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Social Progress Index Human Well-Being Quantified

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Abstract: Human wellbeing a highly debated topic from many disciplines have been tried to quantify by the usage of Social Progress Index, which has taken into account fifty-four indicators. This can be considered as the best possible way of quantifying it from quite many angle. This analysis has compared often known indicator with the SPI. Currently many have come up with the view that GDP has to retire. This can be seen as a probe into the same category. The outcome seems to be quite disgusting from an economic perspective.

Keywords: SIP, GDP, HDI, Rank Correlation Coefficient, Progress Indicator

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The reason why Richard Ainsley Easterlin, a renowned economist at the University of Southern California, is worried with happiness is that he unambiguously identifies it with welfare. He accepts the English economist Arthur Cecil Pigou's dissimilarity between social (or total) welfare and economic welfare. In Easterlin's view: "Happiness corresponds to the broader of the two concepts, that of social welfare, or welfare at large". Unfortunately, he does not propose a more accurate definition of happiness.¹ To examine whether higher income is linked with greater happiness, Easterlin performs three diverse comparisons. Third, he compares the happiness of Americans at unlike points in time. This to the point arrangement of Easterlin's article illustrates that he adopted the innermost assumptions underlying psychological measures of well-being. First, the technique he uses to determine welfare presupposes that wellbeing is a matter of a psychological state, in this case happiness.

In the above, I have traced the chronological roots of subjective course of well-being. There is no doubt that subjective method of well-being appeared in functional branches of psychology and other fields. Even though the questions given to subjects in the early studies consistently referred to happiness – of individuals or of marriages – the conclusions were often framed in terms of contentment as well as happiness. Over time, psychologists in full swing started asking questions about satisfaction together with questions of happiness, and they realized that answers to questions of satisfaction were not as highly correlated with answer to questions about happiness as they would have thought. Some ask about happiness, others about satisfaction. At the same time, the correlation between answers to questions about happiness and satisfaction suggests to the researchers that for many purposes, a

measure of either one can serve as a measure of both. Anyway, this passage certainly gives the impression that psychologists and economists working on subjective well-being simply assume that people are reliable judges of their happiness.

The concept of well-being, as it is used here, needs to be sharply distinguished from the concept of financial well-being, or economic welfare, in the sense of access to economic resources.² For the purposes of understanding, I divide accounts of well-being into three main classes: mental state accounts, preference-satisfaction accounts, and objective list accounts. Welfare, rather, is like physical fitness. Although Keller does not offer a complete account of welfare, he does put forward that one aspect of welfare is the accomplishment of goals. Second, Keller maintains, goals be different from simple preferences or desires.

In this section we take into account the three different indicators and the relationship between these are checked over here. Once these relations are established it can help us to know the real facts about freedom and capability establishment in an economy. When we speak of an economy it takes into account a concept of nation. Gross Domestic Product, Social Progress Index and Opportunity are the three indicators taken into account in the analysis.

1. GDP or HDI as Progress Indicator

The two measures of GDP and HDI has remained as the majority commonly used standards by which experts assessed whether a country is making improvement better than in the past. Sometimes GDP has also been regarded as a representative indicator for by and large development and progress in all-purpose. However, with the succeeding insight that GDP does not put across information on social inclusion, environmental sustainability or social progress in its intend and function, the need to harmonize and substitute GDP with some

enhanced development indicators has been progressively more recognized. The indispensable concern that emerged from this discernment raises the question whether the GDP measure evaluates progress precisely, while progress could take account of not only the material progress but the standard of life aided by health care, education and basic amenities of life. In fact, the development of Human Development Index (HDI) in 1990 is recognition to the information that per capita income levels are not satisfactory to denote overall development. According to Anand and Sen³, income or wealth do put up with importance but cannot constitute a direct measure of the overall well-being and therefore the HDI is constituted approximately a broader concept of development by combining health, education and per capita income into a composite index. On the other hand, it is also argued that at the same time as composite indices broaden the dimensions of development they also compromise on the fact that all the components in a composite index are not evaluated at market prices.⁴ In fact, it has in recent times been claimed that GDP bears a noteworthy advantage over other indicators of development in the sense that it only uses information that are generated by the market processes.⁵

One may for that reason be apprehensive about deliberating the appropriateness of using the GDP measure as an alternate indicator for wellbeing and in general development as opposed to the HDI. It may be mentioned that several studies have earlier indicated high correlation between economic indicator of per capita GDP and other aggregate social indicators of development, thereby suggesting that GDP can be used as a proxy measure of development. It may be well-known that the values of development index like the HDI have been shown to show

evidence of positive and statistically significant correlation with the GDP or GNP per capita. Some researchers have consequently recommended that since the HDI is so intimately correlated with GDP or GNP per capita, it is a redundant index. The argument that is forwarded is that since additional dimensional indicators like health and education outcomes often advance with income, then the HDI measure would consistently be closely connected with the per capita GDP and therefore no additional information can be gained from the HDI index.

It may likewise be noted that the features of higher economic growth have often been found to be associated with performance in cumulative or dimensional human development indicators like health and education attainments. According to Sen⁶, economic development holds a innermost orientation for the human capability expansion, since improvements in per capita income provides superior opportunities for people to benefit from long, healthy and creative lives. On the converse, the responsibility of human and social capital accumulation has critically been acknowledged in accounting for differences in growth rates across countries. Investments in health and education have been emphasized in the development literature for its positive contributions. A series of papers by Booser, Ranis, Ranis and Stewart, Ranis, Stewart and Samman explored the two-way relationships between economic growth and human development, and argued that human development is not only an end product of the development procedure but also a means to generate future economic growth. It is argued that strong economic growth advances human development through the increased domestic consumption expenditure as well as public expenditures, which unswervingly benefit the poor. Thus, while economic growth increases a country's tax base, it becomes possible for the government to spend more on the key

public services of health, education and other items that contribute to their capabilities and raise the standard of living. The employment opportunities created by robust growth levels can also create incentives for families to expend in education and health. On the other hand, the impacts from human development to economic growth works as people turn out to be healthier, better nourished and educated and to contribute more to economic growth.

Although, per capita GDP growth can continue as an important mechanism for achieving a higher standard of life, the impact of economic growth on human development level significantly depends on aspects, such as the allocation of income. Thus, the same level of GDP can be found to distribute very different development performances depending on the allocation of income across income classes. In fact, a key message enclosed in various Human Development Reports remains that economic growth alone does not automatically translate into human development progress. For instance, the 1996 edition of the Human Development Report identified five ways in which economic growth can be problematic, viz.,

1. Jobless growth, where economic growth does not expand employment opportunities.
2. Ruthless growth, where growth benefits only the rich.
3. Voiceless growth, where economic growth is not accompanied by democracy or empowerment.
4. Rootless growth, which causes minority cultures to be swamped by the dominant culture.
5. Futureless growth where resources for future growth are exploited (UNDP 1996)⁷.

The elevated economic growth rates may not convert into development unless appropriate distributional policies and

well-designed delivery instruments are accompanied to translate the benefits of growth into the lives of the underprivileged.

2. HDI to SPI

Most wellbeing indices, such as the Human Development Index, the Better Life Index, and Bhutan's Gross National Happiness measure integrate GDP or other economic measures directly. Most of these either comprise only a modest portion of social progress, such as the environment or basic needs, conflate social measures with economic ones, or make use of more subjective contribution measures rather than outcomes. The Social Progress Index is the primary holistic measure consisting of only observable outcomes that focuses exclusively on social and environmental performance. These are commendable efforts to measure wellbeing that have laid important groundwork in the field. However, because they conflate economic and social factors, they cannot explain or discharge the relationship between economic development and social progress. The Social Progress Index measures social progress unswervingly, independently of economic development, in a way that is both holistic and rigorous. The Social Progress Index can be used to measure a country's performance on social and environmental factors relative to its economic peers in a more meaningful and rigorous way than when economic performance is incorporated as a component. The Social Progress Index is the first holistic measure consisting of only observable outcomes that focuses exclusively on social and environmental performance.

3. SIP as a Progress Indicator

Economists created the Social Progress Index to enlarge how country achievement is measured, beyond economic indicators like GDP per capita. Social progress is about gathering everyone's basic needs for food, clean water, shelter, and

security. It is about living healthy, long lives, and protecting the environment. It is about education, freedom, and opportunity. Social progress has become a more and more serious agenda for leaders in government, business, and civil society. Citizens' demands for enhanced lives are obvious in uprisings such as the Arab Spring and the emergence of new political movements in even the most prosperous countries, such as the United States and France. Since the financial crisis of 2008, citizens are increasingly expecting business to play its role in delivering improvements in the lives of customers and employees, and protecting the environment for us all. This is the social progress imperative. Advancing social progress requires a new model of development, because economic development alone has been found wanting.

Economic growth has had an astonishing impact on our world. Not only has global Gross Domestic Product (GDP) per capita more than doubled since 1970 but, according to World Bank estimates, the percentage of the world's population now living in extreme poverty has fallen from nearly 40% to less than 10%. However, the gains from this growth have been uneven. Most of the world's extremely poor now live in countries considered middle income. Progress on social issues does not automatically accompany economic development. Rising income usually brings major improvements in access to clean water, sanitation, literacy, and basic education. But on average, personal security is no better in middle income countries than low-income ones, and is often worse. "Too many people – regardless of income – live without full rights and experience discrimination or even violence based on gender, religion, ethnicity, Traditional measures of national income, such as GDP per capita, fail to capture the overall progress of societies. This limitation has been

well documented in reports such as *Mismeasuring Our Lives*, but solutions have been slow to emerge. The question of when and how economic development advances social progress (and when it does not) has become central due to concerns about inequality and environmental limits to growth, but the answers have been absent.”⁸ The Social Progress Index is the first wide-ranging framework for measuring social progress independently of GDP, and gives us the ability to understand the relationship between economic and social progress. Our vision is a world in which social progress sits together with GDP as a core standard for national performance. The Social Progress Index provides a methodical, empirical foundation for this yardstick and a guide for comprehensive growth strategies.

4. Analytical Examination

This section explores whether the SIP and Opportunity ranks countries differently from the way the popular economic indicator of per capita GDP ranks them. To deal with this issue we draw together a 100-country data set at two dissimilar points of time, i.e., 2014 and 2017. The gap between per capita Gross Domestic Product, Social Progress Index and Opportunity is examined for the full sample of 100 countries, as well as for diverse income groups of countries. Our analyses make use of the SIP and Opportunity scores and per capita GDP (current values in USD) data consistently for the full sample 100 countries as well as three sub-samples of high, middle and low-income groups of countries for the duration of two points of time. We have used the World Banks’ per capita income categorization in each definite year to group economies according to the high, middle and low income countries. The information of the income categorization and the number of countries falling in each group throughout specific years are provided in Table 1⁹

Table 1: Classification of Countries in Income Groups, 2014 and 2017. Source: World Bank (various years).

Years	Income Range for Country Classification (2014 and 2017)			
	High Income Countries	Middle Income Countries	Low Income Countries	Total Countries
2014	12806.56 USD and above (32 Countries)	12593.7 - 1052.13 USD (52 Countries)	1031.11 USD and below (16 Countries)	100 Countries
2017	13429.41 USD and above (32 Countries)	11856.8 - 1139.57 USD (50 countries)	998.201 USD and below (18 Countries)	100 Countries

Figure 1: SPI versus GDP per Capita Rank in Low Income Countries, 2017

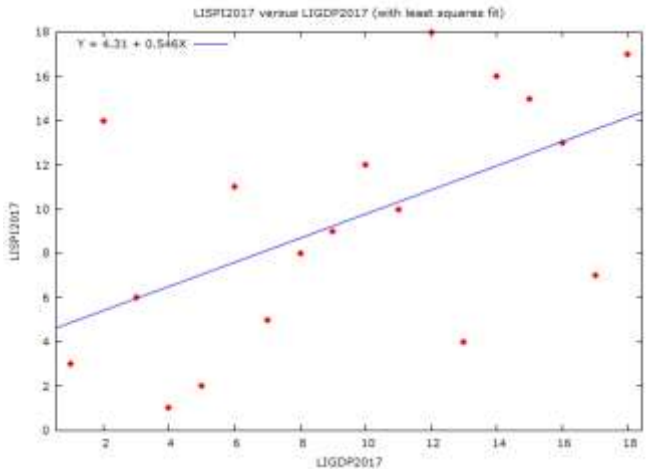
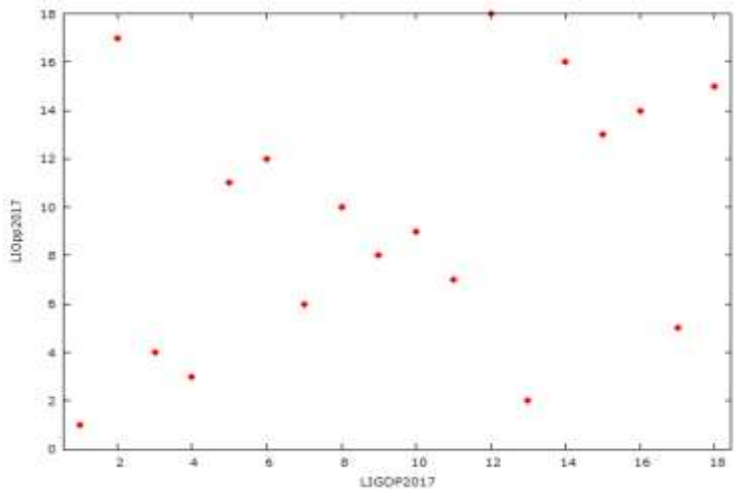


Figure 2: Opportunity versus GDP per Capita Rank in Low Income Countries, 2017



The statistics on per capita GDP, SPI and Opportunity level for the section of 100 countries have been defined and sourced as

follows. The per capita gross domestic product in current U.S. dollars is defined as country's gross value added by all occupant producers in the economy plus any product taxes and minus any subsidies not incorporated in the value of the products divided by the midyear population. This information has been derived from the World Bank and Social progress Index Annual reports of two years. The SPI and Opportunity scores for countries are derived from Social Progress Index Report.

The assessment of the differentiation in the rankings between SPI, Opportunity and per capita GDP is first attempted by a contrast of scatter plots for like chalk and cheese income group of countries during two specific points of time. Consequently, we compute the Spearman's rank correlation coefficients between the SPI, Opportunity values and current per capita GDP level for the full sample 100 countries as well as the sub-samples of high, middle- and low-income countries.

5. Scatter Plots and Regressions

The assessment of the rank differences between SPI scores, Opportunity scores and per capita GDP (current levels in USD) is performed by plotting the GDP per capita ranks in the horizontal axis and other ranks in the vertical axis from our cross-sectional country data. The analysis is performed for different income group of countries and time after time during two points of time, viz., 2014 and 2017, so as to establish whether the experimental association is undergoing any change over time. The first four figures (Figures 1 to 3) demonstrates how closely the SPI, Opportunity and per capita incomes were connected during the year 2014 in high- and middle-income countries, while the same for all income groups of countries are depicted in Figure 7 & 8. We observe a high

positive correlation between the per capita SPI, Opportunity and GDP rankings for all the 100 countries, so that the fitted regression line also yielded a positive sloped line. The same line of analysis but disaggregated over different income groups, however, disclose that positive correlation is the highest in the case of High income countries (Figure 1 to 2), which is followed by the middle income countries (Figure 3) and no relation for the low income group of countries. Thus, the fitted regression lines are upward sloping for high- and middle-income countries in the year 2014. No relation established between the low-income countries in the year 2014.

Similarly, the relationships during the year 2017 are graphically represented through a scatter-plot of the two series for three specific income groups and all countries in Figures 8 to 16. While the fitted regression lines are still upward sloping, the degrees of correlation vary substantially among different income groups in the sample. The positive relationship remains more pronounced in the high-income group of countries. Although the observed correlation remained the lowest for the low-income group, it registered higher degrees of correlation than the correlation in 2014. We can study the link between the rankings of SPI, Opportunity and per capita real GDP during the 2017. The regression lines are positively sloped for all the income groups, but the positive relationship remains more evident in high income countries. One can notice that the positive association between the rankings of SPI, Opportunity and per capita GDP remains the highest for the high- and middle-income group of countries in comparison to the association in other income group during all the two time periods. Overall these results seem to indicate that although the SPI and Opportunity ranking of countries is not very different from the ranking of per capita GDP in the full sample of all countries except from low income countries, there remain

substantial differences in the results for sub-samples of countries containing different income groups. The opportunity which is taken in this case gives a clear picture about the fact of Amartya Sen's concept of freedom of choice, which seems to be influenced by many other factors than income alone.

6. Rank Correlation Tests

The rank correlation coefficient measures the degree of similarity between the two rankings, and can be meaningfully used to assess the significance of the relation between SPI, Opportunity and GDP per capita. The rank correlation coefficients are calculated using the full sample comprising 100 country observations, together with sub-samples that comprise countries classified by their income groups according to the World Bank classification as low, middle- and high-income countries. The total sample of 100 countries has been reorganized for three income groups depending on the range of incomes in each year group. The results on the rank correlation coefficients are reported in Table 2 & 3 for the full sample of 100 countries as well as for the subsample of different income group of countries. One can observe positive and high rank order correlation (in the range of 0.94 to 0.95) between the SPI and per capita GDP, Opportunity and per capita GDP (0.88 to 0.89) for the full sample in each specific year. All these coefficients are statistically at significant level. We also observe positive rank-order correlation coefficients for the sub-samples consisting of high, middle- and low-income countries in all the years, but the degrees of rank correlation remained different across various income groups of countries. For instance, the rank correlation coefficients between SPI and per capita GDP recorded values of (0.86, 0.76, 0.17 and 0.94) for high, middle, low- and all-income groups of countries in the year 2014. The

degrees of rank correlation increased in successive years and reached to (0.85, 0.77, 0.54 and 0.94) in the year 2017 for high, middle, low- and all-income groups of countries. When we take the case of the rank correlation coefficients between Opportunity and per capita GDP recorded values of (0.80, 0.67, 0.07 and 0.88) for high, middle, low- and all-income groups of countries in the year 2014. The degrees of rank correlation increased in successive years and reached to (0.79, 0.58, 0.33 and 0.89) in the year 2017 for high, middle, low- and all-income groups of countries.

It may be noted that the correlation coefficients between ranks of SIP and per capita GDP remained comparatively high for high income countries all along, even though a reasonable re-grouping of countries occurred among income groups over the years. Even when we compare the correlation we understand that though there is a slight change happened in 2017 low income group but it can be considered as a rather good move between SIP and GDP Per Capita (0.17 to 0.54). a substantial growth is brought about in this aspect. But when we consider Opportunity and GDP Per Capita there no substantial growth present over there. There is no positive correlation between then in low income group. As we have observed the value (0.074 to 0.33) this is not considered as a substantial positive growth. So we can conclude by saying that both in the case of SPI and Opportunity in relation with GDP Per Capita the low income countries are never in tune with the GDP. There should be another means to measure the development. This actually contradicts the study done on GDP Per Capita and HDI.

Conclusion

Human life without a purpose to live is meaningless. The ultimate purpose and meaning in life are viewed by different people in different ways. The analytics shows a very different aspect of the freedom and capability approach. It explains that

the practical approach of these philosophical aspects. Also, at the same time the speciality of variations which takes place with the countries in terms of relation with GDP, SIP and Opportunity. These relationships undergo various changes as the countries change from high income to middle income and low-income groups. These changes reveal a greater truth about the hidden factors in the whole economy or nation taken together.

¹ In 2001, Easterlin wrote: “Throughout this article, I use the terms happiness, subjective well-being, satisfaction, utility, well-being, and welfare interchangeably” (Easterlin 2001), p. 465.

² Amartya Sen, *Commodities and Capabilities* (New Delhi: Oxford University Press, 1987), p.16.

³ S. Anand, and Amartya Sen, “*The Income Component of the Human Development Index*”, *Journal of Human Development* (2004).

⁴ G. E. M. Santos, “Composite Indices of Development”, in Bruce Currie-Alder, Ravi Kanbur and D.M Malone (eds) *International Development: Ideas, Experience and Prospects* (New York:Oxford University Press, 2014), p.11

⁵ J. Weimann, A. Knabe and R. Schob, *Measuring Happiness: The Economics of Well-Being*, (Cambridge:MIT Press, 2015), p.103.

⁶Amartya Sen, *Development as Freedom* (New Delhi: Oxford University Press, 2000), p.28.

⁷United Nations Development Programme, *Human Development Report* (New York: Oxford University Press, 1996).

⁸ Michael E. Porter , and Scott Stern, *Social Progress Index 2017* (Washington DC: www.socialprogressimperative.org, 2018), p. 8.

⁹ Considering the aspect of data availability on a comparable basis, we could find uniform data for 100 countries, which are Afghanistan, Albania, Algeria, Argentina, Armenia, Australia, Austria, Bangladesh, Belgium, Benin, Bolivia, Botswana, Brazil, Bulgaria, Cambodia, Cameroon, Canada, Central African Republic, Chile, China, Colombia, Congo, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Cyprus, Czech Republic, D.R. of the Congo, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Fiji, Finland, France, Gambia, Germany, Ghana, Greece, Guatemala, Guyana, Honduras, Hungary, Iceland, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Lao People's DR, Latvia, Lesotho, Malawi, Malaysia, Mali, Malta, Mauritania, Mauritius, Mexico, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Rwanda, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Swaziland, Sweden, Switzerland, Tajikistan, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Tanzania, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, Yemen, Zambia and Zimbabwe.

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