

## Measurement of economic performance and social progress as well-being: A survey of Himachal Pradesh

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### Abstract

In 1930s, the concept of GDP and how to calculate it was developed by Simon Kuznets in the wake of the Great Depression and in the context of World War II to measure the size of an economy by reference to its production and output. But later Bill Nordhaus and James Tobin (1971) develop GDP which also account for environmental impact. Richard Easterlin (1974) publishes the results of his study into whether economic growth makes people happier. He claims that no link is found between GDP per capita and wellbeing, yet the wealthy in a country report greater wellbeing than those less fortunate. This study resulted in the phrase 'Easterlin paradox', to which the wellbeing literature frequently refers. In 2008 the Organization for Economic Co-operation and Development (OECD) Global Project on Measuring the Progress of Societies is established to foster the development of key economic, social and environmental indicators with a view of measuring wellbeing.

**Keywords:** measurement of economic, well-being, Himachal Pradesh

### 1. Introduction

The concept of well-being has been the basis of most economic analysis. Achieving well-being has been the concern of philosophers since Aristotle, and is, in many regards the essence of human existence. One of the main motives of analysing and measuring economic well-being is that well-being is, at least in principle, a key target variable of economic policy. Well-being is a very broad term and can be influenced by many factors which can be economic, social, political, psychological, physiological etc. There can be trade-off or complementarity among the various components of well-being some of which are subjective and others objective or subjective as well as objective in nature. This makes the measurement of well-being a very complex issue.

In 1930s, the concept of GDP and how to calculate it was developed by Simon Kuznets in the wake of the Great Depression and in the context of World War II to measure the size of an economy by reference to its production and output. But later Bill Nordhaus and James Tobin (1971) [28] develop GDP which also account for environmental impact. Richard Easterlin (1974) [17] publishes the results of his study into whether economic growth makes people happier. He claims that no link is found between GDP per capita and wellbeing, yet the wealthy in a country report greater wellbeing than those less fortunate. This study resulted in the phrase 'Easterlin paradox', to which the wellbeing literature frequently refers. In 2008 the Organization for Economic Co-operation and Development (OECD) Global Project on Measuring the Progress of Societies is established to foster the development of key economic, social and environmental indicators with a view of measuring wellbeing. Moreover, in 2009 the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) suggests that a measurement of wellbeing should include such categories as health, education, environment, employment, material wellbeing, interpersonal connectedness, and political engagement. Further UK Measuring National Well-being Programme is launched in November, 2010.

During the time GDP is extremely useful as an indicator, it does not capture all aspects of life in a particular country. GDP only measures the market value of final goods and services produced in a country but do not reveal other aspects of well-being. Now it is well accepted that GDP is not a reliable measure of well-being.

While measuring GDP no value judgement is made (or help of no other source or agency is sought) about welfare influencing capacities of various goods and services, that is, no mention is made about welfare increasing, welfare decreasing and welfare neutral characteristics of goods and services produced and consumed in a particular year. This becomes clear from the fact that although consumption of few goods such as drugs, cigarettes etc has been scientifically proved to be extremely harmful and, thus, is welfare reducing for human beings, GDP/GNP does not segregate them from other goods and services which have been scientifically proved to be extremely useful and thus welfare increasing for human beings.

This cannot be considered as a limitation of GDP/GNP as the basic purpose of measuring GDP is/was different. GDP basically is a measure of level of economic activity and it was well understood by its developers. In fact this is more of a limitation of the existing theory of economic well-being, which, in turn, seems to have inhibited the development of appropriate techniques for the measurement of economic well-being. Existing theory of economic welfare does not analyse the effect of consumption and production of various goods and services on well-being of people.

GDP measurement does not and need not take into account the various quantitative and qualitative differences that exist among different individuals/ nations in resource endowment, needs, mode of production, size of non-market sector, type and nature of goods produced and consumed, cultural traditions, tastes of people etc. It just aims to measure the value of goods and services produced in a year. But for reliable measurement and comparison of well-being it becomes extremely necessary to account for such differences and variations among individuals/ nations.

GDP also fails to serve as an accurate index of level of economic activity or economic progress as it does not adequately account for the goods and services that are not exchanged in the market, that is, goods and services of the non market sector including illegal activities. GDP misses many activities like caring for children or elderly at home, do it yourself type of work, housewives services, leisure time spent relaxing or with family and friends. But how best to evaluate non-market goods such as housewives services, imputed rent, leisure, externalities or discomfort associated with economic growth such as smoke, noise and other kind of pollution have, until now, not been satisfactorily resolved. Consequently, GDP cannot be considered as a reliable measure of economic performance of different nations since the above discussed factors are different in different countries.

These are just limitation of GDP but they are equally applicable to any other approach such as use of GDP as a measure of well-being, use of GDP per capita in the formulation of indices such as HDI etc. However, it seems fair to say that it has generally been believed that while these are difficult conceptual and practical problems, nevertheless they are capable of solution, and if they could be satisfactorily solved then we would have an index which would provide a correct indication of economic performance and a more reliable proxy variable for other approaches.

The main problem encountered while analysing and measuring well-being is based on whether one should look at objectives or subjective economic conditions when making welfare comparison. It, therefore, becomes important to understand the relationship between objective and subjective indicators of well-being.

### 1.1 Review of Literature

For carrying out the literature survey, approaches to the definition and measurement of social well-being and the quality of life can broadly be classified into three categories:

1. The first centres around the national income accounts, using monetary measures such as GDP per capita either in their raw form, or extended to account for pollution or leisure effects as in the well known work of Nordhaus and Tobin (1973) <sup>[30]</sup>;
2. The second approach involves objective social indicators, by which the level of living achieved by members of a society is judged either as an absolute level of achievement or relative to the satisfaction of human needs. The Morris's (1979) <sup>[27]</sup> Physical Quality of Life Index (PQLI) and UNDP's Human Development Index (HDI) fall into this category; and
3. The third approach's emphasis shifts to subjective social indicators. Here, the concern is with how members of a society perceive their own quality of life.

### 1.2 Measurement of Well-being by Adjustments in GDP

Sharma (2006, 2011) <sup>[36, 35]</sup>, Beckerman (1988) <sup>[3]</sup>, Nordhaus and Tobin (1972), The major conclusion of the study is that although the absolute value of welfare is much higher than what is indicated by conventional estimates, the rate of growth of welfare is very small. Other effort has been to exclude some items called 'regrettable necessities' from the GNP to arrive at a relevant measure of welfare. Another study suggests an alternative method based upon human needs and their welfare providing capacities to derive comparable Measure of

Economic Welfare (MEW) and Measure of Economic Cost (MEC) by making some adjustments, modifications and supplementations in the national income estimates of 58 countries.

### 1.3 Measurement of Well-being through Objective Indicators

The index based approach to well-being is essentially the outcome of increasing dissatisfaction with GDP as a proxy for happiness or economic well-being. Most of the parameters used in construction of these indices represent the achievements in regards to longevity, health status, education, environment, living standards, leisure etc. MEW, MDP, GPI, HDI, HPI, HPI, ELSI, NWI, WISP, OECD, CIW, CMEPSP, GDI, GEM, QLI, ISP, IEW, all the above discussed exercises suffer from various limitations and points towards statistical difficulties to find measurable proxies for well-being and happiness. For some of the widely used variables in these indices such as education, income and life expectancy cause and effect relationship is still uncertain and unresolved.

Cooney (2011) <sup>[13]</sup>, Polintan (2011) <sup>[31]</sup>, Stibich (2008) <sup>[37]</sup>, Kolata (2007) <sup>[25]</sup>, it is the general conclusion of almost all studies that education contributes significantly to average life spans and health. May be better educated people can better able to understand and manage their health condition and are more mindful about eating healthy, getting exercise and averting risk factors such as drinking excessively, smoking, rash driving and can change their risky health behaviours quickly in response to new evidence. Burtless (2012) <sup>[6]</sup>, Vogli, Mistry, Gnessto, and Cornia (2004) <sup>[41]</sup>, Deaton (2003) <sup>[14]</sup>, Scully (2000) <sup>[34]</sup>, it has been concluded that there is a powerful association between per capita income and expected life span. Probably people with higher income are better placed to take benefit from the health care system and can afford a healthy diet. Strauss (2011) <sup>[38]</sup>, Abdulla, Doucouliagos and Manning (2011) <sup>[1]</sup>, Carnoy, Loyalka and Androuschak (2010) <sup>[8]</sup>, results of the most of the studies on income and education reveal that there is a significant relationship between income and level of education attainment.

### 1.4 Measurement of Well-being through Subjective Indicators

Veenhoven (1984, 2000) <sup>[39, 40]</sup>, Frey and Stutzer (2000, 2001) <sup>[19, 20]</sup>, Camfield *et al.* (2009) <sup>[7]</sup>, Caria and Falco (2014) <sup>[9]</sup>, Dutta and Foster (2013) <sup>[16]</sup>, Clark *et al.* (2013, 2014) <sup>[12, 11]</sup>, and many others. Schimmel (2009) examines that increased income, better objective health and higher levels of education do not automatically lead to greater happiness. Aknin, Norton, and Dunn (2009) <sup>[2]</sup>, Rogas (2007) <sup>[32]</sup>, Kahneman, Schkade, Schwarz, and Stone (2006) <sup>[22]</sup>, Dipietro and Anoruo (2006) <sup>[15]</sup>, Lee (2006) <sup>[26]</sup>, Borooah (2006) <sup>[5]</sup>, Binswanger (2006) <sup>[4]</sup>, Kaun (2005) <sup>[23]</sup>, Ferrer-i-Carbonell (2005) <sup>[18]</sup>, Kenny (1999) <sup>[24]</sup>, Gerdtham and Johannesson (1997) <sup>[21]</sup>, Clark and Oswald (1996) <sup>[10]</sup>, these studies concerned with the economics of happiness. Happiness increases with income and education and it decreases with unemployment, being single etc, money matters a great deal, in the fact that it must be earned and spent. In a developed nation, economic progress buys only a small amount of extra income. Together these findings suggest that people do not maximize happiness, they would be better off if they worked less and had more leisure time.

The main explanation for based on empirical findings for this is that: (a) happiness depends upon the conceptual referent for happiness a person holds; (b) the influences of the income of the reference group on individual well-being is very important, that is, ‘comparison incomes’ plays a major role and income of this reference group is about as important as the own income of this individuals; (c) income matters a great deal, problem arises, however, in this fact that it must be earned and spent.

**1.5 Objectives of the study**

The main objectives of the study are

1. To analyse the relationship between well-being and the income level which is generally associated with economic development in Himachal Pradesh state of India;
2. To analyse how factors other than income such as health status, age, education, marital status, social relationship etc. can influence the well-being of people of Himachal Pradesh state of India;

**2. Methodology**

For empirical analysis of the measurement of well-being a primary survey of different districts of Himachal Pradesh will be undertaken for collecting the relevant data with the help of a questionnaire. Efforts will be made to collect information on more than 400 individuals in all, and the questionnaire will be designed so as to ascertain or capture the maximum possible information.

To avoid various problems and for statistical reasons a numerical scale of 0-10 will be used for the large part of the questionnaire. The usefulness of this type of scale is recognized by Diener (1983) while discussing various scales. The subjects of the respondents will be chosen on random basis but different regions will be selected for survey so as to include a diverse range of welfare group while keeping the factors like rural and urban, gender, age, education, income etc., that is, principal of a multi-stage, random probability sample, in which the population is stratified regionally and within region according to urban/rural division and town size, male/female, educated/illiterate will be followed. The descriptive statistics as well as econometric techniques will be used for analysing the data and deriving results there from. Among the descriptive statistics mean, difference of mean, test of difference of means will mainly be used. Most of the variables will be defined so as to vary between 0 and 10.

Time Period: Primary data was collected on the basis of a questionnaire in the year 2016.

**2.1 Analysis and Discussion**

The average level of self-reported happiness for all the respondents is presented in this Table 1. Most of the respondents have reported themselves to be at 5 or higher ranks on the scale of 0 to 10. The data reveals that around 96 per cent of the respondents feel themselves above 5 on the happiness scale of 0-10. None of the respondents have reported their happiness level to be below 3 on the scale. Around 37 per cent of the individuals reported themselves to be at 7 and around 28 per cent of respondents covered themselves to be at 8 on the

scale. This level on the scale indicates complete or perfect happiness.

**Table 1:** Distribution of Self Reported happiness

| Rank on Scale | Frequency  | Cumulative Frequency |
|---------------|------------|----------------------|
| 0             | 0 (0)      | 0 (0)                |
| 1             | 0 (0)      | 0 (0)                |
| 2             | 0 (0)      | 0 (0)                |
| 3             | 2 (0.005)  | 2 (0.005)            |
| 4             | 2 (0.005)  | 4 (0.01)             |
| 5             | 29 (0.072) | 33 (0.082)           |
| 6             | 85 (0.21)  | 118 (0.29)           |
| 7             | 150 (0.37) | 268 (0.66)           |
| 8             | 112 (0.28) | 380 (0.95)           |
| 9             | 17 (0.042) | 397 (0.99)           |
| 10            | 3 (0.007)  | 400 (1)              |

**Note:** Figures in parenthesis are proportion to total number of observations.

**2.2 Happiness for Male and Female Categories**

The level of happiness was reported to be slightly higher among the male respondents as compared to female respondents. The difference in the happiness level of male and female respondents could be attributed to factors which tend to differ for categories. The differences are, however, not very substantial in the economic conditions of males and female in the area of survey. The nature of profession, however, happen to be different for females as most of the females remains busy in the house keeping and in addition females also have to contribute to agricultural work in the area where agriculture is the main occupation.

**Table 2:** Average level of Happiness for Males and Females

| Category | Average on the Scale |
|----------|----------------------|
| Females  | 6.80                 |
| Males    | 7.11                 |
| Total    | 6.99                 |

**2.3 Education and Happiness**

The level of happiness was found higher among literate group when compared with illiterates. The average level of happiness for the illiterates was found to be 6.0 on the scale of happiness whereas for the literates group this was 7.05 on the similar scale.

**Table 3:** Average level of Happiness for the Literate and Illiterates

| Category    | Average on the Scale |
|-------------|----------------------|
| Illiterates | 6.00                 |
| Literates   | 7.05                 |
| Total       | 7.00                 |

**2.4 Marital satus and happiness**

The present study found higher level of happiness among those who are married. However, out of married and unmarried respondents the difference in happiness is not substantial but the level of happiness among the divorcee/ widow/widower was substantially lower.

**Table 4:** Average level of Happiness for Married and Unmarried

| Category            | Average on the Scale |
|---------------------|----------------------|
| Married             | 7.16                 |
| Unmarried           | 6.71                 |
| Widow/er / Divorcee | 5.87                 |

**2.5 Age and Happiness level**

The happiness level of the respondents in different age groups may be seen in context of the conditions that are expected to influence the level of happiness. For example, most individuals in the age group of 25 years or less are at the job entry level or have to start work. Most of them are dependent upon their and pursuing their studies and also worried about job and other responsibilities. The age of 26-30 years brings with it all the new responsibilities and struggles to get suitable job and life partner etc. The period of age between 31-40, 41-50 and 51-60 years brings still new responsibilities and struggle. The age group of 60 years plus, as observed was found to show the tendency of being satisfied.

**Table 5:** Average level of happiness among different age group

| Category     | Average on the Scale |
|--------------|----------------------|
| Less than 25 | 6.58                 |
| 26- 30       | 6.84                 |
| 31-40        | 7.24                 |
| 41-50        | 7.04                 |
| 51-60        | 7.06                 |
| 61 and above | 7.25                 |
| Total        | 6.99                 |

**2.6 Nature of job and Level of Happiness**

The main features related to job, which are important in the context of the present study, are employment status and regularity of job. For examining the difference in the level of happiness, the present study has divided the respondents into different groups namely (1) Self-employed, (2) Regular job, (3) Part-time job, (4) Work at home, (5) Unemployed and (6) others. It is evident from the table 6 that those who are doing regular jobs feel most happy and showed an average of 7.41 on the happiness scale followed by work at home and self-employed by 7.21 and 7.14 on the happiness scale.

**Table 6:** Average level of Happiness among different Nature of Job

| Category      | Average on the Scale |
|---------------|----------------------|
| Self-employed | 7.14                 |
| Regular job   | 7.41                 |
| Part-time job | 6.95                 |
| Work at home  | 7.21                 |
| Unemployed    | 6.33                 |
| Others        | 6.60                 |
| Total         | 6.99                 |

**2.7 Satisfaction with Different Variable and level of Happiness**

**Table 7:** Level of Happiness among different Variables

| Scale | Life as a Whole (in %) | Financial Position (in %) | Contribution of Education (in %) | Faith in God (in %) | Health Status (in %) | Political Scenario (in %) | Environment (in %) |
|-------|------------------------|---------------------------|----------------------------------|---------------------|----------------------|---------------------------|--------------------|
| 0     | 1 (0.25)               | 4 (1)                     | 28 (7)                           | 3 (0.75)            | 1 (0.25)             | 35 (8.75)                 | 7 (1.75)           |
| 1     | 1 (0.25)               | 4(1)                      | 17 (4.25)                        | 1 (0.25)            | 2 (0.5)              | 11 (2.75)                 | 4 (1)              |
| 2     | 2 (0.5)                | 2 (0.5)                   | 10 (2.5)                         | 2 (0.5)             | 5 (1.25)             | 19 (4.75)                 | 4 (1)              |
| 3     | 1 (0.25)               | 14 (3.5)                  | 12 (3)                           | 4 (1)               | 4 (1)                | 35 (8.75)                 | 8 (2)              |
| 4     | 8 (2)                  | 22 (5.5)                  | 15 (3.75)                        | 5 (1.25)            | 18 (4.5)             | 38 (9.5)                  | 14 (3.5)           |
| 5     | 36 (9)                 | 55 (13.75)                | 27 (6.75)                        | 16 (4)              | 33 (8.25)            | 70 (17.5)                 | 28 (7)             |
| 6     | 33 (8.25)              | 54 (3.5)                  | 38 (9.5)                         | 16 (4)              | 47 (11.75)           | 62 (15.5)                 | 23 (5.75)          |
| 7     | 85 (21.3)              | 81 (20.25)                | 49 (12.25)                       | 35 (8.75)           | 90 (22.5)            | 65 (16.25)                | 48 (12)            |
| 8     | 84 (21)                | 75 (18.75)                | 73 (18.25)                       | 80 (20)             | 95 (23.75)           | 40 (10)                   | 67 (16.75)         |
| 9     | 62 (15.5)              | 42 (10.5)                 | 43 (10.75)                       | 55 (13.75)          | 62 (15.5)            | 13 (3.25)                 | 127 (31.75)        |
| 10    | 87(21.7)               | 47 (11.75)                | 88 (22)                          | 183 (45.75)         | 43 (10.75)           | 12 (3)                    | 70 (17.5)          |

The life as a whole clearly reveals that most of the respondents have reported themselves to be at 7 or higher ranks on the scale of 0-10 and around 80 per cent of the respondents perceive themselves to be above 7 on the scale, that is, this level on the scale indicates complete or perfect happiness. Whereas around 20 per cent of the respondents covered in the sample reported them to be at 0-6 on the scale.

The result reveals that so far as the financial position is concerned the shares of the respondents perceiving themselves to be above 5 on the scale are 88 per cent respectively.

The level of satisfaction with the contribution of education to economic or financial position is reflected where 80 per cent of the respondents have reported their level of satisfaction to be above 5 on the scale, which shows that respondents are

satisfied with the contribution of education towards economic or financial position.

The majority of respondents have expressed high degree of faith in God. A large majority, about 46 per cent, has expressed complete faith in God. In addition, around 34 per cent of the respondents have expressed faith in God to be at 8 and 9 on a 0-10 scale. This means that more than 80 per cent of the respondents have high degree of faith in God.

For the health status the most of the respondents have reported themselves to be at 5 or higher ranks on the scale of 0-10 and around 85 per cent of the respondents perceive themselves to be above 5 on the scale, that is, this level on the scale indicates very good health. Whereas around 15 per cent of the respondents covered in the sample reported them to be at 0-4 on the scale.

The level of satisfaction with the political scenario at different level (village to national level) is reflected where around 52 per cent of the respondents were reported below 5 on the scale which means they were completely dissatisfied and 48 per cent the respondents were reported themselves to be above 5 on the scale which means they were completely satisfied with the political scenario at different level (village to national level). Satisfaction with environment reveals that most of the respondents have reported themselves to be at 5 or higher ranks on the scale of 0-10 and around 84 per cent of the respondents perceive themselves to be above 5 on the scale, that is, this level on the scale indicates complete or perfect happiness. Whereas around 9 per cent of the respondents covered in the

sample reported them to be at 0-4 on the scale.

**2.8 Various economic aspect of life and Happiness**

The level of satisfaction is measured in respect of various economic aspect of life on a 0-10 scale. The selection of various domains was made on the basis of their importance as reflected by the literature in the subject. The satisfaction with expected income (no change to substantial change) was indicated to be lowest followed by satisfaction with economic achievement vis-a-vis expectation. On the higher side, satisfaction with food and cloth was indicated to be highest followed by satisfaction with housing.

**Table 8:** Average level of Happiness among Various Economic aspect of life

| Category  | Average on the Scale |
|---|----------------------|
| Present job/ profession                           | 7.29                 |
| Food  | 8.57                 |
| Clothing  | 8.63                 |
| Housing   | 8.11                 |
| Education   | 7.24                 |
| Standard of living                                | 7.13                 |
| Economic achievement vis-à-vis Expectation        | 6.29                 |
| Future security                                   | 6.46                 |
| Leisure   | 6.33                 |
| Expected income (No change to substantial change) | 6.26                 |
| Changed financial position since childhood        | 7.02                 |

**2.9 Various social aspects of life and Happiness**

The concept of happiness and satisfaction are sometimes used as synonym for each other. They in fact, represent different aspects of human feelings. The satisfaction with changed social status since childhood was indicated to be lowest followed by satisfaction with friends/neighbourhood. On the higher side, satisfaction with married life was indicated to be highest followed by satisfaction with family.

achievement and future security was found to be positively associated with happiness and feeling of security was highest among the individuals engaged in regular jobs. Satisfaction with health status was also higher. Faith in God reported higher level of happiness. The satisfaction with government was low. These are the general trends in happiness revealed by the survey undertaken for the present study.

**Table 9:** Average level of Happiness among Various social aspect of life

| Category                              | Average on the Scale |
|---------------------------------------|----------------------|
| Family                                | 8.92                 |
| Married Life                          | 8.98                 |
| Children/ Parents/Siblings            | 8.54                 |
| Friends/ Neighbourhood                | 8.20                 |
| Changed social status since Childhood | 8.07                 |

**3. Conclusion**

This completes the broad in the self-reported happiness of the respondents covered in the sample. The major reflections that have emerged from the analysis may be summarised as that females are less happy than male counterparts and individuals having higher education were found to be happier in general. Older person reports higher level of happiness. The person with higher per capita income reported higher level of happiness. The persons who were employed in regular jobs have indicated higher levels of happiness whereas those who are engaged in part-time and others jobs were found to be least happy. The married persons were happier than unmarried ones and the happiness level of widow/ers was found to be substantially lower. The people, in general, have expressed high level of satisfaction with married life and family. The economic

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