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## A Study on Different Indicators of Economic Development

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### ABSTRACT:

*Economic development is most important concept for measuring improvement of any country in the competitive world. But it is not easy to define economic development in a precise manner because different criteria have been used for different country. But which criteria is good for measuring economic development is debatable issue in economics. Economic development is a process of change over a long period of time. Though there are several criteria used to measure the economic development, but no one criteria provide a satisfactory and universally acceptable index of economic development. According to R. G. Lipsey there are many possible measures of a country's degree of development like national income, per capita income, saving per head, amount of social capital and the percentage of resource unexploited. But more commonly used criteria of economic development are increase in national income, PCI, standard of living and economic welfare etc. so some important economic development criteria are discussed here in this paper which is used by all over the world.*

**Keyword** = Growth, development, PCI (per capita income), HDI (human development index), PQLI (physical quality life index) NI= national income

### Introduction

The great depression of 1929 and second world war from 1939 to 1945. this were the two major historic event which were responsible for the study of principals problems and policies related to the economic development. this was for perhaps because of independence of most of the Asian like India, Sri Lanka and some of rest South Asian and African countries from the colonial slavery, since then economics have analytically studied the problem of accelerating development in under developed countries and maintaining development in developed countries of the world.

The study of economic development has attracted the attention of eminent scholars and economics right from the mercantile school to Adam Smith and Karl Marx. then man focus was on the problems of statistic nature and largely related to the Western European framework of social and cultural institutions. Adam Smith in his popular work and enquiry into the nature and cause of wealth of nation has dealt with the forces leading to the economic progress. David Ricardo was interested for economic growth during the 1930 Keynesian analysis addresses a double promed message a condemnation of wastage of resource resulting from cyclical unemployment and warning against deep rooted dangers of secular stagnation. these two

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interrelated problems have been moving into the general discussion of economic growth which is the major concern in post in analysis. In more advanced face of capitalistic development economics are attempting to spell out the precise conditions necessary for maintaining of study growth and avoidance of chronicle problems of general or production or under production

### Definition

The meaning of economic development are try to explain by its definition. So Some of the definition are below which given by economist.

According to **Williamson and Buttrick**, “Economic development or growth refer to the process whereby the people of the country are region come to utilize the resource available to bring about a sustained increase in per capita production of goods and service.”

“Economic development implies both more output and changes in technical and constitutional arrangement by which it is produced.” ----- **CP Kindleberger**

“Development concerns not only men's material needs but also the improvement of social conditions of his life development is there for not only economic growth but growth plus change social cultural and institutional as well as economic.” ----- **UNO**

According to above definition we may say that economic development is a qualitative aspect. It includes not only growth of national income but also change of quality aspects also such as education, health, life style, etc.

### Indicators of Development:

There are four important indicators to measure the level of development.

#### 1) Per capita income (PCI)

Gross domestic product GDP is considered a method to measures the level of output produced by the economy in an accounting period specially one year. in this indicator there is no difference between GDP and GNP. in India being a big country GNP is less than GDP. GDP is the better representative index. the average income of a person in a country in a particular year is called per capita income. it is the income per head of the population per capita income is obtained by dividing national income by population.

Therefore, the per capita income formula is first determined by dividing the region's (country) total revenue by its people.

**Per Capita Income = Total Income of Area / Total Population**

#### 2) Physical Quality of Life Index (PQLI)

During 1979 the Morris constructed composition of physical quality of life index. He perused that most of the indicators were inputs of development process rather than result of the development process. These indicators reflected that the economically less developed countries are simply under developed version of industrialized countries. three component indicators of infant mortality, life expectancy and basic literacy to measure performance in meeting the basic need of the people.

The **Physical Quality of Life Index (PQLI)** is an attempt to measure the quality of life or well-being of a country. The value is the average of three statistics: basic literacy rate at the age

of 15 years, infant mortality, and life expectancy at age one, all equally weighted on a 1 to 100 scale.

It was developed for the Overseas Development Council in the mid-1970s by M.D Morris, as one of a number of measures created due to dissatisfaction with the use of GNP as an indicator of development. He thought that they would cover a wide range of indicators like health, sanitation, drinking water, nutrition, education etc. PQLI might be regarded as an improvement but shares the general problems of measuring quality of life in a quantitative way. It has also been criticized because there is a considerable overlap between infant mortality and life expectancy.

Steps to Calculate Physical Quality of Life:

- 1) Find percentage of the population that is literate (literacy rate).
- 2) Find the infant mortality rate. (out of 1000 births) INDEXED Infant Mortality Rate =  $(166 - \text{infant mortality}) \times 0.625$
- 3) Find the Life Expectancy. INDEXED Life Expectancy =  $(\text{Life expectancy} - 42) \times 2.7$
- 4) Physical Quality of Life =  $\frac{(\text{Literacy Rate} + \text{Infant Mortality Rate} + \text{Life Expectancy})}{3}$

3

#### **ABOUT PHYSICAL QUALITY OF LIFE INDEX (PQLI):**

Increase in national income and per capita income are not the real indicators of economic development, as it has a number of limitations. Increasing incomes of the country are concentrated in the hands of a few people, which is not development. The development of a country should be such that the living standards of the poor rises, and the basic requirements of the citizens are fulfilled. Keeping this in mind, Morris Davis Morris presented the physical quality of life index, in short known as the PQLI. In this index, betterment of physical quality of life of human beings is considered economic development. The level of physical quality of life determines the level of economic development. If any country's physical quality of life is higher than that of the other country, then that country is considered as more developed. There are three standards to measure the physical quality, which are depicted here:

- 1)- Extent of Education, 2)- Life Expectancy & 3)- Infant Mortality Rate

#### **3) Human Development Index**

The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

The health dimension is assessed by life expectancy at birth, the education dimension is measured by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income per capita. The HDI uses the logarithm of income, to reflect the diminishing importance of income with increasing GNI. The scores for the three HDI dimension

indices are then aggregated into a composite index using geometric mean. Refer to technical notes for more details. The HDI can be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes. These contrasts can stimulate debate about government policy priorities.

The HDI simplifies and captures only part of what human development entails. It does not reflect on inequalities, poverty, human security, empowerment, etc. The HDRO provides other composite indices as broader proxy on some of the key issues of human development, inequality, gender disparity and poverty.

A Human Development Index is a statistical method that shows how countries have fared in the areas of human development, namely, living a long and healthy life, having access to education, and having an acceptable standard of living. The normalized indices for each development dimension are averaged to get the HDI. Each year, the UNDP ranks the nations based on the HDI report. Given that it incorporates significant social and economic factors that influence economic growth, the HDI is one of the greatest tools for monitoring a nation's level of progress.

In 1990, the United Nations Development Programme (UNDP) published its first Human Development Report (HDR). The Pakistani Economist Mahbub Ul Haq and the Indian Nobel laureate Amartya Sen introduced the first HDR in 1990. The Pakistani economist, Mahbub-Ul-Haq's approach to human development was grounded in Amartya Sen's research on human capabilities. The HDI calculates a minimum and maximum value for each dimension referred to as "goalposts" and then displays where each nation sits regarding these goals. The value of the index is calculated for each dimension on a scale from 0 to 1, with 0 denoting the least value and 1 denoting the highest value allocated to the associated indicator. A country's HDI value increases with its level of human development.

## HDI Indicators

Three indicators of HDI:

- **Life expectancy at birth:** long and healthy life is determined through the life expectancy index. For example, when the life expectancy at birth is 85 years, the LEI is 1, and when it is 20 years, it is 0.
- **Expected years of schooling & Mean years of schooling:** It comes under the knowledge dimension of the HDI index. Acquired knowledge through mean and predicted years of education is measured through the education index. The two Knowledge indicator values are first normalized using a minimum value of 0 and a maximum value of 15 for the mean years spent in school and 18 for the expected number of years.
- **GNI per capita (PPP \$):** The technique measures a decent standard of living through the GNI index. The low minimum value of PPP is taken as \$100. PPP \$75,000 is the maximum value allowed.

A good performance on the UN Human Development Index would necessitate a good performance on all dimensions since a poor performance on any index would be instantly reflected in the entire HDI. (Values mentioned are according to the 2014 goal post).

#### HDI Formula

The Human Development Index calculation involves multiple steps and formulas. It starts with calculating the index values: Life Expectancy Index (LEI), Education Index (EI), and Income Index (II). Finally, HDI is the geometric mean of the three normalized indices.

1. **Life Expectancy Index (LE)** =  $LE - 20 / 85 - 20$

Here LE = life expectancy at birth

2. **Education Index (EI)** =  $MYSI + EYSI / 2$

Here MYSI = means years of schooling index

EYSI = expected year of schooling index

3. **Income Index (II)** =  $\ln(GNI_{pc}) - \ln(1000) / \ln(75,000) - \ln(100)$

$GNI_{pc}$  = Gross national income at purchasing power parity at per capita

4. **HDI** =  $\sqrt{LEI \cdot EI \cdot II}$

#### 4. Quality of Life Index

Quality of life of the people is another index to measure the standard of living of the people in an economy. It is influenced by National and per capita income of the people. Quality of the people is influenced by many other factors like consumption, output, health, environment, education, freedom, security, nonviolence, fees, full atmosphere, etc. These factors influence human welfare directly or indirectly. Generally, none of the factors alone determine the welfare of the people. At the same time, we should not know that national income is not itself the single factor of welfare. It is essential that all the determiners of welfare should be combined together to measure the quality-of-life index, but it is not possible that every variable should be accounted for because of conceptual and statistical difficulty.

#### Conclusion:

Many scholars and policy makers are not happy with the above-cited indicators of development. They found that each indicator has its own constraints. Some groups believe that GNP or per capita income (PCI) is the best indicator, but it simply needs modification. Others feel that they should directly measure development, particularly social development. They consider all possible variables that impinge upon modernization, urbanization, and industrialization. Similarly, Prof. Morris developed the Physical Quality of Life Index (PQLI). He is of the view that it represents the outcome of development, but he failed to consider monetary aspects, which pose the problem of inter-national comparison. Infant mortality and life expectancy both refer to the same demographic features. HDI, which incorporated per capita income along with longevity and knowledge, is subject to defects. Thus, we can say that the choice of indicator needs an alternative. However, P. Das Gupta and Martin Weale suggested a way of combining some aspects of quality of life into an index which can provide better results.

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