IN SEARCH OF A COMPREHENSIVE AND RIGOROUS MEASURE OF HUMAN DEVELOPMENT AND WELL-BEING: A COMMENTARY ON THE SOCIAL PROGRESS INDEX 2014 AND ZAMBIA'S PERFORMANCE ON THE INDEX

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ABSTRACT

The Social Progress Index 2014 is the latest addition to the various measures of human development or well being that exist. It provides further evidence to the argument that the GDP is not an adequate measure of human development. The SPI is a multidimensional measure involving a fairly large number of indicators. This is useful for policy makers in individual countries like Zambia to identify areas of relative strengths and weaknesses and direct their policy focus accordingly.

Keywords: Social Progress Index, human development, Zambia.

INTRODUCTION

In April 2014, the Social Progress Imperative, a nonprofit group, launched the Social Progress Index Report 2014 amid a lot of attention-grabbing publicity. Much of the attention grabbing was perhaps due to the fact that the world's most powerful economy with the highest per capita income among large economies had a relatively low rank on the Social Progress Index. The United States did not even feature among the top ten ranked countries. It was ranked 16th among 132 countries.

The Social Progress Index is the latest addition to the numerous measures of human development and well-being that already exist. The most notable among these is the UNDP's Human Development Index that has been in existence since 1990 with several refinements to the index made over the years.

The formulation of the various measures of human development (or human well-being or human welfare or human happiness or human progress, call it what you will) attained momentum especially in the past three decades or so because of the growing intensity of dissatisfaction among development specialists with the use of the Gross Domestic Product (GDP) as a measure of both economic growth and development. A growing body of empirical evidence showed that economic growth was not sufficiently correlated with human development and hence there was a need to have separate measures of development.

The limitation of the GDP in gauging human development was recognized by the very developer of the GDP concept – Simon Kuznets, who stated that "the welfare of a nation can scarcely be inferred from a measurement of national income" (Kuznets, 1934). But this warning that Kuznets gave the United States Congress way back in 1934 went largely unheeded and the US and many other countries continued with the pursuit of economic growth and "a rising GDP quickly became a dominant mantra of policy making". (Malik, 2014).

Some perspectives on human development

While efforts to formulate adequate measures of human development may appear to be a relatively recent intellectual activity, the concept of human development or human happiness as the ultimate goal of human existence is itself as old as the hills.

A perspective from ancient India

In India, there is a stanza in Sanskrit whose author is unknown and dates back to antiquity, which states:

“Every human being is born a *sudra* (an uncultured being little different from other animals). Through exposure to the norms of culture and civilization, he becomes a *dwija* (twice-born; i.e. born again as a human being distinct from other animals). Then, through exposure to higher levels of knowledge, he becomes a *viprah* (an enlightened being). And finally, through the attainment of self-realization, the fundamental goal of human birth and existence, he becomes a *brahmanah* (a Brahmin).”

In the light of the above stanza, human development can be defined as the process by which an individual progresses from a sudra to a Brahmin. When nations of human beings proceed towards the Brahmin state, they can be considered to be developing. If they stagnate at any of the lower levels, it signifies scope for human development.

Going by the above definition, even countries that are regarded as ‘highly developed’ on the basis of other modern-day definitions and indicators cannot be deemed to be developed. The reason is that the concept of development embedded in the old Sanskrit stanza implies, among other things, moral and ethical progression of men and women which is not the case with the other commonly used definitions including the UNDP’s concept of human development.

But the ancient stanza subsumes the UNDP’s concept and all the dimensions associated with the latter. In the first place, the transformation from sudra to Brahmin cannot be wrought overnight and is a long-term process. Hence for this transformation to be achieved, a man or woman must have, in the first place, a long and healthy life. For this, he or she must have access to all the amenities required for such a life: access to nourishing food, safe water, health care, accommodation, and other material requisites. In order to have access to these things, he or she must have enough real purchasing power at his or her disposal. And finally, to acquire knowledge of culture, civilization and matters of the spirit, education is a pre-requisite.

The UNDP’s Human Development Index, HDI, is based on three sub-indices that correspond to the above requirements, namely, Index of Longevity as measured by life expectancy at birth, Index of Knowledge as measured by literacy and years of formal schooling, and an Index of Income adjusted for purchasing power parity.

While all the above dimensions are important, a human being cannot attain the status of Brahmin unless he also progresses as a moral and ethical being as judged by qualities such as honesty, integrity, love, empathy and a spirit of altruism that tempers selfish desires.

Modern perspectives

Adam Smith, regarded as the father of modern economics, produced a voluminous tome explaining the nature and significance of wealth and suggesting ways in which nations can become rich. But Smith also cautioned that what a man really wanted was happiness and that happiness was not synonymous with wealth. (Smith, 1776)

What then constitutes and contributes to human happiness? This question continues to be posed to the present day. Smith's statement that 'happiness is not synonymous with wealth' can be equivalently recast in modern terminology as 'human development is not synonymous with economic growth'. What other measure then can depict the state of human development in a country more satisfactorily than per capita GDP growth which is the main measure of economic growth? It is in response to this question that economists and other social scientists have proposed alternative measures such as the Human Development Index, Happy Planet Index, Gallop Healthways Well-being Index and Index of Gross National Happiness (which is used in Bhutan) among others.

Why are there so many measures? Is one comprehensive index of human development not sufficient? The answer is that there seems to be no agreement that any of the measures developed so far is comprehensive and rigorous enough to measure human development. For instance, pretty soon after the Human Development Index was introduced, it was acknowledged that the Human Development Index was not conterminous with human development which had many dimensions not captured in the index. One such prominent dimension is environment. As noted environmentalist Paul Hawken (2009) pithily remarked: 'You can print money to bail out a bank but you can't print life to bail out a planet. At present, we are stealing the future, selling it in the present, and calling it GDP'.

The latest in the series of ongoing attempts to develop a more satisfactory measure of human development is the Social Progress Index. Before one can go into an analytical discussion of this new index, there is one more important point that needs to be clarified.

Why human development measures are relevant not only for poor developing countries

Consider the following excerpt from an article by a leading economist that appeared in a well-known newspaper (I have deliberately left blanks in place of several words):

"--------------- supporter: 'Why doesn't President ------ get credit for a great economy? I blame liberal media bias.'

Informed economist: 'But it is not a great economy for most -----------. Many families are actually losing ground and only a very few affluent people are doing well.'

-------------- supporter: 'Why doesn't President -------- get credit for a great economy? I blame liberal media bias.'

To a large extent, this dialogue of the deaf reflects Upton Sinclair's principle: it is difficult to get a man to understand something when his salary depends on his not understanding it.

……………..

But it is reasonably clear that …… growth in the economy is mainly benefiting a small elite, while bypassing most families.

Here's what happened in 2004. The economy grew 4.2 percent. Yet…. real median family income – the purchasing power of the typical family – actually fell. Meanwhile poverty increased. …… So where did the growth go?

….in 2004, the real income of the richest 1 percent surged by almost 12.5 percent. Meanwhile the average real income of the bottom 99 percent of the population rose by only 1.5 percent. In other words, a relatively handful of people received most of the benefits of growth.

………………

Can anything be done to spread the benefits of a growing economy more widely? Of course. A good start would be to increase the minimum wage, which in real terms is at its lowest in half a century."

To a reader in many a country especially in sub-Saharan Africa including Zambia, the above statistics may seem to reflect the situation in her own country, and if she were asked to fill in the blanks in the foregoing excerpt, she would probably fill them appropriately with the name of her own country, countrymen and her country's President. But the above excerpt is from an article written by Professor Paul Krugman of Princeton University in the *New York Times* (July 14, 2006) about the situation obtaining in the United States under President George Bush.

I quote from the above article for two reasons. One, issues relating to human development such as inequality and iniquitous distribution are not confined only to the developing countries, they can be issues of concern in the economically developed countries as well. They are more prominent issues in developing countries only because of the prevailing high levels of poverty and inequality. Two, issues of inequality and iniquitous distribution transcend economic and political discussion and bring moral and ethical concerns to the fore. Is it morally acceptable or ethically legitimate to endorse or persist with a process of growth that adds so much to those who already have and adds little to - or even takes away the little from - those who have but a little?

The well-known Pareto Principle in economics states that if one person gains without anyone else losing, overall economic welfare could be deemed to have increased. Put more simply, if out of a society of 100 persons, 5 persons gain a lot while the remaining 95 persons neither gain nor lose, overall welfare in the society will have increased. And if this happens persistently over time, overall welfare too would be deemed to go on increasing over time. The question is: would it? For if the 5 persons are rich and the remaining 95 persons are on the fringes of the poverty line, such a dynamic scenario would aggravate the gap between the haves and the have-nots which eventually could lead to social instability. As is well-known, many revolutions in history, notably the French Revolution, took place precisely because the small elite fed on cakes while most of the poor commoners went without bread.

Coincidentally, it was French President Nicolas Sarkozy who, in February 2008, asked Nobel Prize-winning economists Joseph Stiglitz and Amartya Sen, along with the distinguished French economist Jean-Paul Fitoussi to establish a commission of leading economists to examine why the GDP – the most widely used measure of economic activity – did not seem to be a reliable indicator of economic and social progress. The three economists authored a book that addressed this issue. (Stiglitz, Sen & Fitoussi, 2010).

The authors provide an elaborate assessment of the limits of GDP as a measurement of the well-being of societies. In particular, they emphasize how GDP overlooks inequality (with the result that most people can be worse off even though average income is rising); and does not factor environmental impacts into economic decisions.

Social Progress Index 2014

The Social Progress Index (SPI) 2014 is the most holistic measure of human development that has been formulated to date. The 2014 Index calculated for 132 countries is a refinement of the beta version of the index for 2013 calculated for 50 countries. Among its main features are:

- It is an outcome-based measure of a country's well-being that is independent of economic indicators; there is no comingling of social and economic indicators as is the case for example with the Human Development Index;
- It is based on outcomes and not inputs;
- It does not contain any money-metric components.
- It draws on Amartya Sen's capabilities approach and also emphasizes the role of institutions in shaping economic and social performance as propounded by Nobel laureate Douglas North among others.

The SPI is based on three dimensions – Basic Human Needs, Foundations of Wellbeing and Opportunity.

Each of the three dimensions has four components as follows:

Basic Human needs: Nutrition and Medical Care, Water and Sanitation, Shelter, Personal Safety.

Foundations of Wellbeing: Access to Basic Knowledge, Access to Information and Communications, Health and Wellness and Ecosystem Sustainability.

Opportunity: Personal Rights, Personal Freedom and Choice, Tolerance and Inclusion and Access to Advanced Education.

Each of the components has several indicators. There are 54 indicators in all. Such a large number of indicators enables a granular analysis of the specific areas of relative strengths and weaknesses that should prove useful to policy makers.

The methodology of the construction of the SPI briefly is as follows:

1. The overall SPI is derived as the equal weighted average of a country's score in each of the three dimensions;
2. Each dimension score is calculated as the equal weighted average of its four component scores;
3. Each component has several indicators that are aggregated using a weighted average.

The value of the SPI ranges on a scale between 0 and 100. The scale is determined by identifying the best and worst global performance on each indicator by any country in the last 10 years, using these to set the maximum (100) and minimum (0) bounds.

Some of the statistical tools that have been used in the SPI construction are:

- Since all the components have several indicators, the "fit between" the individual indicators within a component was evaluated by calculating Cronbach's alpha. Chronbach's alpha provides a measure of internal consistency across indicators.
- Factor Analysis was used to obtain a set of weights for the indicators within each component to create an aggregate value or factor for the component. If indicators within a component are chosen well, this factor will extract a score which can be used as a valid synthetic measure of the component across countries.
- After performing Factor Analysis in each component, goodness of fit was assessed using the Keyser-Meyer-Olkin measure of sampling adequacy.

After carrying out the above statistical evaluations, the SPI is calculated through the following steps:

Individual component value is obtained as $\text{Component}_c = \sum(W_i {}^* \text{ indicator}_i)$

Individual dimension score is obtained as $\text{Dimension}_d = 1/4\sum_c \text{ Component}_c$

The overall index is obtained as $\text{SPI} = 1/3\sum_d \text{Dimension}_d$

As mentioned earlier, the SPI is scored on a 0 to 100 scale for each country. To achieve this, a component score for each country is calculated as

$$(X_j - \text{Worst Case})/(\text{Best case} - \text{Worst Case})$$

I do not intend to go into a more detailed discussion of the methodology. Those interested can peruse the Report.

Lack of synchronicity between GDP per capita and SPI

The SPI scores for the 132 countries show that the index values display significant deviations from the GDP per capita trend line. New Zealand is the top ranked country on SPI but it ranks only 25th on GDP per capita. New Zealand's GDP per capita is only half of the richest country Norway, but Norway's SPI score is lower. Liberia's GDP per capita is only one third that of Chad's but has a higher score on SPI.

What is encouraging is that some countries including those in sub-Saharan Africa, despite their low incomes, are outperformers on SPI. For example, Malawi's actual score on SPI is 28% higher than its predicted score based on its GDP per capita. Ghana and Liberia are also outperformers in this sense.

Such lack of synchronicity between GDP per capita and performance on SPI is seen at all levels of incomes. It becomes amply clear that factors beyond economic growth are essential to social progress and human development. Indeed, the SPI provides one more major piece of evidence that economic growth is at best a necessary but by no means a sufficient condition for human development. As Michael Green, Executive Director of the Social Progress Imperative, said: “Economic growth does not automatically lead to social progress. The Social Progress Index shows that if we are to tackle problems such as poverty and inequality economic growth alone is not enough”. (Quoted in Kassab, 2014). In an earlier paper, I had explained that economic growth needs to fulfill five criteria – five E’s - if it is to have a closer linkage with human development, namely, employment, equality & equity, ethnicity, empowerment, and environment & ecology. (Seshamani, 2010).

How does Zambia fare on the SPI?

Zambia has a score of 49.88 on the SPI and ranks 104 out of 132 countries. The overall score and the rank are both quite low.

What is to be taken note of, however, is that Zambia still has a pretty low income and so its performance on the SPI has to be gauged by seeing where it stands in relation to countries with similar GDP per capita. In this respect Zambia has some relative strengths and weaknesses on different components. This is shown in the table below.

Table 1: Zambia’s performance on the SPI relative to 15 countries with most similar GDP per capita

Index/component	Relative performance
SPI	Neither strong nor weak (49.88)
Basic Human Needs	Weak (38.57)
Foundations of wellbeing	Strong (63.67)
Opportunity	Strong (47.41)
Nutrition and basic medical care	Weak (49.33)
Water and Sanitation	Nether strong nor weak (33.23)
Shelter	Weak (23.05)
Personal safety	Neither strong nor weak (48.67)
Access to Basic Knowledge	Strong (79.52)
Access to Information and Communications	Neither strong nor weak (47.54)
Health and Wellness	Weak (64.63)
Ecosystem Sustainability	Neither strong nor weak (63.09)
Personal Rights	Neither strong nor weak (53.80)
Personal Freedom and Choice	Strong (62.94)
Tolerance and inclusion	Strong (49.18)
Access to Advanced Education	Neither strong nor weak (23.73)

NB: Figures in brackets indicate scores
Source: Social Progress Index 2014 Report, Appendix 2

The scores indicate that Zambia is strong in Access to Basic Knowledge and Personal Freedom and Choice.

It must be noted that relative performance is not necessarily correlated with absolute performance. For instance, on Access to Advanced Education Zambia’s relative performance is assessed as being neither strong nor weak in relation to the 15 countries with most similar GDP per capita. But in absolute terms, Zambia's performance is very weak on this indicator with a score of only 23.73. Likewise, Zambia is weak on Water and Sanitation (33.23) although rated as being neither weak nor strong in relative terms.

It is also interesting to note that despite what seems to be a moderate score on Health and Wellness (64.63), the country is rated as being relatively weak.

Zambian policy makers, therefore, need to focus attention on all those components in which the country is assessed as being weak in relative and/or absolute terms. In particular, the following areas where the country is weak in both absolute and relative terms need special attention: Overall Basic Human Needs, specifically, Water and Sanitation and Shelter and also Access to Advanced Education.

How does Zambia fare in the SADC region?

To understand Zambia's performance on SPI within the SADC region, consider the following table. (Note that although currently SADC has 15 countries, SPI values are not available for three countries – Democratic Republic of Congo, Seychelles and Zimbabwe).

Table 2: SPI for SADC countries

Country	SPI value	Global rank	Rank within SADC
Angola	39.93	127	12
Botswana	65.6	57	2
Lesotho	48.94	107	6
Madagascar	44.28	119	11
Malawi	48.79	109	8
Mauritius	73.68	34	1
Mozambique	45.23	117	10
Namibia	61.19	78	4
South Africa	62.96	69	3
Swaziland	48.87	108	7
Tanzania	46.05	114	9
Zambia	49.88	114	5

Source: Social Progress Index 2014 Report

Zambia ranks fifth among 12 countries in the SADC region. The average value of the SPI for the 12 countries is 52.95. So Zambia's SPI value is slightly over three percentage points below the regional average. Going by absolute SPI values, this is a large difference. But its Z-score shows that Zambia is only 0.298 standard deviation below the mean and so it is not significant.

Now, on the face of it, Mauritius looks like an outlier. Indeed, not only it ranks as number one in the region but with an SPI value of 73.68, it ranks fairly high even globally. Its global rank is 34 with Botswana in the region coming a remote second. So what if we trim the data by removing Mauritius from Table 2? It could in all probability show Zambia in even a better light in the region. Unfortunately, we are unable to do this since the Extreme

Studentized Deviate (ESD) Test does *not* show Mauritius to be an outlier. (Seeing is not believing always!). The ESD Test statistic T_s has a value of 2.1 which is less than even the 5% critical value for ESD of 2.41 for 12 observations.

But what is perhaps more encouraging is that Zambia with a per capita GDP of $1,475 has a higher SPI than Angola, Swaziland and Lesotho, all of which have per capita GDP higher than Zambia ($5262, $4522 and $1692 respectively). This again highlights the inadequacy of GDP per capita or economic growth to bring about human development.

Is the SPI an adequate measure of human development?

The SPI undoubtedly represents a painstaking attempt at constructing a comprehensive and rigorous measure of human development. But the SPI 2014 is not the last word on such index construction. A number of areas have been identified where better data could have enhanced the credibility of the SPI:

- Quality and affordability in housing
- Violence against women
- Quality of education
- Access to radio, television and newspapers
- Quality of life and rights for the disabled
- Treatment for mental health
- Deforestation
- Property rights for minorities and women
- Ease and affordability of internal mobility
- Quality of social relations and networks

The quest for a more satisfying measurement of human development/happiness/wellbeing/welfare is bound to continue!

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