Towards the Development of an Index of Economic Well-Being and Accounting for its Cross-country Variations Using Dynamic Panel with GMM Method

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There has been a storm of controversy on the use of per-capita real GDP as a measure of economic progress or well-being particularly since, when Nordhus and Tobin (1972) developed an alternative measure of economic welfare (MEW) by correcting GDP for its most evident limitations. In fact it is undeniable that GDP contains only the production of goods and services which are transacted in the market without taking into account or valuing the non-market transactions of good and services(health, education, defensive expenses etc) done by both private, household and Government sectors contributing to the economic well-being of people; the underground legal and illegal economic and social activities contributing to social welfare ;the economic and social value of leisure, health status, education; social securities; social and economic cost of environmental degradation. Further GDP is flow and it does not pay heed to the stock of wealth of the household as well as the society ,the expected income from which largely influences the human behavior pertaining to consumption, saving ,inter-generational transfer of productive base for sustainability of well-being of the future generation of the household vis-à-vis the society. In fact, the use of per-capita real GDP which is basically an average figure does not focus on how it is distributed and whether all sections / classes of people consume it. It is also obvious that measure of GDP does not take into account the issue of sustainability of well being of the people. The money measure of economic performance and living standard creates a lot of problems regarding the use of prices of goods and services and the related weights. Economists have studied the impacts of price volatility on the economic well-being of the people (Osberg et al, 2016; King and Low, 2014). Although the SNA 2008 have revised the national accounting system through the rectification of accounting methods, there is still a lot of limitations in using the GDP and Per-capita GDP as measure well-being of people. The difficulties regarding the use of real GDP as measure of economic performance, social progress as well as the economic well being have also been extensively studied by the commission on measurement of economic performance and social progress, the report of which is published in 2009(Stiglitz, Sen, Fitoussi 2009). The report contains several recommendations towards better measurement of economic performance and well-being. The commission has suggested output based measure

instead of input based measure for some non-market services provided by government sector. It has also made several recommendations for the development of index of economic well being, which is defined as a multidimensional concept. The commission has identified the key dimensions for the development of the index.

There has been cross-current of studies on the measure of well-being of the people of a country (Osberg, Sharpe et al., 2016; Jones and Klenow, 2016; Wu & Rao et al. 2016, Beaumont and Thomas, 2012; Cribb, Robert and David, 2012; Fleurbaey, M., 2009; Fleurbaey and Gaulier, 2009 , 2007; Krueger and Schkabe , 2007; Matthews, E.,2006; Kahneman and Krueger, 2006; Layard, 2005; Osberg and Sharpe, 2002, 1998; Easterlin, 2001; Diner, Suh, Lucas and Smith, 1999; Osberg, 1985 etc). Some of the studies use subjective measures of well being while some others use objective based measures. Moreover, there are some studies which have developed composite index of well being. Following such studies (Osberg, Sharpe et al., 2016, Osberg and Sharpe, Thomas and Murray, 2016a; Osberg and Sharpe, 2002,1998) as well as the recommendations of the Stiglitz et al. commission we will develop a composite indices of economic well being (IEWB) for 35 developed and developing countries by considering the following dimensions of well being namely per-capita real consumption expenditure for material living standard, the per-capita real savings as proxy of wealth, life expectancy at birth as proxy of health, adult literacy rate as proxy of educational development, gini coefficient as measure of inequality in the distribution of income, poverty intensity, CO_2 emission and its social cost for the period from 1980 to 2014. Now since most of the countries in the globe are in the process of rapid globalization and further since the trade liberalization has led to rapid transfer of modern technologies, modern consumers goods across the countries in the globe, the preference pattern of the people is also experiencing a rapid change and so one can expect that the globalization will have some impact on the economic well being of the people of the countries. Moreover, the rapid expansion of R&D sector across countries which has produced positive impact on the total factor productivity of the countries such that the technological change as well as the expansion of IT will also have some positive effect on well being of the people across the countries. To capture the effect of these factors on the cross-country variations in the economic-well being of the people over the period of our study we will use dynamic panel data analysis with GMM approach following Arellano-Bond method (1991) using software STATA 12 version . We will use IEWB as dependent variable and trade openness, TFP as control variables and unemployment rate (as proxy of social security), R&D and health expenditure as instrumental variables. To develop the IEWB we will use two approaches: i) the UNDP method of development of HDI .We will first develop the dimension index of each component of well being and then the composite IEWB by giving suitable weights to each dimensional indices through

additive method; and ii) the additive method used by Osberg and Sharpe in 2002 by using their method of weighting also.

We have collected the data on all the variables from the secondary sources, viz. Various issues of World Development Indicators; World Development Reports; PENN World Table; Human Development Report, UNDP; UNESCO etc. and the construction of indices is in progress.