How to measure happiness?
From GDP to SSWBB: subjective sustainable well-being in the Italian public finance cycle

February 2018

*Satisfaction, bliss, quality-of-life, self-realization: there is an ongoing international debate, which started some time ago, on **whether GDP should be ousted as the sole indicator of well-being.** The benchmarks on which the progress of a society can be evaluated should not be solely economic. This is demonstrated by the World Bank's per capita GDP classifications: in 2017 Italy was among 16% of the most prosperous countries, but ranked only 48th (out of 155) in the World Happiness Report. Briefly, given parity of GDP, by comparison with other countries, Italy is lacking in certain "happiness factors".*

*But what is the relationship between GDP and happiness? And how can the well-being of citizens be measured? A set of indicators, known as SDG (Sustainable Development Goals), which "go beyond GDP", has been developed on international level. **Italy is at the forefront in this process: it is the first country which has officially accorded subjective sustainable well-being (SSWB) a role in the implementation and monitoring of public policies.***

The starting point

Italy is the first country which, by linking subjective sustainable well-being indicators to economic and budgetary planning, created implementation and monitoring of public policies. **In 2016,** with the Budget Reform Act no. 163, **SSWB indicators were first recognized in regulations and included in Government economic planning documents.**

Figure 1. People who declare themselves to be "highly satisfied" or "moderately satisfied" with their lives (in percentage terms)
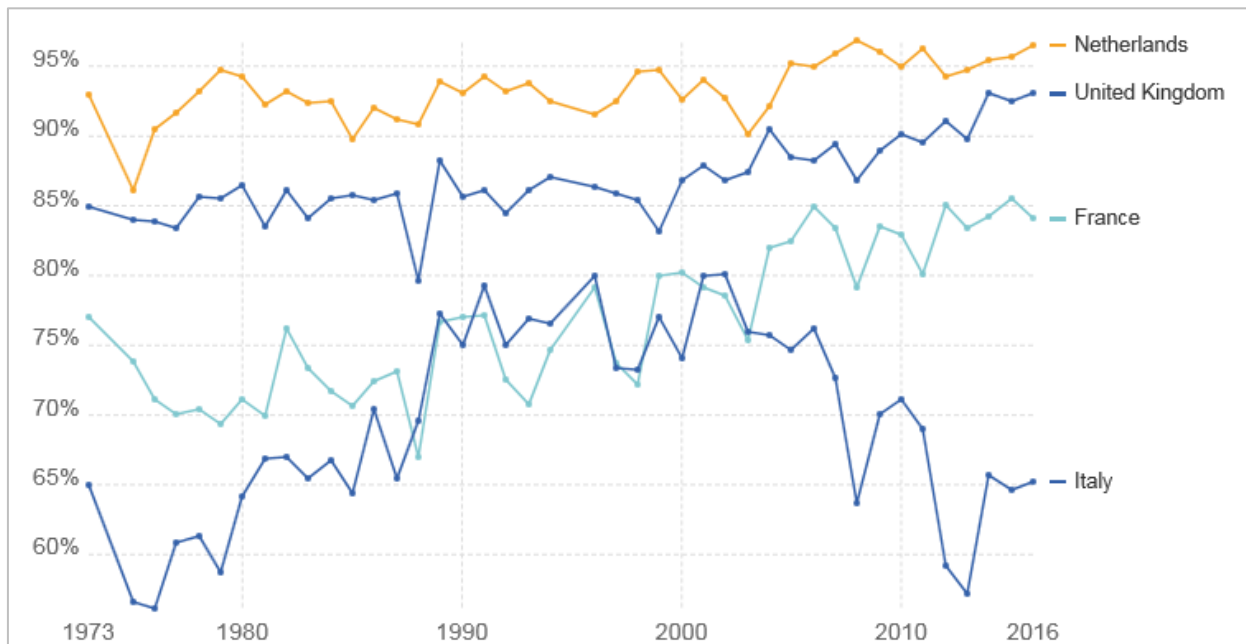
Source: OurWorldInData.org based on Eurobarometer survey of 2017.

Beyond GDP

In the 2017 World Happiness Report, Italy was ranked 48th out of the 155 countries surveyed (immediately behind Uzbekistan and Ecuador), far behind all the leading European countries and only just in front of Algeria: **it was among 31% out of the happiest countries in the world.** In the World's Bank 2017 per capita GDP classifications, Italy was ranked 30th out of the 187 countries surveyed, **and included in 16% of the most prosperous countries.**

This indicates that, given parity of GDP, other "happiness" factors are missing in Italy, more than elsewhere. Two variables in particular are having a negative impact: low "freedom to make life choices" and **"corruption perception".** These factors may indicate an excessive level of authoritarianism, formalism, poor transparency in selection mechanisms and inefficiency in allocation of the labor factor. **The graphics show a strong correlation between "life satisfaction" and GDP and a sharp fall in life satisfaction in Italy in recent years.**

Analysis

Italy is at the forefront in introducing to public decision-making processes aspects of the well-being of citizens which "go beyond GDP".

The first significant experiment involving the measurement of welfare by public bodies has been started in late 2010 by the ISTAT [Italian Statistical Institute] and the CNEL [Italian Economy and Labor Council].

In 2016 SSWB indicators were first recognized in regulations and included in Government economic planning documents.

Italy is the first country which, by linking subjective sustainable well-being indicators to economic and budgetary planning, created implementation and monitoring of public policies. On the basis of data supplied by the

ISTAT, the Economy and Finance Minister is required to prepare two documents a year:

- **an Annex to the EFD** [Economic and Financial Document] indicating the trend of SSWB over the last three years and estimated future trends in view of the impact of key public policies over the next three years
- **a Parliament report**, to be submitted by 15th of February each year, on the effects of the Budget Act on SSWB indicators over the current three-year period.

The Ministerial Decree published in the Official Gazette on 15 November 2017 pointed out **12 SSWB indicators** to be used. They will be introduced in full in the 2018 EFD.

How the welfare of Italians will be measured from 2018?

1. Average disposable income, adjusted per capita
2. Disposable income inequality index
3. Absolute poverty index
4. Life expectancy in good health at birth
5. Excess weight
6. Drop-out from education and training systems
7. Rate of non-participation at work, broken down according to gender
8. Ratio between the employment rate of women aged 25-49 with children of preschool age and childless women
9. Predatory crime index
10. Efficiency of civil justice index
11. Emissions of CO2 and other climate-altering gases
12. Unauthorized building index.

In detail. The four SSWB indicators introduced in 2017

The Government has decided, experimentally, to introduce a first group of indicators in the 2017 EFD: a) an inequality index, b) the adjusted average disposable income, c) rate of non-participation in work and d) emissions of CO2 and other climate-altering gases. The other eight indicators will be introduced at the beginning of the 2018 public finance cycle.

Disposable income inequality index

The income inequality index used is given by the 'interquartile' range between the total equivalent income received by 20% of the population with a higher income and income received by 20% of the population with a lower income (expressed in euros).

A ratio which indicates that the equivalent income of 20% of the population with a higher income is five times the income received by 20% of the population with a low income.

Table 1 - Comparison between ISTAT and MEF [Ministry of Economy and Finance] disposable income inequality indices

SSWB Indicators	Final Year Figure						
	2010	2011	2012	2013	2014	2015	2016
Disposable income inequality index - **ISTAT**	5,4	5,7	5,6	5,8	5,8	5,8	6,3
Disposable income inequality index - **MEF**					6,8	6,4	6,4

Source: MEF figures based on ISTAT data.

Annual average disposable income adjusted per capita

The annual average disposable income adjusted per capita is given by the ratio between the adjusted disposable income of households (that is, including the value of services provided by public and non-profit making bodies) and the total number of residents, expressed in thousands of euro.

Table 2 - Annual average disposable income adjusted per capita (2004-2016)

	Household sector					Population national account	Gross per capita income (in euro)
	Gross disposable income	Social transfers in kind received	From public bodies	From non-profit-making bodies for households	Adjusted disposable income		
	(1)	(2)=(3)+(4)	(3)	(4)	(5)=(1)+(2)	(6)	(7)=(5)/(6)
2004	992.472	166.444	159.210	7.234	1.158.916	57.845	20.035
2005	1.020.188	176.973	169.397	7.576	1.197.161	58.191	20.573
2006	1.057.825	185.359	177.077	8.282	1.243.184	58.428	21.277
2007	1.097.286	189.112	180.614	8.498	1.286.398	58.787	21.882
2008	1.117.911	194.555	186.411	8.144	1.312.466	59.242	22.154
2009	1.091.167	199.585	190.896	8.689	1.290.752	59.578	21.665
2010	1.089.980	200.914	192.135	8.779	1.290.894	59.830	21.576
2011	1.118.288	196.148	187.329	8.819	1.314.436	60.060	21.885
2012	1.087.676	192.982	184.324	8.658	1.280.658	60.339	21.224
2013	1.092.134	192.330	183.419	8.911	1.284.464	60.646	21.180
2014	1.097.048	193.848	184.384	9.464	1.290.896	60.789	21.236
2015	1.105.634	194.764	185.062	9.702	1.300.398	60.731	21.413
2016	1.121.526	195.510	185.860	9.650	1.317.036	60.623	21.725

Source: MEF figures based on ISTAT data.

Rate of non-participation in the labor market

The rate of non-participation in work has been selected to represent different aspects of work and work-life balance, and indicates the difference between the total number of unemployed people, potential labor force at the age of 15 to74 years old, and the actual one. Unlike the participation rate usually surveyed in the EFD, this indicator includes the discouragement factor. The figure indicates the number of labor forces out of the 100 potential not participating.

Table 3 – Rate of non-participation in the labor market (2004-2016)

Rate of non-participation (numerator/denominator)												
2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
15,5	15,3	14,5	14,9	15,6	16,5	17,5	17,9	20,0	21,7	22,9	22,5	21,6
Denominator												
Denominator (employed+unemployed+PLF not seeking work but available for work)												
2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
26.409	26.388	26.546	26.837	27.301	27.123	27.255	27.459	28.138	28.266	28.802	28.879	28.926
Numerator												
Numerator (unemployed+PLF not seeking work but available for work)												
2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
4.096	4.026	3.837	3.991	4.262	4.473	4.783	4.913	5.627	6.130	6.591	6.484	6.248

Source: MEF figures based on ISTAT data.

Emissions of CO2 and other climate-changing gases

The econometric model estimates, at sector level, the ratios between emissions of CO2 and other climate-altering gases to added value, oil prices and the resident population (expressed as tons of CO2 equivalent per inhabitant).

Table 4 - Greenhouse effect (tons of CO_2 equivalent)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Total emissions Namea (x 1.000)	596.963	596.202	587.084	577.519	568.824	511.192	521.618
Population	57.844,80	58.190,60	58.428,40	58.787,40	59.241,90	59.578,30	59.829,60
Per capita emissions	10,30	10,20	10,00	9,80	9,60	8,60	8,70

	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Total emissions Namea (x 1.000)	506.165	478.320	448.370	426.079	439.569	446.183
Population	60.060,00	60.339,10	60.646,40	60.789,10	60.730,60	60.622,50
Per capita emissions	8,40	7,90	7,40	7,00	7,20	7,40

Source: MEF figures based on ISTAT data.

In detail. The eight SSWB indicators introduced in 2018

The indicators which follow, added to the four indicators first monitored in the 2017 EFD, will be introduced in the EFD in April 2018.

Absolute poverty index

This index is calculated in percentage of persons belonging to households with an overall expenditure on consumption below the absolute poverty threshold, of the total of residents. Absolute poverty thresholds are differentiated according to the number and age bracket of family-members, the macro-area and size of the municipality of residence, and reflect regional differences in the cost of living.

Table 5 - Individuals in a condition of absolute poverty according to geographic distribution 2005-2016 (figures expressed as %)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
North	2,3	2,2	2,6	2,7	3,1	3,5	3,4	5,5	5,5	5,7	6,7	6,7
Central	2,7	2,6	2,8	2,8	2,1	4,5	4,0	4,6	5,9	5,5	5,6	7,3
South	5,0	3,8	3,8	5,2	6,0	4,8	6,1	7,3	10,6	9,0	10,0	9,8
Italy	**3,3**	**2,9**	**3,1**	**3,6**	**3,9**	**4,2**	**4,4**	**5,9**	**7,3**	**6,8**	**7,6**	**7,9**

Source: ISTAT, Survey of household expenditure.

Life expectancy in good health at birth

This indicator is defined as the average number of years of a baby born in the benchmark year with expectancy to live in good health, on the assumption that the risks of disease and death at various ages remain constant over the period of time. The indicator makes it possible to assess the quality of survival, an aspect of particular relevance in the present period of health and demographic transition, characterized by an ageing population and the spread of chronic degenerative pathologies.

Table 6 - Life expectancy in good health at birth (average number of years)

	2009	2010	2011	2012	2013	2014	2015	2016
North	57,4	59,1	59,5	59,6	60,0	59,4	59,6	60,5
Central	56,9	58,4	58,3	59,5	58,6	59,3	58,8	58,3
South	54,5	55,1	56,0	56,2	55,4	55,7	56,0	56,6
Italy	**56,4**	**57,7**	**58,2**	**58,5**	**58,2**	**58,2**	**58,3**	**58,8**

Sources: ISTAT, Mortality tables of the Italian population and Survey on aspects of daily life.

Excess weight

Excess weight is a major risk factor for health, associated with cerebral and cardiovascular diseases and diseases of the musculoskeletal system, diabetes, hypertension, cancer, liver disease and cholestasis. It has therefore been decided to use the standard proportion of people over the age of 18 who are overweight or obese of a total number of over 18 years old.

Table 7 - Standard group of people over the age of 18 who are overweight or obese according to gender and geographic distribution (percentage values)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Males												
North	50,9	51,6	51,3	52,9	53,6	51,9	53,3	52,1	51,5	52,0	50,8	52,3
Central	53,1	53,6	53,3	53,4	56,0	53,6	53,8	53,8	53,9	52,6	53,3	52,0
South	59,9	58,6	60,9	60,0	60,6	61,0	60,9	60,1	60,2	60,0	58,5	60,0
Italy	**54,5**	**54,4**	**55,0**	**55,5**	**56,5**	**55,4**	**56,0**	**55,2**	**55,0**	**54,9**	**54,0**	**54,9**
Females												
North	31,4	32,7	32,4	32,1	33,1	33,2	32,4	32,8	31,9	33,9	31,1	32,3
Central	35,4	34,5	34,6	34,5	34,2	35,9	34,1	33,8	34,9	34,2	34,3	33,8
South	42,2	42,6	42,7	41,2	42,0	41,1	39,8	41,6	40,6	41,6	39,8	39,9
Italy	**36,0**	**36,5**	**36,5**	**35,7**	**36,4**	**36,5**	**35,3**	**36,1**	**35,5**	**36,6**	**34,7**	**35,2**
Males and females												
North	40,9	41,9	41,6	42,2	43,1	42,4	42,6	42,2	41,5	42,7	40,7	42,1
Central	43,9	43,7	43,6	43,6	44,8	44,4	43,6	43,4	44,1	43,0	43,4	42,6
South	50,8	50,3	51,5	50,3	51,0	50,8	50,0	50,6	50,2	50,6	48,9	49,7
Italy	**45,0**	**45,2**	**45,5**	**45,3**	**46,2**	**45,7**	**45,4**	**45,3**	**45,0**	**45,5**	**44,1**	**44,8**

Source: ISTAT, Survey on aspects of daily life.

Drop-outs from the education and training systems

This indicator is a target measure of the Europe's 2020 strategy, which aims to reduce the proportion of drop-outs from education below 10% by 2020 across the Europe (national target: 16%) and is calculated as a percentage of the population at the age from 18 to 24-year-old not attending education or training courses.

Table 8 –People at the aged of 18 to 24 who have only completed intermediate-level education and are not attending a training program, according to gender and geographic distribution (percentage value

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Males and females													
North	20,8	19,8	17,6	16,5	17,4	17,7	16,6	15,7	15,1	14,1	12,0	11,7	10,6
Central	17,3	16,0	14,3	13,5	14,3	13,2	14,6	15,3	14,3	13,5	12,4	11,5	10,8
South	27,6	26,7	25,4	24,7	23,7	22,8	22,3	20,9	20,8	21,1	19,3	19,2	18,4
Italy	**23,1**	**22,1**	**20,4**	**19,5**	**19,6**	**19,1**	**18,6**	**17,8**	**17,3**	**16,8**	**15,0**	**14,7**	**13,8**

Source: ISTAT, Survey of labor forces.

Ratio between the employment rates of women at the age of 25 to 49, with preschool age children and childless women

This indicator is an indirect measure of the adequacy of welfare services designed to achieve a balance between work and family commitments.

Table 9 - Ratio between the employment rates of women at the age of 25 to 49, with at least one preschool age child and childless women according to geographic distribution

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
North	78,0	77,4	78,5	79,3	79,3	81,3	79,7	78,9	80,4	80,3	81,6	83,3	80.6
Central	76,2	77,5	76,6	77,1	79,1	80,1	78,9	77,6	79,8	82,6	85,1	82,7	83.7
South	65,2	67,3	66,3	64,0	66,1	64,2	62,0	67,5	71,6	69,8	73,4	73,5	71.3
Italy	**69,5**	**69,7**	**70,6**	**70,9**	**72,4**	**73,3**	**71,7**	**72,4**	**75,1**	**75,4**	**77,5**	**77,8**	**76,0**

Sources: ISTAT, Survey of labor forces.

Predatory crime index

This indicator is calculated on the basis of the number of victims of burglaries at home, pickpocketing and robberies per 1,000 inhabitants.

Table 10 - Rate of predatory crime: number of victims of burglaries at home, pickpocketing and robberies (per 1,000 inhabitants)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Italy	15,2	16,8	20,3	22,1	18,9	17,3	18,5	22,6	25,1	27,1	27,2	25,3

Source: Figures arrived on the basis of police reports data (Home Office) and the survey on public safety (ISTAT).
Note: This indicator is calculated on the basis of data from reported crimes based on police statistics (source: Home Office) adjusted to take into account the average proportion of victims of hidden crimes, according to the type of crime, derived from Surveys on public safety (ISTAT). The number of victims of burglaries at home has been calculated by multiplying, on each year, the average household size by the number of reports of burglaries at home.

Civil justice efficiency index

The data takes account of ordinary first and second instance fact-finding proceedings (litigious or otherwise) for the SICID area (District Civil Litigation Database), excluding the functions of the probate judge and preliminary special assessments in the matter of welfare.

Table 11 - Average number of days taken to settle proceedings before ordinary courts

	2012	2013	2014	2015	2016
North	263	254	263	274	258
Central	379	392	423	427	414
South	684	693	744	719	682
Italy	**461**	**466**	**494**	**482**	**460**

Source: Organization of the Judiciary, personnel and services – General Department of Statistics and Organizational Analysis.
Note: Figures updated in March 2017.
Civil sector - SICID area excluding functions of the probate judge and preliminary special assessments in the matter of welfare.

Unauthorized building index

Indicates a measure of damage to the landscape. The collective well-being and cohesion of local community dependents on a proper balance between public and private interests.

Table 12 - Index of unauthorized building per region and geographic distribution (unauthorized constructions during the year out of 100 authorized constructions)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
North	5,0	4,6	3,5	3,2	3,2	3,5	4,2	4,6	4,9	5,6	6,0	6,7	6,4
Central	10,1	9,3	7,6	7,0	6,5	7,4	8,1	9,7	10,8	13,1	16,7	19,0	19,2
South	34,9	31,2	26,7	24,0	24,6	27,8	30,6	36,9	35,9	35,0	40,4	47,8	48,2
Italy	**13,0**	**11,9**	**9,9**	**9,0**	**9,4**	**10,5**	**12,2**	**13,9**	**14,2**	**15,2**	**17,6**	**19,9**	**19,6**

Source: Centre for Economic and Social Market Research for Building and the Territory (CRESME).

Conclusions

The introduction of SSWB to the budgetary cycle represents a **step change** towards **a more in-depth analysis of the satisfaction of citizens**. It is a significant innovation which positions Italy at the forefront internationally.

The exercise is now beginning to leave behind the "experimental stage", but it is still a courageous work in progress, evolving gradually through the process of institution change, trials and errors made. It is necessary to refine the choices, evaluate its solidity, extend their scope and in general terms to monitor the efficacy by strengthening interdepartmental support procedures.

The choice of indicators cannot be regarded as definitive. As suggested by the "Committee for indicators of subjective and sustainable well-being", it would be useful to undertake a regular review of the indicators and a disaggregation (according to gender, age, geographic area, professional status and income, etc.) to take in account of the heterogeneous nature of the phenomena which the policies wish to confront. For a country such as Italy, whose well-being levels differ substantially in different regions, **it would be appropriate to present indicators on a regional basis (or at least on the basis of macro areas).**

Looking-forward, **other indicators could be taken into consideration, including indicators of general well-being based on periodic "institutional" surveys**. Measurement of life satisfaction and

happiness is not an easy task, but technology can assist through more direct contact, for example social contact between citizens and Government authorities. Other indicators could be introduced, for example indicators of income distribution and language handicap of disadvantaged categories, indicators of quality of the local public transport, cultural heritage, tourism and health.

Finally, it would be appropriate to consider international comparative analyses to determine "life satisfaction" (the *World Happiness Report* and other academic studies) which highlight a number of deficiencies **in Italy, which are also potential sources of increased well-being**: for example, low "freedom to make life choices", poor distribution of human capital in Government authorities and elsewhere, the NEET crisis [Not in Employment, Education or Training], such as young people neither working or studying, associated to different degrees with the new phenomenon of alienation.

Observations

Some SSWB indicators are affected by short-term economic policy measures, whereas others only in the long -term. **It is perhaps necessary to reflect whether it would be more appropriate to undertake rather than annually, an assessment of trends every five years**.

Should be advised to include SSWB exercise into budgetary cycle when fully completed in February/March and no in October's Budget Act having no detailed information on the contents of the measure to be published in the EFD in April

Report to Parliament would be therefore an exhaustive exercise, containing new updated indicators (the ISTAT will publish new data on SSWB in December and national accounting figures of the previous year in March), the menu of the Budget Act, in its final form and hence is to be taken into full account, and finally the availability of a macroeconomic framework consistent with the Update to the EFD.

Parliament should draw out benefits of the use of the conclusions emerging from discussion of the Parliament Report, for policy purposes.