

MEASURING SUSTAINABLE ECONOMIC GROWTH

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Abstract

Within the context in which worldwide concerns are oriented towards the rational and efficient usage of natural resources, on the decrease of the impact produced by industrialization and technological upgrading over the environment and the increase of living standards, it can be said that the concept of sustainable development has become an ever-present objective within political strategies as well as within international organizations- a thing which can be seen via their adopted strategies. For the 2030 Agenda, sustainable development encourages the delimitation of the economic growth from the negative impact it has over the environment and society at large. Eurostat monitors the implementation objectives of such a sustainable development at European Union Member States' level, of which, a specific interest is awarded to the attention given to the proposed sustainable economic growth and the set of indicators which can better illustrate the registered progress. Reinvigorating economic growth and ensuring its resilience and sustainability are key as the world emerges from the Covid-19 pandemic. The paper questions the relevance of the main indicator used in measuring sustainable economic growth and reviews alternative ways of measuring. The study concluded the necessity to adapt such measurement indicators to national conditions and to the priorities encountered by each economy, founding the premises for the development of new appropriate indicators to measure progress.

Keywords: sustainable economic growth, alternative indicators, policymaking, Gross Domestic Product, Beyond GDP.

1. Introduction

The global economy faces multiple challenges, such as globalization, digitalisation, environmental degradation, population aging, poverty eradication, which has led in recent years to rethinking development strategies and adopting reforms to ensure sustainable development for future generations. The current pandemic context is putting even more pressure on governments to find viable solutions that provide welfare and effectively counteract the shocks caused by crises.

Achieving sustainable growth is a major goal for all governments in the world, but its monitoring is based on inconsistent policies. Following the financial crisis of 2008, efforts at EU level have been geared towards sustainable economic growth, with one of the effects being to reduce the long-term disparities between Member States in terms of GDP per capita.

This paper focuses on sustainable economic growth and the aspects generated by its measurement. The paper begins with the presentation of sustainable economic growth in the context of the 2030 Agenda for Sustainable Development, then addresses problematic issues related to measurement, which come from the limitations of GDP as a measure of sustainable economic well-being. The last part addresses alternative indicators used to measure sustainable economic growth and which have gained popularity due to the calculation methodology and the availability of data, followed by the conclusions resulting from the documentation.

2. Sustainable economic growth under the 2030 Agenda

The main challenge in achieving sustainable economic growth is to find solutions that balance the desire of the environmental society with the economic burden of industry. According to Porter and colleagues (1995), the notion of an inevitable struggle between ecology and economics stems from a static vision of environmental regulation, in which technology, products, processes and customer needs are fixed, but the new paradigm of international competitiveness is a dynamic one, based on innovation. Supporting its claims is based on the argument that properly designed environmental standards can trigger innovations

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that can partially or more than fully offset the costs of complying with them, by improving the productivity with which resources are used and increasing competitiveness.

Sustainable economic growth refers as a concept to that growth or development that reduces the impact of economic activity on the environment. The sustainability of economic growth can be achieved by ensuring the sustainability of production and consumption, increasing efficiency in the use of material resources, revitalizing high value-added manufacturing industries and relative balance with the services sector, which has experienced rapid development in recent decades.

The 2030 Agenda is citizen-oriented and aims to improve people's quality of life, with the basic principle being "no one will be left behind" (United Nations, 2015). The 2030 Agenda for Sustainable Development includes 17 sustainable development goals and 169 targets and was adopted in 2015 by heads of state and government at a special UN summit, as a result of a lengthy international review process, to find solutions to eradicate poverty and achieve sustainable development.

Sustainable development delimits economic growth from the negative impact on the environment, discouraging irresponsible economic growth. The 2030 Agenda focuses on three pillars - economic, social and environmental, defined in the well-known Brundtland Report (1987).

The eighth goal of sustainable development "Decent Work and Growth" in the 2030 Agenda for Sustainable Development has the direct attribute to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (United Nations, 2015).

The European Commission developed in 2017 a set of benchmarks to monitor the SDGs in the 2030 Agenda, which are annually reviewable, to be in line with issued and changing policies and to increase the statistical quality of the set of indicators.

It is noted that, in various reports and communications of European and international organizations, the paradigm of sustainable economic growth is most often related to SDG 8 and GDP measurement. There are complex linkages between the goal of sustainable growth and the other SDGs, so that the strict delimitation of sustainable growth from the other SDGs is not feasible. There are connections and interconnections of different intensity between the SDGs, the SDGs being indivisible and integrated according to the 2030 Agenda.

From the set of EU SDGs, 67 indicators out of a total of 102 global indicators are aligned with the UN list, noting that UN indicators are selected for global reporting and are not always relevant to the EU. (EC, 2021)

The set of indicators that illustrates the progress made towards achieving the goal of sustainable growth comprises six main indicators (Table no. 1). It is observed that there are interferences between indicators of other objectives associated with economic growth, namely SDG 1, SDG 5, SDG 12.

Table no. 1 Indicators measuring SDG 8, EU

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all			
Code	Multipurpose indicators	Indicator name	Frequency of data collection
8_10	-	Real GDP per capita	Every year
8_11	-	Investment share of GDP	Every year
8_20	SDG 10	Young people neither in employment nor in education and training	Every year
8_30	-	Employment rate	Every year
8_40	-	Long-term unemployment rate	Every year
8_60	SDG 3	People killed in accidents at work	Every year

Multipurpose indicators: Supplementary indicators of other goals which complement the monitoring of this goal			
01_41		In work at-risk-of-poverty rate	Every year
05_40		Inactive population due to caring responsibilities	Every year
12_20		Resource productivity and domestic material consumption (DMC)	Every year

Source: CE, EU SDG Indicator set 2021, Result of the review in preparation of the 2021 edition of the EU SDG monitoring report, 2021

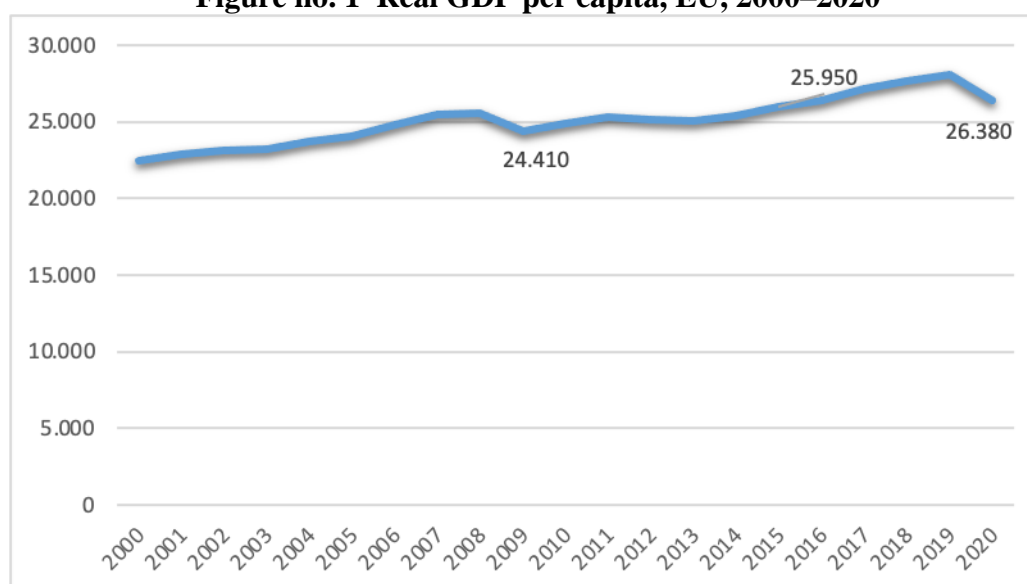
The European Union monitors and analyzes in SDG 8 trends in the areas of sustainable growth, employment and decent work. Despite the COVID 19 pandemic, which has curbed positive growth trends, the EU is reporting some progress on sustainable economic growth over the last few years, the overall employment situation and working conditions (EC, 2021).

The target set to support per capita economic growth in line with national, global (UN, EU) circumstances is at least 7% GDP growth per year in the least developed countries. It follows that there is no indication of the pace of growth that developed countries should aim for, as some forms of GDP growth may adversely affect the quality of the environment, health and social relations and could further exacerbate inequalities (Coscieme L and al, 2020).

Real GDP per capita in the EU grew strongly and continuously by 2.0% per year, on average, between 2014 and 2019, with both private consumption and investment being the key drivers of economic expansion. The economy has been hit by the global COVID-19 pandemic, which led to a 6.2% contraction in real GDP in 2020 compared to 2019. This was the sharpest decline observed since at least the mid-1990s, surpassing the record previous decrease of 4.6% in 2009, following the financial crisis from 2007 to 2008 (EU monitoring report, 2021, p.183).

Following the 2020 recession, real GDP per capita in the EU was EUR 26,380, which was 9.0% higher than in 2005 and just above 2015 (EUR 25,950) (Figure no. 1).

Figure no. 1 Real GDP per capita, EU, 2000–2020



Compound annual growth rate (CAGR): 0.6% per year in the period 2005–2020; 0.2% per year in the period 2015–2020

Source: Eurostat data; author's processing

3. Challenges and limitations in measuring sustainable growth

The effort to achieve a sustainable and competitive economy, by streamlining the allocation and consumption of resources and social inclusion, must be supported by the existence of an adequate system of indicators to measure this process. Indicators are needed to measure progress towards achieving sustainability goals. The issue of identifying appropriate indicators to monitor sustainable economic growth has been addressed by researchers and practitioners in many studies, which have highlighted the limitations of GDP.

Economic growth can be defined as "a measure of the positive change in GDP in an economy" (Howitt, 2008). GDP growth is the main economic dimension, while greenhouse gas emissions and renewable energy consumption are the size of the environment, and corruption is the social dimension of sustainable development.

The OECD defines GDP as "an aggregate measure of production equal to the sum of the gross values added of all resident and institutional units engaged in production and services (plus any taxes, and minus any subsidies, on products not included in the value of their outputs)" (OECD Glossary).

GDP is the best known and most widely used indicator of economic activity, but the characteristics of contemporary society changed from the historical ones, when Kuznets developed the modern concept of GDP for the US Congress report in 1934 (Kuznets, 1934), becoming after the conference Bretton Woods since 1944 the main instrument for measuring a country's economy. By dividing the GDP by the size of the population, GDP per capita is obtained, an indicator that reflects the average standard of living of a person in a country.

Given the long period of applicability and the wide availability of statistical data, GDP has become a reliable tool for comparing economic performance both over time and between countries or regions. The quarterly publication of data has given this indicator an additional advantage, becoming a useful tool in developing short-term economic policies.

In an OECD report (2021), the Going for Growth framework is based on breaking down GDP growth into labor productivity and labor utilisation, in order to provide a deeper understanding of the performance of the economy. One of the OECD recommendations is to revitalize productivity growth for long-term income growth.

Pursuing quality growth, the OECD identifies in the Going for Growth Report (2019) 5 priority national reforms to raise long-term living standards that combine quantitative analysis and specific expertise to identify each country's priority needs (Figure 2).

Figure no. 2 Top 5 national reform priorities



Source: OECD, "Economic Policy Reforms 2019: Going for growth"

Each individual economy needs to identify its reform priorities on the basis of a mixed approach that combines qualitative assessment with quantitative assessment. The OECD draws attention to the importance of a detailed examination of scoreboard with indicators that include, for each of the growth dimensions (growth, inclusion and environmental sustainability), the best available outcome and matching policy indicators in pairs based on economic evidence monitoring (OECD, 2021).

The path of sustainable economic growth is one that is dynamically efficient and does not decrease over time (Stavins and al., 2002), and GDP, although not an indicator to measure economic and social well-being, remains the most widely used indicator of monitoring sustainable economic growth.

Robert F. Kennedy once said that a country's gross domestic product measures "everything except that which makes life worthwhile" (Constanza, 2014).

The issue of the relevance of the GDP indicator is part of the topics of debate both in academia and at the political level. Although commonly used as an indicator of well-being, GDP reflects output expressed in monetary terms as a measure of economic performance. The lack of capacity of this indicator to capture the multidimensional nature of sustainable economic growth is obvious, as it does not take into account the environmental and social costs of increasing production, does not reflect social and territorial inequalities and may mask certain economic problems, such as of the COVID-19 pandemic.

Some authors have addressed the conditions under which long-term economic growth can be sustainable, assessing the costs and benefits of growth. For example, Islam et al. (2004) analyzed the interactions between key economic, environmental and social elements, and the empirical results indicated that long-term economic growth is unsustainable, with its costs outweighing the benefits of environmental damage. The model proposed by them aims at an optimal growth, in conditions of reducing pollution.

In attempts to destabilize GDP, indicators for measuring economic progress have been divided into three groups: the first group adjusts economic measures to reflect social and environmental factors, the second group targets subjective welfare measures extracted from surveys, and the third includes weighted composite indicators of well-being, including housing, life expectancy, leisure and democratic commitment (Constanza, 2014).

4. Alternative indicators in measuring sustainable economic growth

The important role of statistical indicators is known, which make it possible to design and evaluate policies that promote the progress of society and influence the functioning of economies.

Stiglitz and co-workers emphasize this idea very well in "What we measure affects what we do", the risk of an erroneous measurement can be translated into distorted decisions (Stiglitz Report 2009, p.7). Thus, the choices between protecting the environment and promoting GDP can be false choices, once environmental degradation is properly included in measuring economic performance.

Assessing the well-being of citizens through indicators that take into account social aspects, such as health, education, is increasingly used to complement economic measures. In this regard, international efforts intensified in 2007, together with the "Beyond GDP" conference, organized in collaboration with the Club of Rome, the OECD and the World Wide Fund for Nature (WWF).

Beyond-GDP indicators, which aim to supplement or replace GDP, are of growing interest at national and international level. The European Parliament supports the inadequacy of GDP and promotes the use of alternative indicators in policies, which can improve monitoring and guide policies towards sustainable economic, social and environmental goals.

A Beyond GDP set with a limited number of indicators is perceived as a compromise between the need for a small number of indicators and their statistical robustness, influenced by the difficulty of aggregating multiple dimensions into a single indicator (Chancel and al., 2014).

For example, the set of sustainable development indicators is not perceived as an easy-to-understand indicator Beyond GDP, has little coverage in political debates and in the media, and is not concretely mobilized to assess public policies.

National and regional authorities, international organizations, NGOs, statistical institutes, etc. they have developed a variety of alternative indicators to GDP. They can be divided according to the calculation methodology, taking the form of a single indicator (such as the GINI coefficient, which measures income inequality); a scoreboard - a set of indicators (such as Sustainable Development Indicators); or a composite indicator that comprises several sub-indicators aggregated to a single value (for example, the Human Development Index, which comprises three dimensions - health, education and income) (Widuto 2016).

Regarding the relationship of alternative indices to GDP, they can be seen as replacing, adjusting or supplementing GDP. Indices that replace GDP usually include an income component, those that supplement GDP use dimensions other than income, while those that adjust GDP add and subtract other factors. Examples of "adjustment" indicators include the Genuine Progress Indicator (GPI), Adjusted Net Savings (ANS) and the Sustainable Economic Welfare Index (ISEW). (Widuto 2016)

Economic theory suggests that an appropriate indicator of sustainable economic development requires a focus on the components of national wealth, thus providing a strong argument for including the measure of "genuine savings" (GS) in any economic component of a set of sustainability indicators (Mcgrath, 2020).

The World Bank has operationalized economic theory to provide regularly updated GS estimates for most countries, called Adjusted Net Savings (ANS) (World Bank, 2018).

Another well-known indicator is the Human Development Index (HDI), a composite indicator that takes into account other important elements for human development, beyond economic growth and income (Alkire, 2002). The United Nations Development Program has published HDI annually since 1990, which encompasses information on three dimensions: material living standards, life expectancy, and educational attainment.

Among potential candidates, HDI is considered by far the most prominent indicator of well-being, which assesses not only income capacity but also education and health opportunities. Its popularity lies in the simplicity of construction and its large geographical coverage, which allows comparisons between several countries in terms of welfare over a long period of time (Decanq, 2021).

In 2011 the OECD proposed the Better Life Index (BLI). The OECD selected 11 dimensions of life, which encompass material living conditions (housing, income, and jobs) and quality of life (community, education, environment, governance, health, life satisfaction, safety, and work-life balance) (OECD, 2011).

BLI is insensitive to the way multidimensional well-being is distributed within countries, due to the fact that it is based only on aggregate indicators at the country level (Decanq, 2015).

Another alternative indicator often used is the Genuine Progress Indicator (GPI). While GDP is a measure of current output, GPI is designed to measure the economic well-being generated by economic activity, being a version of the Sustainable Economic Welfare Index (ISEW) first proposed in 1989 (Daly and Cobb, 1989, Kubiszewski, 2013).

Academic practice also offers numerous proposals for complex indicators to replace GDP, as well as empirical studies that may be the subject of further documentation.

5. Conclusions

The use of new indicators requires a consensus on their choice, as well as harmonized methodologies and improved statistical practice at regional and global level. It is noted that the various sets of indicators used at regional or individual level do not replace GDP as an indicator for measuring economic performance, but most often complement it by highlighting the social and environmental dimensions. The indicators that stand out most often are HDI and BLI. Data availability and reliability are crucial, the existence of time series allowing the comparability of results over time. Spatial considerations are important when applying new indicators, in order to avoid facing the same problems as GDP, in particular the concealment of inequalities, the distribution of wealth between different population groups and the disposable income of households living in a region.

Although some countries have adopted Beyond GDP indicators at the political level, there is a slow evolution in terms of their notoriety and applicability in policy-making at the national level. According to the OECD (2019), only a few nations have integrated indicators that measure welfare into public policies (France, Italy : Lois Sas and Budget Reform Law – New Zealand: first “well-being budget” in 2019 – Scotland, Slovenia, Slovakia: Performance framework, national development plan – United Kingdom: range of instruments for public officials).

GDP remains the main tool used in the evaluation of public policies as opposed to the sets of complementary or substitute indicators that have not been mobilized in this way and benefit from poor media coverage. Moreover, the variety of these sets of indicators and different calculation methodologies will not ensure a uniform practice and comparability of results over time.

Obviously, much remains to be done to identify that indicator or set of indicators that will ensure an adequate assessment of sustainable economic growth, in the context where current monitoring of sustainable development is inconsistent. The new set of indicators must be adapted to the national conditions and priorities of each economy, while taking into account key elements of sustainable economic growth that are opposable to each economy. The prerequisites for creating a single comprehensive response to the assessment of sustainable economic growth, including social and environmental costs, are currently low and require accelerating and unifying efforts in the same direction at governmental, regional and global levels.

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