

Beyond GDP: which options to better represent modern socio-economic progress?

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Abstract

In recent years, specialists begun to reconsider the representativeness of GDP as an index of overall well-being of society and to recognize its validity only in the initial phases of a country's economic development, when the growth of income and wealth are more correlated to the improvement of people's living conditions. Most economic theories states that with greater wealth and higher income there is a greater possibility of choice and consequently an improvement in the position of the individual. However, as the economic conditions of a country improve and the country moves from a developing economy to a developed one, there is an evolution in the preferences and aspirations of individuals, who now fall into areas that may not always be to be quantified at the monetary level.

Keywords: *GDP; well-being; socio-economic progress; quality of life; welfare; global happiness, human development.*

1. GDP as an index of socio-economic well-being of a society

The problem associated with the poor representativeness of GDP as an “index of socio-economic well-being of a society” has long been known and was highlighted in “Robert Kennedy's speech at the University of Kansas on March 18, 1968, expressly saying” that “it measures everything, except that which makes life worthwhile” (Speech of Robert Kennedy at the University of Kansas on 18 March 1968).

Despite the known limitations of this indicator, “the predominant economic model has always favored the use of GDP in measuring the degree of development of a nation, as it is characterized by equally well-known advantages:

- it is quite easy to measure, since the monetary value of goods and services makes it possible to compare quantities of different types (it is therefore not easy to identify an equally practical substitute);
- reflects the economic prosperity of a country (and since there is a certain relationship between wealth and well-being, it was considered correct to associate social growth with GDP growth);
- is easily comparable internationally.

However, there are also obvious disadvantages in the use of such an indicator, for example:

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- excludes all those aspects that cannot be quantified at the monetary level (for example domestic work, volunteering and social relations);

- being an average value, the GDP per capita does not take into account how income and wealth are effectively distributed among the population (therefore the GDP could paradoxically indicate that a country is going well, despite the fact that we have huge inequalities within it and social classes extremely poor);

- incorporates in a single value different aspects of life that are poorly correlated; although at first sight the fact of having a single number may seem an advantage, in practice it may not be useful at all (for example two countries could have the same value as this indicator, but levels of health care, education, freedom and political rights clearly different);

- also includes the costs necessary to correct the negative externalities of economic development (purification costs, accidents, pollution, diseases, etc.); it is evident that an increase in GDP determined by these items is not reflected in the improvement of the quality of life of a community” (Nussbaum 2012: pp. 52-54).

A practical example of what we have just described is highlighted by Nussbaum, who reminds us that India, although it has recorded GDP values lower than those of China over the past 60 years, is a stable democracy with guaranteed basic freedoms, while this last no (Nussbaum 2012: p. 52). Also, South Africa while in apartheid: since in those years it was in a period of strong economic growth, to summarize the level of prosperity in an average value would certainly have distorted the actual situation in that country, given that it did not take the slightest bit considering racial discrimination (the average does not tell us where the wealth goes, who controls it, and what happens to all those who do not benefit from it) (Nussbaum 2012: p. 54)

The author therefore asks herself: “If the GDP of a particular country grows, but does not decrease the number of people deprived of the rights to education, health and other opportunities for individual fulfillment, can we say that that country is progressing?” (Nussbaum 2012).

The need for a different approach from the one so far predominant can also be traced to a theory of the 1970s, known as the Easterlin Paradox; through an empirical analysis, the economist from whom the paradox is named, pointed out that there was not an ever increasing relationship “between income, economic well-being and happiness, but that the latter tends to remain stable once a certain level of income is reached and of economic well-being”. (Easterlin 1974: pp. 89-125)

Easterlin's analysis was later developed by many other authors, confirming these results; for example Di Tella and MacCulloch “find that the happiness responses of around 350,000 people living in the OECD between 1975 and 1997 are positively correlated with the level of income, the welfare state and (weakly) with life expectancy; they are negatively correlated with crime, openness to trade, inflation and unemployment; [...]” (Di Tella and MacCulloch 2008: pp. 22-42). Consequently the unexplained trend in happiness is even bigger than it would have been predicted if income was the only argument in the utility function (Di Tella and MacCulloch 2008: pp. 22-42).

Based on this discovery, many Authors have therefore begun to reconsider the representativeness of GDP as an index of overall well-being of society and to recognize its validity only at the beginning of a country's economic development, when the raise of

income and wealth are more related to the better conditions of people's life (this is in line with prevailing economic theories, according to which with greater wealth and higher income there is a greater possibility of choice and therefore an improvement in the position of the individual).

However, as the economic conditions of a country improve and the country moves from a developing economy to a developed one, there is an evolution in the preferences and aspirations of individuals, who now fall into areas that may not always be to be quantified at the monetary level (for example leisure time, social relations, self-esteem, family satisfaction, psycho-physical status, etc.) thus making a purely economic indicator not more fully representative. In this regard, very clearly Diener and Seligman state: "economic indicators were extremely important in the early stages of economic development, when the fulfillment of basic needs was the main issue. As societies grow wealthy, however, differences in well-being are less frequently two to income and are more frequently two factors than social relations and enjoyment at work. Important noneconomic predictors of the well-being of societies include social capital, democratic government and human rights. [...] Money is a means to an end, and that end is well-being; but more money is an inexact surrogate for well-being, the more inexact a surrogate income becomes" (Diener and Seligman 2004: p. 1; Serban and Puglisi 2018).

It is however necessary to point out that at the philosophical level, this concept had already been brought to light many years before by Aristotle: "life dedicated to the pursuit of gain, then, is of a genre against nature, and it is clear that wealth is not good that we sought: in fact, it has value only in so far as it is "useful", that is, in function of another" (Aristotel 2000: pp. 5-10).

The problem of the choice of the most suitable indicator to represent the progress of a nation is crucial as public policies are addressed exactly on the basis of what is underlined by the indicator of choice. And the choice of a purely economic index could increase the risk of inadequate political choices, as mentioned by Diener and Seligman, according to which currently "domestic policy focuses above all on economic issues, although economic indicators omit or mislead the real values in the societies" (Diener and Seligman 2004: p. 1).

Moreover, the Authors add that combining GDP with social indicators is not enough to solve this matter, because even if "current social indicators can capture phenomena such as crime, marriage and divorce, environmental problems such as pollution, longevity and infant mortality, gender equality in schools, and the amount of land devoted to parks [...], they fail to fully capture the well-being of nations because they do not reflect people's actual experiences: the quality of their relationship, the regulation of their emotions, whether they experience work as engaging, and whether feelings of isolation and depression permeate their daily living" (Diener and Seligman 2004: p. 20). Therefore, "the problem stems from the fact that our world, our society and our economy have changed, and the indicators have not done it hand in hand" (Stiglitz, Sen and Fitoussi 2010: p. XI).

So Diener and Seligman "suggest that well-being should become a primary focus of policymakers" and that "accounts of subjective well-being can help decision makers evaluate policies that improve societies beyond economic development" (Diener, Oishi and Lucas 2015: p. 234).

Of the same opinion also Layard in his 2005 book (Layard 2005); Kahneman et al., according to which "the goal of public policy is not to maximize measured GDP,

so a better measure of wellbeing could help to inform policy” (Kahneman et. al. 2004: pp. 429-434); and the Global Happiness Council, which in its Global Happiness Policy Report of 2018 expressly states that “measures of subjective well-being, and especially life evaluations, provide an overall indicator of the quality of life. Having such an umbrella measure of well-being makes it possible to evaluate and compare the economic and social consequences of policies on a consistent basis” (The Global Happiness Council, 2018.).

So that the choices of policy makers can be correctly addressed to improving well-being, it is therefore necessary to identify the right path that allows recognizing the areas in which to intervene. And, to identify such a path, we must first of all develop alternative indicators to the GDP that are more able to reflect the new needs that emerged from modern developed societies; but, since the new needs of society are no longer connected exclusively to the economic aspect, it is necessary that economists confront themselves with other social sciences, such as psychology, sociology, and anthropology in particular, so as to have so a more complete view of this evolution.

However, it seems that some steps towards this direction have been made: we recall in fact that the European Union has begun to monitor psycho-physical well-being with the Euro barometer (Euro barometer is a “survey which interviews a random sample of Europeans from 1973, asking a series of socio-economic questions”; in the field of “Happiness” and “Life satisfaction”, the main question is: “On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead?”); likewise the US with the “US General Social Survey” (GSS is a survey on US citizens’ attitudes, behaviours, and attributes, developed since 1972; about “happiness”, there is a similar question to Euro barometer survey, that ask: “Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?”) (Huppert and So 2013: 837-861).

For example, at the national level, the German Socio-economic Panel Survey (The German Socio-Economic Panel (SOEP) is a longitudinal survey of approximately 11,000 private households in the Federal Republic of Germany from 1984 to 2017 and the eastern German lander from 1990 to 2017) and at a global level the World Value Happiness (The World Happiness Report is a “landmark survey of the state of global happiness” that ranks 156 countries by how happy their citizens perceive themselves to be) provide information not only on economic matters but also on life satisfaction. In 2008, French President Sarkozy established a Commission (“The commission was chaired by Professors Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi, and composed of experts from universities and governmental and non-governmental organizations from different countries”) with the specific task of identifying the limits of GDP as “an indicator of economic performance and social progress and assessing the feasibility of switching to alternative measurement tools” (Stiglitz, Sen and Fitoussi 2010: p. XXII); the “final Report by the Commission on the Measurement of Economic Performance and Social Progress was presented in Paris” on September 14, 2009 as part of a public discussion, in which the French President expressly stated that “we will not change our behavior unless we change the way we measure our economic performance” (Stiglitz, Sen and Fitoussi 2009: p. I).

The Report also clarifies “that time is ripe for measurement system to shift from measuring to economic production to measuring people's well-being. And measures of

well-being should be put in a context of sustainability” (Stiglitz, Sen and Fitoussi 2009: p. 12).

The example was followed in 2010, by the Prime Minister of the United Kingdom, David Cameron, who announced: “we'll start measuring our progress as a country, not just how our economy is growing, but by how our lives are improving; not just by our standard of living, but by our quality of life” (Prime Minister’s speech on wellbeing on 25 November 2010).

A very detailed analysis of the limits of economic indicators was developed by Diener and Seligman (Diener and Seligman 2004: p. 1), who highlight the divergences that can occur when using “economic indicators instead of well-being indicators; the analysis is carried out in 6 areas related to well-being”:

- societal conditions (national and political factors related to well-being): Diener and Seligman recall the investigations carried out by numerous other authors, which can be summarized exhaustively in the concepts exposed by Helliwell that people with the highest well-being “are not those who those who live where social and political institutions are effective, where mutual trust is high and corruption is low” (Helliwell 2002); and by Veenhoven, who further specifies that “the effect of economic freedom is greater in developing ones than developing oneself and the effect of political freedom greater in the dairy than in the former” (Veenhoven 2010: p. 14); it is clear that a purely economic indicator is not able to grasp these aspects, typical of more developed societies, mainly linked to the quality of political institutions and social relations;

- income (money and well-being): the Authors found an “important negative outcome related to money, such as the deleterious effects of materialism on happiness”; more specifically, Kasser and Kanner documented problems with “materialistic individuals relating to less materialistic individuals: lower self-esteem and greater narcissism, greater amounts of social comparison (i.e., comparing oneself with other people, sometimes for the purpose of evaluating oneself) and less empathy, less intrinsic motivation, and more conflictual relationships; materialism might lead to lower well-being due to materialistic people tend to downplay the importance of social relationships and to have a large gap between their incomes and material aspirations” (Kasser and Kanner 2004: p. 211); Helliwell found that “the strong negative effects of unemployment are likely to be caused by difficulties in meeting material needs, but by psychological factors such as a decrease in self-respect” (Helliwell 2002); Kahneman and Krueger added “several studies have found that rank in the income distribution or in one’s peer group is more important than the level of income” (Kahneman and Krueger 2006: p. 8) “a focus on subjective well-being could lead to a shift in emphasis from the importance of income in determining a person’s well-being toward the importance of his or her rank” (Kahneman and Krueger 2006: p. 22); moreover, Layard, Mayraz & Nickell found “not only the marginal utility of income declines but income” that “declines somewhat less than proportionally to the rise in income” (Layard, Mayraz and Nickell 2008: pp. 1846-1857). It is clear, therefore, that even in this area there are aspects that cannot be adequately captured by the GDP;

- work (productivity and well-being): “work should no longer be considered something to be endured in order to obtain income, but rather should be considered a potentially rewarding experience in its own right. When the workplace is properly structured to increase well-being, profits will likely rise; thus, well-being at work not only is desirable as an end in itself, but also can help to produce greater economic

productivity” (Diener and Seligman 2004: p. 21); moreover, “the work context may influence the family context [...]. Individuals might choose to work overtime to earn more money, but their family lives might suffer as a consequence. These externalities might include greater delinquency among children who remain unsupervised by overworked parents” (Diener and Tov 2012: pp. 137-157); an indicator such as the GDP can measure the level of production, but it cannot verify the quality of the job and the satisfaction of the worker, and consequently does not allow to identify any critical issues not strictly related to the remuneration aspect; furthermore, economist often omit from GNP volunteer work and homemaking, although they can produce substantial amounts of goods and services (Diener and Tov 2012: pp. 137-157); and “if we refer to a representation of the world in which the services provided by people within a family have no value compared to those that we can obtain on the market, we are expressing a concept of civilization in which the family no longer has much importance” (Stiglitz, Sen and Fitoussi 2010: p. XVI);

- physical health and well-being: in this area an indicator such as GDP could even lead to paradoxical conclusions: for example an increase in the use of drugs increases the value of this indicator, but this increase does not necessarily reflect an improvement in the health conditions of the population;

- mental disorder: “as developed nations have become wealthier, mental health has either dropped sharply or stayed the same”; [...] “mental disorders are widespread, and perhaps growing in frequency, in modern society”; [...] “a single mental disorder, depression, is the third leading cause (after arthritis and heart disease) of loss in quality-adjusted life years (a measure of longevity that factors in quality of life), ranking above cancers, stroke, diabetes, and obstructive lung disease”; [...] it is also “interesting to note that higher rates of mental illness and ill-being experienced in a society can increase GDP if more money is spent on hospitalization, crime prevention and imprisonment of individuals with disorders. Paradoxically, a mounting problem in well-being might increase economic indicators, and the increase in GDP does not indicate whether the money is spent effectively” (Diener and Seligman 2004: p. 28); here too, therefore, a paradoxical situation arises: that is, a developed country, therefore in theory with a high GDP, it could present low levels of psychophysical well-being, or in any case inversely related to GDP;

- social relationship: “people need social bonds in committed relationship, not simply interactions with strangers, to experience well-being”; [...] “although it is clear that positive social relationships are an important cause of well-being, they are largely missed by economic indicators” (Diener and Seligman 2004: p. 28). Even Becchetti and Semplici confirm, “That sociality is a very important factor in the health dynamics of the population” (Becchetti and Semplici 2016: p. 95). So, “those interested in maximizing society’s welfare should shift their attention from an emphasis on increasing consumption to an emphasis on increasing social contacts” (Kahneman and Krueger 2006: p. 22).

From the analysis of Diener and Seligman, therefore, the limits of an indicator like the GDP clearly emerge.

To these limits we must also add those connected with the new theories introduced by behavioral economics: Kahneman et al remember that “income is often used as a proxy for opportunities and well-being. If people are not fully rational,

however, their choices will not necessarily maximize their experienced utility, and increasing their opportunities will not necessarily make them better off". "Direct measures of experienced utility become particularly relevant in a context of bounded rationality" (Kahneman, Krueger, Schkade, Schwarz and Stone 2004: pp. 429-434).

Current economic indicators are constructed following the logic of rational choice models of individuals; however, behavioral sciences are developing alternative models that take into consideration "irrational" aspects of agents; models that, if confirmed, would therefore undermine, from the ground up, those tools built starting from the assumptions of the perfect rationality of economic agents.

Finally, especially in contexts such as the post-crisis period of 2008, in which inequalities can increase disproportionately, there is an intrinsic limit of all the indicators that are developed on the concept of media: they do not in fact provide correct information on the distribution (whether it be income, consumption or wealth); therefore the Recommendation 4 of the Report by the Commission on the Measurement of Economic Performance and Social Progress of 2009 "suggest to give more prominence to the distribution of income, consumption and wealth, combining average indicators with the median ones and poverty statistics" (The problem of inequality is also mentioned in Recommendation 7, expressly titled Quality of life indicators in the dimension covered should assessments in a comprehensive way).

Moreover, in Recommendation 5 is highlighted that well-being is multi-dimensional, and articulated in 8 dimensions:

- material living standards (income, consumption and wealth);
- health;
- education;
- personal activities including work;
- political voice and governance;
- social connections and relationships;
- environment (present and future conditions) (A specific Recommendation, the 11th, is dedicated by the Commission to the issue of sustainability);
- insecurity, of an economic as well as a physical nature.

However, the Commission noticed that many of them are missed by conventional income measures, and so suggest in Recommendation 9 and 10 that in addition to objective indicators of well-being, subjective measures of the quality-of-life should be considered.

In the first chapter of the Report, the Commission propose five ways of dealing with some of the deficiencies of GDP as an indicator of living standard, that are:

- emphasize national accounts aggregate other than GDP (for example, by accounting for depreciation so as to deal with net rather than gross measures of economic activity; since in recent years the structure of production has changed (Information technology assets have now a main role in the economy, but their depreciation rate is faster than for "older" industries -as steel mills), the discrepancy between GDP and NDP may be increasing, and by implication, volume NDP may be increasing less rapidly than GDP);
- improve the empirical measurement of key production activities, in particular the provision of health and education services (this is important because in present economies services account for up to two-thirds of total production and employment);

- bring out the household perspective, which is most pertinent for considerations of living standards (in this way, household income and consumption should also reflect the value of in-kind services provided by government, such as subsidized health care and educational services);
- add information about the distribution of income, consumption and wealth to data on the average evolution of these elements (when inequality is increasing, it needs to combine average statistics with median ones);
- widen the scope of what is being measured (in fact, a significant part of economic activity takes place outside markets and is often not reflected in established national accounts).

A first significant contribution to the development of GDP was made at the beginning of the 1970s by Nordhaus and Tobin: starting from the idea that an obvious shortcoming of GNP is an index of production, not consumption, and that of the goal economic activity, after all, is consumption, the Authors have made some adjustments to this indicator in order to consider, for example, also the value of free time, of homework and the negative externalities connected to urbanization and industrialization; this change led to the development of what the Authors themselves defined as primitive and experimental measure of economic welfare (MEW); specifically, the Authors distinguish between actual welfare (MEW-A) and sustainable welfare (MEW-S), where the amount of consumption is in a sustained growth in per capita consumption at the trend rate of technological progress; so, it measures the level of MEW that is compatible with preserving the capital stock.

Despite this change, the results obtained did not however show important changes to such an extent as to justify the obsolescence of economic growth. Their idea has however paved the way towards a new way of seeing the indicators of progress of a company, giving rise to different solutions, which can be included in the category of those that can be defined as adjusted GDP indicators. Some adjusting GDP approach, deviates increasingly from the criterion of accounting consistency; for example, the Index of Sustainable Economic Welfare (ISEW) and its enhanced version, the Genuine Progress Indicator (GPI).

The ISEW was elaborated by Herman Daly and John B. Cobb in 1989 the economic value of social activity, social and environmental patterns, and it is the most important economic, social and environmental patterns, and it is the results of the sum of the following variables: weighted personal consumption + public non-defensive expenditures + capital formation + services from domestic labor - private defensive expenditures - costs of environmental degradation - depreciation of natural capital. The GPI was developed in 1995 by the non-profit organization "Redefining Progress" as a refinement of the ISEW, taking into consideration more items with respect to the ISEW.

Because the GDP and the ISEW / GPI are both measured in monetary terms, they can be compared on the same scale. The Stiglitz-Sen-Fitoussi Commission remember that in all countries for which both ISEW and GPI are available, their values are similar and some point in time start diverging from GDP. This has led to the author of putting forward to so-called "threshold" hypothesis, according to which GDP and welfare move in the direction of certain points. being. The "threshold" hypothesis would confirm

again the Easterlin Paradox in describing the negative effects of economic growth on social and environmental conditions.

However, some of them have emerged as natural substitutes, since they take on natural capital and are the perfect substitutes, these indicators can only work under the constant capital rule (or weak sustainability hypothesis). The forms of natural capital irreplaceable and therefore non-declining stocks of natural capital are required; under this "strong" hypothesis, monetary indicators would always fail because they are either monetize externalities (damage cost, abatement cost, etc.) or market prices in order to assign monetary value to different forms of natural capital. If a resource is irreplaceable and its decline would be an irreparable damage to society, it could not have a price or a cost.

Moreover, there is too much arbitrariness in the choices of the variables included in the definition of the defensive expenditure.

Other adjusting GDP approach are instead integrated into the realm of national accounting. It is based on the so-called System of Environmental Economic Accounting (SEEA) (United Nations. Department of Economic and Social Information and Policy Analysis. Statistical Division 1993), a satellite account of the Standard National Accounts (SNA) (Stiglitz, Sen and Fitoussi 2009: p. 66). Due to the environmental adjustments to SNA this indicator is also known as Green GDP, and it could be considered an extension of the concept of net domestic product. Indeed, just as GDP (Gross) is turned into NDP (Net) by accounting for the consumption of fixed capital (depreciation of produced capital), the idea is that it would be meaningful to compute an "ea-NDP" (environmentally-adjusted) that takes into account the consumption of natural capital (Stiglitz, Sen and Fitoussi 2009: p. 66).

2. Dimensions of well-being

Even if adjusted GDP indicators are an easy way for making comparison with "standard" GDP, the Stiglitz-Sen-Fitoussi Commission however highlighted that both approaches miss to evaluate an assessment of how far we are from desirable sustainable targets; so, they suggest to implement measures of overconsumption or of underinvestment (Stiglitz, Sen and Fitoussi 2009: p. 67), and specifically:

- the Adjusted Net Saving (also known as genuine savings or genuine investment): ANS is based on the concept of "extended wealth", that means that it take into account not only natural resources but also physical, productive capital and human capital; the main limit of this measure is connected with the pricing techniques (Stiglitz, Sen and Fitoussi 2009: p. 73) and with the lack of global view (Stiglitz, Sen and Fitoussi 2009: pp. 69-76);

- the Ecological Footprints: EF measures how much of the regenerative capacity of the biosphere is used up by human activities (consumption). It does so by calculating the amount of biologically productive land and water area required to support a given population at its current level of consumption. A country's Footprint (demand side) is the total area required to produce the food, fiber and timber that it consumes, absorb the waste that it generates, and provide space for its infrastructure (built-up areas). On the supply side, biocapacity is the productive capacity of the biosphere and its ability to provide a flux of biological resources and services useful to humankind (Stiglitz, Sen and Fitoussi 2009: p. 70); however, even if it differs from ANS because no market prices are explicitly used, also EF miss global view (Stiglitz, Sen and Fitoussi 2009: p.

71). Then, Commission suggest that "the Ecological Footprint could at best be an indicator of instantaneous non-sustainability at the worldwide level, while EFs for countries should be used as indicators of inequality in the exploitation of natural resources and interdependencies between geographical areas" (Stiglitz, Sen and Fitoussi 2009: p. 71).

An alternative solution to the adjusted GDP indicators adopted by various international organizations, and in particular by the UN and the OECD, is that of statistical dashboards; as we are reminded by the Stiglitz-Sen-Fitoussi Commission, dashboards or indicators of a widespread approach to the general question of sustainable development. This approach involves gathering and ordering a series of indicators that support direct or indirect relationship to socio-economic progress and its durability.

Although this solution has the advantage of providing a broader and more variegated view than the one proposed by the GDP, the statistical dashboards nevertheless have different limits, such as the simple definition of sustainability and the lack of a single headline. socio-economic performance over time or across countries. Then, Commission suggest at most to create a "micro" dashboard [...] that is specifically dedicated to the sustainability issue, based on a clear notion of sustainability.

To solve the problem of the scarce parsimony of the statistical dashboards, the composite indexes have been proposed; the Stiglitz-Sen-Fitoussi Commission in its 2009 Report cites as an example:

- Osberg and Sharpe's Index of Economic Well-Being: "it is a composite indicator that simultaneously covers current prosperity (based on measures of consumption), sustainable accumulation, and social topics (reduction in inequalities and protection against "social" risks)" (Stiglitz, Sen and Fitoussi 2009: p. 64);

- Environmental Sustainability Index: "ESI covers 5 domains: environmental systems (their global health status), environmental stress (anthropogenic pressure on the environmental systems), human vulnerability (exposure of inhabitants to environmental disturbances), social and institutional capacity (their capacity to foster effective responses to environmental challenges), and global stewardship (cooperation with other countries in the management of common environmental problems). It uses 76 variables to cover these 5 domains" (Stiglitz, Sen and Fitoussi 2009: p. 64);

- Environmental Performance Index: "EPI is a reduced form of the ESI, based on 16 indicators (outcomes), and is more policy-oriented" (Stiglitz, Sen and Fitoussi 2009: p. 64).

However, a more well-known composite index is Human Development Index, proposed by the United Nations Development Program in 1990 (UNDP 1990); from 2010, HDI is the geometric mean of three elements (UNDP 1990: p. 103):

- life expectancy at birth;
- education levels, assessed in terms of mean years of schooling and expected years of schooling (the years of schooling that a child can expect to receive given current enrolment rates) (UNDP 2010: p. 15);
- gross national income (GNI) per capita¹ (UNDP 2010: p. 15).

¹ GNI replaces gross domestic product (GDP) per capita, because in a globalized world differences are often large between the income of a country's residents and its domestic

The index scale (with values between 0 and 1) divides the countries into 4 quartiles: countries with very high human development, countries with high human development, countries with medium human development, countries with low human development.

The ranking generated by this indicator is very different from that based on GDP per capita, especially in reference to the least developed countries. Nussbaum, for example, points out how the United States slides from first place as GDP to twelfth as HDI.

The OECD has also developed its own composite indicator for the 36 member countries which can be considered a valid alternative to GDP; it is the Better Life Index, which embraces 11 dimensions of well-being in terms of material living conditions (housing, income, work) and quality of life (social relations, education, environment, governance, health, personal satisfaction, security, relationship between private life and work). The OECD believes that such an indicator is relevant because well-being is a multidimensional concept that must be measured with a multidimensional indicator. In Italy, an interesting solution was developed by a joint ISTAT-CNEL initiative in 2010 and is called Fair and Sustainable Well-being; this is also a composite tool that integrates economic, social and environmental indicators with measures of inequality and sustainability. The name chosen summarizes in an extremely clear way the key elements that are currently considered suitable for a coherent and complete measurement of the socioeconomic progress of a nation:

- develop a multidimensional analysis of the relevant aspects of citizens' quality of life (Wellness);
- pay attention to the distribution of the determinants of well-being among social subjects (Equo);
- guarantee the same well-being even to future generations (Sustainable).

The BES is divided into 12 domains (or welfare dimensions) which are:

- environment;
- health;
- economic well-being;
- education and training;
- work and reconciliation of life times;
- social relations;
- security;
- subjective well-being;
- landscape and cultural heritage;
- research and innovation; quality of services;
- politics and institutions.

The innovative feature of this tool consists in the fact that the BES was from the beginning conceived as an evolving project. Within a stable structure based on 12 domains, each year the set of indicators is reviewed to take into account the changes in the country's socio-economic context, any new sources of data and methodological advances.

production; some of the income residents earn is sent abroad, some residents receive international remittances and some countries receive sizeable aid flows.

To underline the importance that this new way of assessing progress is taking, there is also the fact that, starting from the 2017 Economic and Financial Document, some BES indicators have become part of the economic planning cycle according to how much prescribed by the law that reformed the budget law (Law 163/2016). However, among the many attempts to go beyond the GDP, the one that had a greater resonance at international level certainly remains Gross National Happiness (GNH), a measurement method used in a small state of Asia, Bhutan. This indicator was introduced in the early 1970s by the King of the time to assess national progress and to drive public policy and is divided into 9 areas: health, education, living standards, time use, environmental quality, culture, community, vitality, governance, and psychological wellbeing. It should be noted, therefore, that this measure places the focus not only and not only on the economic aspect of a country, but also on man, thus highlighting that people need not only to satisfy the needs of nature and materials, but also spiritual and emotional ones.

The importance of the alternative evaluation mechanism adopted by Bhutan underlines the fact that it was just such an innovative solution that made the “UN General Assembly to adopt Resolution 65/309 on 19 July 2011, entitled: “Happiness: Towards a holistic approach to development” (United Nation. Royal Government of Bhutan 2012: p. 19), that described happiness as „a fundamental human goal and universal aspiration, and noting that GDP by its nature does not reflect that goal; that unsustainable patterns of production and consumption impede sustainable development; and that a more inclusive, equitable and balanced approach is needed to promote sustainability, eradicate poverty, and enhance wellbeing” (United Nation. Royal Government of Bhutan 2012: p. 19). And on the basis of this Resolution, the High Level Meeting of the United Nations of 12 April 2012 was organized, a conference expressly focused on the themes of well-being and happiness, of ecological sustainability, of the efficient allocation of resources and equity in distribution, and with the aim of verifying the need to adopt new measures for assessing the socio-economic development of nations.

The Report on the 2012 meeting opens with a strong and explicit criticism of GDP by the Prime Minister of Bhutan, Jigmi Y. Thinley: ”The present GDP-based system, they recognised, was devised prior to any knowledge of climate change or the finite limits of the earth’s resources, and it prioritises material growth and consumption at the expense of nature and people” (United Nation. Royal Government of Bhutan 2012: p. 11). “This system has depleted resources, degraded ecosystem services, accelerated greenhouse gas emissions, diminished biodiversity, and now threatens the survival of humans and other species. It has created yawning inequities, and is generating global economic insecurity, indebtedness, instability, and conflict” (United Nation. Royal Government of Bhutan 2012: p. 11).

And, consequently, suggests to follow the GNH approach that ”is based on the belief that happiness can be achieved by balancing the needs of the body with those of the mind within a peaceful and secure environment. GNH is a sustainability based, wellbeing centric, inclusive economic model” (United Nation. Royal Government of Bhutan 2012: p. 25).

However, it is right to point out that, although this indicator may seem more representative than the GDP, Diener and Lyubchik wanted to verify if the level of well-

being in Bhutan is really better than in other countries; from this analysis it seems to emerge that this state is not in the top rankings in all areas affected by the GNH; in particular the Authors showed that "Bhutan ranks first in terms of Environmental wellbeing and ranks moderately high on Social wellbeing. However, it scores fairly low in terms of overall Psychological wellbeing" (United Nation. Royal Government of Bhutan 2012: p. 25).

Given that the Authors themselves have specified that they have found some limits in the development of this analysis and that therefore it is not possible to give definite judgments on the results, however the idea that underlies such a measurement method remains admissible, and therefore it is considered that this indicator can be at least useful as a guideline for intensifying those areas where the GDP is lacking. This suggestion is also proposed by the Global Happiness Council, which reminds us in the Global Happiness Policy Report of 2018 that the GNH-based policy evaluation mechanism adopted by Bhutan is a good example to follow.

However, although "among the pros of using a composite indicator there is the easiness of interpretation and the fact that providing the "big picture" it is able to summarize complex or multi-dimensional issues without dropping the underlying information base" Iso the composite indicators have some limitations, such as in particular the absence of a clear definition of the concept of sustainability and the arbitrary character of the procedures used to weight their various components. Consequently, a composite indicator, if poorly constructed or misinterpreted, may be misused inviting simplistic policy conclusions.

3. Conclusions

In conclusion, although there are still difficulties in identifying the most suitable measurement to represent the current configuration of modern society and its progress, it seems nevertheless clear the need to abandon the idea that GDP alone can fulfill this task . Even if the latter has the enormous merit of being able to synthetically describe the situation of a nation and consequently allow an easy comparison with other countries, it is no longer possible to pretend that the other dimensions that characterize human life are not so indispensable for the full realization of man. Therefore, it is believed that, in assessing the progress of a company and in order to correctly direct policy choices, indicators structured differently from GDP should also be taken into consideration, despite the various limits highlighted above. In fact, even if errors should occur in the use of indicators that have the task of assessing the well-being of people, environmental and economic sustainability, most likely these errors will be less serious than those generated by an incorrect and / or instrumental interpretation of measurement methods already distorted at the base as intrinsically connected to an opportunistic logic.

The possible errors of the alternative indicators to the GDP (which are due to measurement techniques not yet perfected, as these indicators are still in their initial development phase, or to erroneous weighting of the variables, or to the fact that in some cases they use subjective and non-objective assessments), as they can be more harmful than those generated by an instrument "that does not include externalities, side effects of productions and consumption that do not result in market transactions, gambling and commuting are part of it?" (Diener and Seligman 2004: p. 1-31).

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