SOCIAL INDICATORS TO MEASURE THE WELL-BEING OF THE POPULATION. BENCHMARKING COUNTRIES

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1. Introduction

The various criticisms made about GDP have facilitated the development of a set of indicators aimed at starting new processes for measuring well-being and subjective well-being.

The aim of this work is to provide an examination of the main well-being indicators in the literature, and their trends with a focus on the Italian context and the main European partner countries.

Within the framework of the United Nations Development Programme, a social indicator, the HDI, is developed, which includes different evaluation dimension with respect to GDP, considering, in fact, social and environmental aspects in the process of evaluating the well-being of a State; it also includes health and education. In Italy in 2010, Istat launched the Bes project to measure Equitable and Sustainable Well-being, with the aim of evaluating the progress of society not only from an economic, but also from a social and environmental point of view. To this end, the traditional economic indicators, GDP first of all, have been integrated with measures of the quality of people's life and of the environment. The purpose is to prepare statistical reports and analysis necessary for the verification of Fair and Sustainable Welfare at the local level to support local authorities in the process of developing intervention strategies. BES project has certainly represented an important moment in terms of analysis and measurement of well-being; it has also given rise to many initiatives at national and local level, such as the "Urbes" and "BES of the provinces" projects, which propose and suggest more precise measures of Equitable and Sustainable Welfare at territorial level.

2. Literature review

The contributions provided by recent literature on well-being and sustainable development, highlight how it is possible to pursue the objective of growth by

damaging the social and ecological aspects of a country, favouring all those factors of an economic nature (Spangenberg and Lorek, 2014). The relationship between the environment and social objectives, or green society; inclusive growth that precludes the link between growth and social factors (Gupta et al., 2015). In a broad perspective, social inclusion implies the need to take into consideration the economy of less developed nations, developing nations and the economic realities of post-conflict countries (Okafor, 2008). The classic dichotomous bipartition on the topic varies between two extremes in which the authors have tried to consider whether higher equity facilitates (Schulze et al., 2018; Ostry et al., 2014) or penalizes GDP growth in the long term (Maibom and Andersen, 2016). Moreover, the studies carried out on "behavioural economics" have shown that each individual subject does not always operate maximizing their economic interest as a result of the presence of information asymmetries that significantly hinder the decision-making process (Stutzer et al., 2007; Verhofstadt et al., 2011).

Masur et al. (2010), on the basis of the framework of classical utilitarian theory, have demonstrated how the measurement of well-being, cannot be separated from the determination, analysis and study of the concept of "subjective well-being". In the latter case, it is possible to count the indices of happiness, which have the advantage of providing an aggregate value of individual well-being. Undoubtedly the so-called developed nations show a higher happiness of their populations than the developing countries (Wolfers and Leigh, 2006; Diener and Oishi, 2000). But happiness in emerging countries is constantly growing (Oishi et al., 2011). In these countries it follows a factor that affects happiness, i.e. the economic condition of each individual, whereas in rich countries the elements that condition the level of happiness are the emotional relationships (Qu, 2015).

In agreement with Doyle (2018) one of the main concerns for the future years is the rapid overheating of the planet; so, this issue must be considered as the starting point for other sustainability hypotheses. Forecasts of economic effects and climate change are based on the "opulence principle", while risks caused by a slow-down in growth are underestimated. As this principle shows various limitations, the estimates are approximate, not considering the costs of dealing with adverse climatic conditions and limiting the resulting economic inequalities. For this reason, several estimates based on this criterion have been revised (Ackerman and Stanton, 2008) with the aim of including these types of costs in the new forecasts. In any case, the ethical aspect of sustainability bypasses the concept of human well-being, attributing more responsibility to protecting the environment with particular attention to the protection of biodiversity (Knox, 2017; Boyce et al., 2010).

Among the other deficiencies of the GDP as an indicator of human well-being, there is the omission to account for environmental costs and values of non-market goods of economic activity (Costanza et al. 2017). Some authors argue that in a

reality where ecological constraints are becoming increasingly evident, an increase in GDP can produce a so-called "uneconomic growth" (Lawn, 2016) produced by an increase in social costs that exceed the economic benefits (Bache and Reardon, 2016; Bleys and Whitby, 2015). Over the years, many attempts have been made to implement new indicators and improve existing ones, focusing on the correlation between indicators and their actual participation and application in decision-making processes (Hayden and Wilson, 2017). Some researchers argue that alternative indices to GDP can be a useful way to show and interpret public costs as "smart investments" (Daly and McElwee, 2014).

3. Human Development Index in the Italian context

The most significant indicator to measure the level of long-term well-being is the Human Development Index (HDI), which highlights the quality of life and human development in three key perspectives: a long and healthy life, access to knowledge and a "decent" standard of living. The first dimension measured is life expectancy; it is referred to the average number of years of a newborn child. In other words, it is an indicator that allows to determine the number of people, of different ages, who die in the reference to the born year to have a view of the mortality characteristics for the population. The second dimension, access to knowledge, is measured by the education index. It indicates the level of education and literacy rate and is constructed on the basis of adult literacy; the latter dimension expresses the attitude of registered students (students and pupils) of individuals over the age of 25, the percentage of students in higher and secondary education institutions and the number of people with higher education. Living standards are measured based on gross national income (GNI) per capita. This index is useful to show how countries with the same level of GNI per capita obtain different levels of human development.

It is essential to affirm that HDI could integrates the results obtained through the use of the traditional macroeconomic indicator. In 2018, the ranking of human development index, classify Italy in the country with a high level; this ranking places Italy in 29th place among 189 countries, with a rating of 0.883 (the index range is from 0 to 1). Between 2010 and 2018 the value of Italian HDI went from 0.871 to 0.883, with an increase of 1.1% and an average annual growth of 0.17%.

To better understand these aspects in Table 1, was show the level of the index in Italy between the 2015 and 2018 (there has also been included the 2010 like base year) (Figure 1).

Comparing the value of HDI in Italy with that of other main economic partner countries (Spain, United Kingdom, France, Malta) like a benchmark, in Table 2 it is possible to observe how Italy shows a low value of this index equal to 0.883

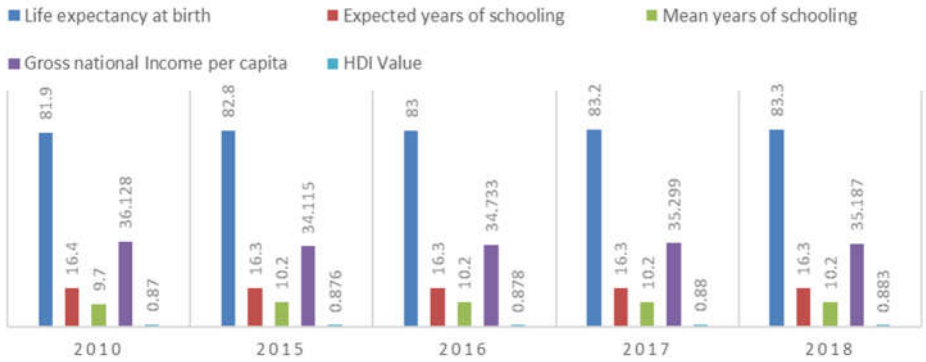
compared to the average of other countries that have a high index of human development. Despite the fact that Italy has a higher GNI per capita than Spain, it is possible to note that the value of the Human Development Index is lower; on the other hand, Montenegro, Greece Cyprus Portugal and Turkey show very low performance in HDI index and in other dimension collected in Table 2.

Table 1 – *Human Development Index in Italy from 2010 to 2018.*

	Life expectancy at birth	Expected years of schooling	Mean years of schooling	Gross National Income per capita	HDI value
2010	81.9	16.4	9.7	36,128	0.871
2015	82.8	16.3	10.2	34,115	0.875
2016	83.0	16.3	10.2	34,733	0.878
2017	83.2	16.3	10.2	35,299	0.881
2018	83.3	16.3	10.2	35,187	0.883

Source: United Nations Development Programme – 2019 own elaboration.

Figure 1 – *Value of each dimension of the HDI.*



Source: United Nations Development Programme – 2019, own elaboration.

3.1. Corrections to the Human Development Index

HDI is an average of a country's human development outcomes, but it does not take into account the inequalities of a country's population. The United Nation Development Programme, in its Human Development Report (HDR), to overcome this gap, in 2010 introduced the Inequality-adjusted Human Development Index (IHDI), which is the index of human development net of inequalities. The IHDI combines a country's average achievements in health, education and income with

how those achievements are distributed among country's population by "discounting" each dimension's average value according to its level of inequality. Thus, the IHDI is distribution-sensitive average level of human development. As the inequalities of a country decrease, the level of human development of the population increases.

Table 2 – *Values of the Human Development Index of Italy and other countries compared. Year 2018to 2018.*

	HDI value	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita
Italy	0.883	83.2	16.3	10.2	35.299
Spain	0.893	83.4	17.9	9.8	35.041
United Kingdom	0.920	81.7	17.4	12.9	39.116
France	0.891	82.5	15.5	11.4	40.511
Germany	0.939	81.2	17.1	14.1	46.946
Greece	0.872	82.1	17.3	10.5	24.909
Cyprus	0.873	80.8	14.7	12.1	33.110
Malta	0.885	82.4	15.9	11.3	34.795
Montenegro	0.816	76.8	15.0	11.4	17.511
Portugal	0.850	81.9	16.3	9.2	27.935

Source: United Nations Development Programme – 2019 own elaboration.

Table 3 – *Values of IHDI of Italy and other countries compared. Year 2018.*

	IHDI value	Overall loss (%)	Human ineq. coeff (%)	Inequality in life expect at birth (%)	Ineq. in educ (%)	Ineq. in income (%)
Italy	0.776	12.1	11.8	3.1	11.0	21.3
Spain	0.765	14.3	14.0	3.0	17.1	21.9
United Kingdom	0.845	8.2	8.0	4.1	2.8	17.0
France	0.809	9.2	9.1	3.8	9.1	14.4
Germany	0.861	8.3	8.1	3.8	2.7	17.7
Greece	0.766	12.2	11.9	3.5	12.8	19.5
Cyprus	0.788	9.7	9.6	3.6	11.0	14.3
Malta	0.815	8.0	7.9	4.6	6.7	12.5
Montenegro	0.746	8.6	8.5	3.6	7.4	14.6
Portugal	0.742	12.7	12.4	3.5	15.8	18.1

Source: United Nations Development Programme – 2019 own elaboration.

The data for 2018 it is shown in table 3. As it possible to read Italy's HDI is equal to 0.883, consequently, subtracting the value of inequality, the same index decreases to 0.776, with a 12.1% decrease. Spain and the United Kingdom show an overall loss of 14.0% and 8.0% respectively. The average loss resulting from the

inequality of each country is 10.7, while for OECD countries it is 11.7%. Human inequality coefficient for Italy is 11.8% much higher than the United Kingdom and France which show respectively a coefficient of 8.0% and 9.1%. Comparing the other European countries, Italy register better performance also considering the Mediterranean region; Malta and Montenegro have a HDI index equal to 7.9% and 8.5%.

The difference between the IHDI and HDI is the human development cost of inequality, also termed – the overall loss to human development due to inequality. The IHDI allows a direct link to inequalities in dimensions, it can inform policies towards inequality reduction, and leads to better understanding of inequalities across population and their contribution to the overall human development cost; a high inequality can determine negative consequences for social cohesion, the quality of institutions and policies, slowing down human progress.

4. Better Life Index (BLI). Benchmarking between Italy and other European countries

Analysing the level of well-being in Italy through the Better Life Index, it is possible to observe how unstable trend was recorded in relation to the various indicators that make up this index. Italy is above the mean of the other OECD countries in terms of income, wealth, work-life balance, civic commitment, social relations and health status, while it has a low average for housing, subjective well-being, quality of the environment, level of employment and education. in order to better understand the positioning of Italy in the European panorama, in the analysis of this indicator it was decided to introduce only United Kingdom, Turkey, Greece, France, Germany, Portugal and Spain to obtain a broader perspective of continental and Mediterranean Europe areas.

In Italy, the average per capita income is significantly lower than the OECD average of 33,604 USD per year compared to 26,588 USD in Italy. In detail, as can be seen from Table 4, Germany and France show a higher mean disposable income per capita than Italy, Greece and Spain. Income is an important component because the level of economic wealth has a decisive influence on choices in terms of education and health care. In terms of employment, 58% of the working population in Italy is legally employed, while it is much higher in Germany and France, where the employment rate is 75% and 65% respectively. Spain also outperforms Italy with 62% employment rate, only Greece and Turkey showing an even lower level of employment than Italy. As Table 4 shows, a country with a high employment rate achieves income benefits, facilitates social inclusion and promotes the development

of work skills. In fact, Germany and France with a high employment rate are among the countries with the highest average disposable income per capita.

An important element that allows a country to achieve an advantage in terms of social and economic well-being is a high level of education. The education variable indicates the percentage of adult population, between 25 and 64 years of age, that have at least an upper secondary education degree; an excellent level of education makes it easier to find a job and to have a substantial income. All this is confirmed by the data reported in the table below, where countries such as Germany and France, which report a high level of education, 75% and 65% respectively, result in a high employment rate of 87% and 78%.

Table 4 – *Some indicators compared to the Better Life Index – Year 2018.*

	Mean disposable income per capita (USD)	Employment (%)	Education (%)	Health (%)	Life satisfaction (score from 0 to 10)
Italy	26.588	58	61	83	6
Spain	23.999	62	59	83	6.3
United Kingdom	28.715	75	81	81	6,8
France	31.304	65	78	82	6.5
Germany	34.297	75	87	81	7.7
Greece	17.700	53	73	82	5.4
Portugal	21.203	68	48	81	5.4
Turkey	18.302	52	39	78	5.5

Source: OCSE, own data processing.

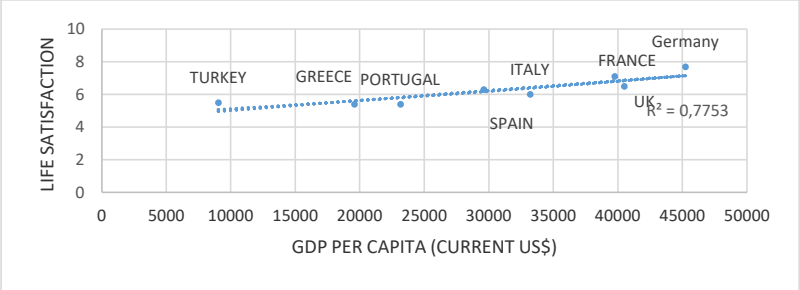
In recent years, a higher number of OECD countries have reported a clear improvement in life expectancy thanks to better living conditions, the quality of the public health system and the evolution of medicine. In Italy, life expectancy at birth is 83 years, which is higher than the mean of some OECD countries such as Germany, France and Greece, which record an average of 81, 83 and 82 years respectively. The increase in hope is related to a higher cost sustained by the population in terms of health.

Another indicator that makes it possible to measure the subjective well-being perceived by the population of a country is the level of life satisfaction, measured on average. As can be seen from Table 4, the people who believe they are most satisfied live in Germany, France e Spain; while Greece shows the worst performance with a score of 5.4. Italy shows an average income per capita of $26.588 higher than in Spain $23.999, but the level of life satisfaction is higher for the latter country, with a value of 6,3 compared to the value 6 of Italy.

4.1. Correlation between some BLI aggregates

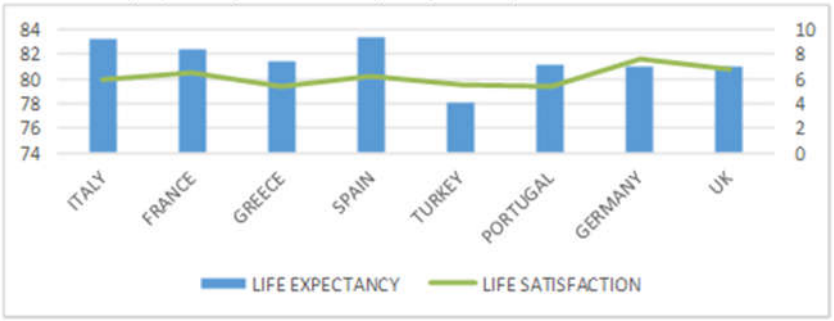
After analysing the data on some aggregates that make up the better life index, it is possible to identify the correlation that exists between some factors, such as income, health and the level of life satisfaction. Life Satisfaction is related to family relationships, health, quality of life, wealth and heritage level, but also confidence in governance. If we consider the data concerning the level of life satisfaction of various countries, all of them covering the same period, it can be affirmed that countries with high average national incomes, consequently, have a higher life satisfaction score.

Figure 2 – *Level of Life satisfaction in relationship to the GDP per capita.*



Source: own elaboration on Word Bank data 2019.

Figure 3 – *Trend of life satisfaction and life expectancy level.*



Source: own elaboration on Word Bank data 2019.

Figure 2 shows the data of various countries (France, Germany, Greece, Italy, United Kingdom, Turkey, Portugal and Spain) with different economic and social conditions expressed from the GDP per capita. In the axes of the ordinate, the levels of satisfaction are reported, on a scale from 0 to 10 for each individual country examined, while in the axes of the abscised are reported the GDP per capita. As can

be seen from the graph, income and satisfaction are a combination that vary in the same direction. In fact, Germany, UK e France which have a GDP per capita of 45.229,25$, 39.753,24$ and 38.605,67$ respectively, they show a very high level of life satisfaction equal to 7.7; 7.1 and 6.64. This level is lower than in Spain and Greece which in 2018 had a GDP of 34.272,36 and 27.936,9. While Italy with a GDP of 35220,08 has a level of satisfaction of 6.2. Similar data show Spain Greece and Portugal where the Life satisfaction index and GDP per capita is lower compare to the other European country.

Another factor that has a considerable influence on the level of life satisfaction is the state of state of health of citizens. Figure 3 shows a positive correlation between life expectancy and satisfaction levels. In fact, the people who live longer affirm to be satisfied. In other words, the level of satisfaction is on the increase in countries with the lowest mortality rates. The analysis of the data shows that the level of well-being varies according to both socio-economic and demographic differences

5. Conclusions

In the present work we tried to evaluate well-being and sustainable development in Italy and in the main partner countries of the European Union, such as France, Germany, Spain and Greece, using both complementary and integrative indices to the GDP. In this perspective, the HDI, the IHDI and the Better Life Index have been analysed; all these indices allow to amplify the traditional economic analysis including both environmental and social factors, allowing a more efficient use of resources, but also to come up with new policies aimed at improving the well-being of the population. The complementary indices, expanding the traditional information base underlying the measurement of GDP, make it possible to increase the qualitative and quantitative aspect of the information, providing disaggregated data useful for making decisions and carrying out the related general planning activities on a country's environmental and social policies.

In this paper, the use of different indices has been emphasized compared to traditional development indicators, which merely take into account the aggregation of simple economic indicators. In this perspective, the IHDI and the Better Life Index provide a wide perspective to evaluate the policy options considering other factors through which it is possible to arrive at a more complete framework of the well-being of a population, compared to what is not possible to do using GDP as the only indicator of surveying. Their application is useful in highlighting the social benefits of policies such as increasing investment in education, increasing the minimum wage.

Starting a process of measuring well-being and using indicators that allow to highlight the variations related to the multiplicity of aspects that affect the concept of well-being, is relevant for the public administration sector, for economic operators and policy makers, as it makes possible the knowledge of information previously not determinable.

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SUMMARY

Social Indicators to measure the well-being of the population. Benchmarking Countries

The issue of the inadequacy of GDP as an indicator of sustainable economic well-being has been the subject of political and economic debate for years. The most relevant literature on the subject focuses on the correlation between GDP and the main elements of human development.

Amromin (2018), Ostry et al. (2014) argue that a high degree of equity facilitates GDP growth in the long term, on the other hand, Maibom and Andersen (2016) affirm that uncontrolled and rapid GDP growth causes inequalities and inequities.

In this work, a selection of summary measures used in literature was considered to compare: the Human Development Index (HDI), which aims to go beyond the concept of economic growth and GDP, to allow the social field to be integrated with the economic dimension by evaluating three factors: longevity, level of education and quality of life standard; the Better Life Index, made up of 11 indicators, gives importance to the concept of "sustainability of well-being"; the Genuine Progress Indicator (GPI) measures the increase in quality of life by taking into account the production of goods and services that do not originate a market transaction, such as volunteering, domestic work and thus balancing the value of private consumption by considering inequalities in the distribution of income. GDP, in fact, indicating the growth of a country in quantitative terms, is not very consistent with the concept of "sustainable economic well-being" that has qualitative nature, so we need a set of indicators that take into account social and environmental factors. In this context, the objective of this work has been to explain how the logic of strict measurement of GDP has been abandoned through the determination of aggregated welfare indices.

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