Original Research Paper

Economics

ANALYSIS OF SUBJECTIVE WELL-BEING IN THE CONTEXT OF HUMAN DEVELOPMENT APPROACH

Arundhati Bhattacharya*

Department of Economics, Sister Nibedita Government General Degree College for Girls Hastings House, Alipore, Kolkata – 700027*Corresponding Author

ABSTRACT Conventionally, GDP or GNP is considered as a measure of well-being of a country. In spite of their simplicity and objectivity, voices are raised against these income-based measures on the ground that human well-being is primarily subjective in nature. According to human development approach, the perception of well-being covers different dimensions of well-being, viz., quality of education, healthcare quality, the standard of living and labor market, personal safety, overall satisfaction with freedom of choice and life and perceptions about community and government. This paper presents a brief overview of the concept of well-being in the context of human development approach and analyses the role of well-being indicators in determining the perception of overall human well-being for different countries, regions and at the global level on the basis of HDR 2016 published by UNDP.

INTRODUCTION

The concepts of Gross Domestic Product (GDP) or Gross National Product (GNP) takes into account the total value of goods and services produced by nationals within a specific time period. They are considered as conventional yardsticks of general well-being of a country. But so far their origins are concerned, these instruments were meant to measure a country's level of economic activities[4]. A lot of factors, such as the aspect of inequality, non-marketed transactions, depletion of natural capital, the social cost of production, general health of the population etc. are not taken into account yielding wrong estimates of the well-being**.** Despite the simplicity, uniformity, and linearity of the national income measures, initiatives were taken to substitute them. One of the widely accepted indicators of welfare is Human Development Index (HDI) that does not reject GDP but uses it in a composite manner.

HUMAN DEVELOPMENT INDEX (HDI)

The human development aims at broadening the scope of fundamental freedoms (viz., freedom of well-being and freedom of agency) so that the entire human society can exercise their choices, functioning, and capabilities[8]. The Human Development Reports (HDRs) published annually by United Nations Development Programme (UNDP) emphasized the people-centric approach to development and prioritizes human well-being pushing 'material opulence' to backstage[7]. Human development is concerned with overcoming the challenges of income and gender inequality, poverty, marginalization and deprivation, hunger, violent extremism, water stress, natural disasters – all of which pose a negative impact on human well-being. Between the twin pillars of human development – freedom of well-being and freedom of agencies, HDRs are chiefly focused on the former aspect. This inclination is clear in the construction of HDI[15]. HDI which is conceived as a measure of well-being captures achievements in three key dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living.

SUBJECTIVE WELL-BEING (SWB)

Well-being is a satisfying condition that encompasses the dimensions of physical, mental, and social well-being – all inter-connected and inter-wined.

Ed Diener coined the term 'subjective well-being' and quoted, "Subjective well-being is a broad category of phenomena that includes people's emotional responses, domain satisfaction and global judgments of life satisfaction…Thus we define SWB as a general area of scientific interest rather than a single specific construct."[5] To be specific, SWB is decomposed into the following separable notions:

I. life satisfaction (global judgments of one's life)
ii. satisfaction with important domains (e.g., work satisfaction)
iii. positive affect (experiencing many pleasant emotions and moods) and
iv. low levels of negative affect (experiencing few unpleasant emotions and moods).

Carol Ryff's 'multidimensional model of psychological well-being'

mentioned six factors which play a key role in determining well-being[12,13]:
I. Self-acceptance
ii. Personal growth
iii. Purpose in life
iv. Environmental mastery
v. Autonomy
vi. Positive relations with others

As evident from the above discussion of SWB, it is primarily a psychological perception; a mental state of being that dominates physical and surrounding conditions.

OBJECTIVES OF THE STUDY

In HDR 2016, UNDP has attempted to measure perception of well-being via three routes, viz., perceptions of individual well-being, those about community and government. The following table shows the indicators falling in each category of perceptions:

Table 1: Indicators of Perceptions of Well-Being

Categories of Perceptions of Well-Being	Indicators
Perceptions of Individual Well-Being	Satisfaction with education quality
	Satisfaction with health care quality
	Satisfaction with the standard of living
	Ideal job
	Feeling safe
	Satisfaction with freedom of choice (female and male)
	Overall life satisfaction index
Perceptions about Community	Perception of the local labor market
	Volunteered time
	Satisfaction with community
Perceptions about Government	Confidence in judicial system
	Satisfaction with actions to preserve the environment
	Trust in national government

Source: HDR 2016, UNDP

The objective of this study is to construct separate indices of perception of well-being in the above three spheres and overall as well, for the countries falling in different human development levels and global level and compare them with respective Human Development Indices (HDIs). This is done so as to verify the common belief that there is a close correspondence between human development and perception of well-being.

METHODOLOGY

The first step consists of the construction of sub-indices for perceptions

of individual well-being, about community and about government with the help of First – Stage Principal Components Analysis. For the i-th country, the sub-index for each of the perceptions are:

$$Ind\_WB\_SI_i = \sum_j \alpha_{ij} X_{ij} + w_i$$

$$Com\_SI_i = \sum_j \alpha_{ij} X_{ij} + w_i$$

$$Gov\_SI_i = \sum_j \alpha_{ij} X_{ij} + w_i$$

where i = 134, 44, 32, 27 and 31 for global level and countries experiencing very high, high, medium and low human development respectively;

j = 8, 3 and 3 for perceptions of individual well-being, about community, and about government respectively.

In the second step of the two-stage Principal Components Analysis, I have calculated the *Perception of Well-Being Index* which can be expressed as a linear function of the previously mentioned sub-indices.

$$WB\_I_i = \beta_1 Ind\_WB\_SI_{1i} + \beta_2 Com\_SI_{2i} + \beta_3 Gov\_SI_{3i} + e_i$$

The Perception of Well-Being Index for each country is computed in the following way:

$$WB\_I_i = \frac{\sum \lambda'_k P'_k}{\sum \lambda'_{jk}}$$

To verify whether or not HDIs across countries have a close association with Perception of Well-Being, Pearson correlation coefficients are calculated at global and zonal levels (categorized according to the degree of human development).

The method of ordinary least squares is executed to check in what way and how far human development, as defined in HDRs and indicated by HDI can be explained by well-being perceptions in the different arena, which are treated as explanatory variables.

DATA SOURCES
*   Gallup (2016)
*   HDRO calculations based on data from UNDESA (2015), UNESCO Institute for Statistics (2016), United Nations Statistics Division (2016), World Bank (2016), Barro and Lee (2016) and IMF (2016)

RESULTS AND INTERPRETATION
The sub-indices of perception of individual well-being, that about community and government and Perception of Well-Being Indices for 132 countries (for which data are available) are calculated by the Method of two-stage Principal Components and are classified according to their level of human development (viz., very high, high, medium and low levels of human development).

The following correlation tables and regression results (demonstrating the nature and direction of the dependence of HDI on the perception sub-indices) also fail to provide sufficient support of the popular view that human development and psychological well-being are close partners in ensuring overall development.

Table 2: Correlation coefficients and model summary (countries with very high human development)

Pearson correlation coefficients			HDI		
Perceptions of individual well-being			.764		
Perceptions about community			.674		
Perceptions about government			.684		
Perception of well-being			.774		

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.758	.018		41.028	.000
Ind_WB_SI	.010	.003	.583	2.846	.007
Com_SI	.002	.019	.020	.101	.920
Gov_SI	.013	.011	.207	1.206	.235
R2	.601				
F	20.092				.000

Dependent variable: HDI
Source: HDR 2016, UNDP

Though the correlation coefficients in table 2 represent high level of association between all sorts of well-being and human development for countries with very high human development and the model is also good fit, HDI is significantly positively dependent only on perceptions of individual well-being in these countries.

Table 3: Correlation coefficients and model summary (countries with high human development

Pearson correlation coefficients			HDI		
Perceptions of individual well-being			.007		
Perceptions about community			.108		
Perceptions about government			.084		
Perception of well-being			.046		

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.774	.026		29.613	.000
Ind_WB_SI	-.006	.005	-.267	-1.030	.309
Com_SI	.038	.023	.385	1.632	.110
Gov_SI	-.006	.015	-.090	-.382	.705
R2	.065				
F	.923				.438

Dependent variable: HDI
Source: HDR 2016, UNDP

For countries with high human development, the degrees of association between different well-being indices and HDI are very low. The unimpressive results of the regression model corroborate the view (as shown in Table 3).

Table 4: Correlation coefficients and model summary (countries with medium human development)

Pearson correlation coefficients			HDI		
Perceptions of individual well-being			-.094		
Perceptions about community			-.050		
Perceptions about government			-.213		
Perception of well-being			-.138		

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.802	.061		13.185	.000
Ind_WB_SI	.000	.014	.009	.034	.973
Com_SI	.013	.048	.067	.278	.782
Gov_SI	-.067	.024	-.478	-2.824	.007
R2	.206				
F	3.467				.025

Dependent variable: HDI
Source: HDR 2016, UNDP

So far the countries with medium level of human development is concerned, they share negative relation with well-being measures (as evident from Table 4). Furthermore, HDI-well-being perceptions seem to be insignificant, the only exception being perceptions about government; but there the dependence is negative.

Table 5: Correlation coefficients and model summary (countries with low human development)

Pearson correlation coefficients	HDI
Perceptions of individual well-being	-.087
Perceptions about community	-.201

Perceptions about government	-.291
Perception of well-being	-.181

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.536	.072		7.495	.000
Ind_WB_SI	.071	.012	.724	6.012	.000
Com_SI	.013	.055	.029	.245	.808
Gov_SI	-.227	.033	-.640	-6.803	.000
R2	.678				
F	28.130				.000

Dependent variable: HDI
Source: HDR 2016, UNDP

The negative association between well-being perceptions and HDI defies the general belief that countries with low human development have low level of well-being. The regression model, though well fit, gives mixed results.

CONCLUDING REMARKS

The entire discussion questions the apparent belief that human development approach (as reflected by HDI) takes into account those factors which are able to represent the elements of well-being. It should be kept into mind that HDI contains objective components only, which do not guarantee that enhancement of the same will improve the perception of well-being, predominantly a subjective notion. "The HDI, however, is a mechanical criterion. It does not capture the contentment or psychological state of individuals. To do that, some measure of subjective well-being or 'happiness' is required."3 Therefore separate and further insightful analysis of the 'well-being – human development' paradox is necessary so as to promote the subjective well-being of people with due importance along with measurable determinants of human development.

REFERENCES

1. Anand, S., and Sen, A. (2000). The Income Component of the Human Development Index. Journal of Human Development and Capabilities (1)1: 83–106.
2. Barro, R.J., and J.-W. Lee. 2016. Dataset of Educational Attainment, February 2016 Revision. www.barrolee.com.
3. Blanchflower, D. and Oswald, A. (2005). Happiness and the Human Development Index: The Paradox of Australia. National Bureau of Economic Research. Working Paper 11416. http://www.nber.org/papers/w11416.
4. Costanza, R. et al. (2009). Beyond GDP: The Need for New Measures of Progress. The Pardee Papers, No. 4. The Fredrick S. Pardee Center for the Study of the Longer-Range Future, Boston University.
5. Diener, E. (2000). Subjective Well-Being, The Science of Happiness and a Proposal for a National Index. American Psychologist, Vo. 55, No. 1, 34-43.
6. Diener, E. et al. (1999). Subjective Well-Being: Three Decades of Progress. Psychological Bulletin, Vol. 125, No. 2, 276-302.
7. Human Development Report 2009 - Human Development Reports. hdr.undp.org/sites/default/files/2009_human_development_report.pdf
8. Human Development Report 2016 - Human Development Reports. hdr.undp.org/sites/default/files/2016_human_development_report.pdf
9. Maddison, A. (2010). Historical Statistics of the World Economy, 1–2030 AD. Paris: Organisation for Economic Co-operation and Development.
10. Oeppen, J. and Vaupel, J.W. (2002). Broken Limits to Life Expectancy. Science 296: 1029–1031.
11. Riley, J.C. (2005). Poverty and Life Expectancy. Cambridge, UK: Cambridge University Press.
12. Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. Journal of Personality and Social Psychology. 57 (6): 1069–1081.
13. Ryff, C. D., and Keyes, C. M. (1995). The structure of psychological well-being revisited. Journal of Personality and Social Psychology, 69(4), 719–727.
14. UNDESA (United Nations Department of Economic and Social Affairs). 2015. World Population Prospects: The 2015 Revision. New York. https://esa.un.org/unpd/wpp/.
15. UNDP (United Nations Development Programme). 1990. Human Development Report 1990: Concept and Measurement of Human Development. New York: Oxford University Press. http://hdr.undp.org/sites/default/files/reports/219/hdr_1990_en_complete_nostats.pdf.
16. UNESCO (United Nations Educational, Scientific and Cultural Organization) Institute for Statistics. 2016. "Education: Illiterate Population." Montreal. http://data.uis.unesco.org.
17. United Nations Statistics Division. 2016. Sustainable Development Goals Indicators Database. http://data.un.org.
18. World Bank. 2016. World Development Indicators database. Washington, DC. http://data.worldbank.org.
19. World Poll – Gallup. www.gallup.com>analytics>world-poll