimensional Poverty Index.

Human Poverty Index for Developing Countries (HPI 1):

HPI-1 measures deprivations in the three basic dimensions of human development as indicated in the HDI :

- **A long and healthy life** : vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 40.

- **Knowledge**: exclusion from the world of reading and communications, as measured by the adult illiteracy rate.
- **A decent standard of living:** lack of access to overall economic provisioning, as measured by the unweighted average of two indicators for the percentage of the population without sustainable access to an improved water source and the percentage of children under weight for age.

Calculating the HPI-1

1. Measuring deprivation in a decent standard of living

An unweighted average of two indicators is used to measure deprivation in a decent standard of living.

Unweighted average = 1/2 (population not using an improved water source)
+ 1/2 (children under weight-for-age)

A sample calculation: Bolivia

Percentage of population not using an improved water source = 15%
Percentage of children under weight-for-age = 8%

Unweighted average = 1/2 (15) + 1/2 (8) = 11.3%

2. Calculating the HPI-1

The formula used to calculate the HPI-1 is as follows:

$$HPI\text{-}1 = [1/3 \, (P_1^{\alpha} + P_2^{\alpha} + P_3^{\alpha})]^{1/\alpha}$$

Where:

P_1 = Probability at birth of not surviving to age 40 (times 100)
P_2 = Adult illiteracy rate
P_3 = Unweighted average of population not using an improved water source and children under weight-for-age
α = 3

A sample calculation: Bolivia

P_1 = 15.5%
P_2 = 13.3%
P_3 = 11.3%

$$HPI\text{-}1 = [1/3 \, (15.5^3 + 13.3^3 + 11.3^3)]^{1/3} = \textbf{13.6}$$

Human Poverty Index for OECD countries (HPI 2):

The HPI-2 measures deprivations in the same dimensions as the HPI-1 and also captures social exclusion. Thus it reflects deprivations in four dimensions:

- **A long and healthy life** - vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 60.

- **Knowledge** - exclusion from the world of reading and communications, as measured by the percentage of adults (aged 16-65) lacking functional literacy skills.

- **A decent standard of living** — as measured by the percentage of people living below the income poverty line (50% of the median adjusted household disposable income).

- **Social exclusion** - as measured by the rate of long-term unemployment (12 months or more).

Calculating the HPI-2

The formula used to calculate the HPI-2 is as follows:

$$\text{HPI-2} = [1/4\,(P_1^{\alpha} + P_2^{\alpha} + P_3^{\alpha} + P_4^{\alpha})]^{1/\alpha}$$

Where:

P_1 = Probability at birth of not surviving to age 60 (times 100)

P_2 = Percentage of adults lacking functional literacy skills

P_3 = Percentage of population below income poverty line (50% of median adjusted household disposable income)

P_4 = Rate of long-term unemployment (lasting 12 months or more)

$\alpha = 3$

A sample calculation: Canada

$P_1 = 8.1\%$

$P_2 = 14.6\%$

$P_3 = 11.4\%$

$P_4 = 0.5\%$

$$\text{HPI-2} = [1/4\,(8.1^3 + 14.6^3 + 11.4^3 + 0.5^3)]^{1/3} = \mathbf{10.9}$$

Why alpha = 3 in calculating HPI 1 & HPI 2

The value of a has an important impact on the value of the HPI. If a = 1, the HPI is the average of its dimensions. As a rises, greater weight is given to the dimension in which there is the most deprivation. Thus as a increases towards infinity, the HPI will tend towards the value of the dimension in which deprivation is greatest. In this report value 3 is used to give additional but not overwhelming weight to areas of more acute deprivation.

Limitations of HPI:

Limited utility, because it combined average deprivation levels for each dimension and thus could not be linked to any specific group of people.

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