

Mateusz Czech, Katarzyna Czech

Selected measures of welfare in the contemporary world economy and the implementation of the sustainable development strategy in the European Union

Folia Oeconomica Stetinensia 10(18)/1, 142-151

2011

Artykuł został opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej bazhum.muzhp.pl, gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

**SELECTED MEASURES OF WELFARE
IN THE CONTEMPORARY WORLD ECONOMY AND THE IMPLEMENTATION
OF THE SUSTAINABLE DEVELOPMENT STRATEGY IN THE EUROPEAN UNION**

Katarzyna Czech, Ph.D.

*University of Economics of Katowice,
Department of International Economic Relations,
katarzyna.czech@ue.katowice.pl*

Mateusz Czech

*Warsaw School of Economics,
Department of Decision Analysis and Support,
czech.mat@gmail.com*

Received 16 June 2011, Accepted 6 August 2011

Abstract

The principle for an effective management of the national economy is to create long-term development strategy. Taking determined decisions increase the chance of future growth. A necessary condition for an effective change, however, is basing them on sound and well-chosen premises. It is also essential, to continuously monitor progress and adjust actions if necessary. For this purpose, appropriate measures are required. The progressive process of environmental degradation, marginalization of national and ethnic groups, as well as the prospect of running out of energy resources, attracted greater attention to sustainable development. Among the main objectives of the sustainable development strategy in the EU, beside economic welfare, is the protection of the environment, as well as equity and social cohesion. These objectives are convergent with emerging measures of welfare, which in contrast to GDP also include other elements that determine the real welfare of people affected.

Keywords: welfare, sustainable development, economic integration.

JEL classification: F15, F43, E01.

Introduction

The foundation of the an efficient management of a national economy is a long-term development strategy. The ability to take decisive steps allows to increase the chance of a future growth. This economic theory, however, should be seen in the social and political context of a given country. Changes, often desirable from the perspective of a long-term growth, may cause drastic cuts in the short term, which immediately translates into social unrest or dissatisfaction. This was what happened with Margaret Thatcher's reforms in the United Kingdom in the 1980's or the Balcerowicz Plan in Poland in the early 1990's. Currently, we can observe how the governments of the EU member states are trying to create strategies that would help overcome the financial crisis and obtain sustained economic development. The prerequisite for effective changes is the choice of the right premises. It is also essential to constantly monitor progress and review the course of action if necessary. In order to do this, we need reliable measures.

On the other hand, due to environmental degradation, the marginalization of national and ethnic groups, and the prospect of natural resources depletion, more and more emphasis is being put on the complex model of the economic development, most often referred to as sustainable development (SD). Not only does the concept underline the need to counteract negative phenomena faced by present generations, but also indicates the necessity to think about the living conditions of future generations.

This article aims to discuss GDP and the welfare measures that are alternative to GDP and their application in the implementation of the sustainable development strategy (SDS) in the EU. The main thesis is that favorable values of the welfare measures for particular EU countries converge with the SDS implementation based on the indicators monitored on the EU level.

1. The measurement of economic welfare

The issue of the reliable measurement of economic development has been discussed for many years. The origins of the most commonly used measure, which is GDP, go back to the 1930's. Kuznets states that the definition and concept of the domestic product seem to reflect the domestic economic output adequately. Moreover, the income paid out, corrected by the change in money value and calculated per capita, is indicative of the change in the welfare of societies. Here, however, Kuznets expresses an important reservation. Despite all the benefits offered by the interpretations of GDP, GDP itself cannot be used directly to measure well-being in society. The measurement cannot be done on the level of an entire economy, because we need to know the income distribution in society in order to do this. This method of measuring

income does not take into account the effort put in earning this income, either. Accordingly, the conclusions about welfare may be based on measuring GDP only to a limited extent. The misuse of GDP as a welfare indicator does not stem from an incorrect definition of the measure and its applications, but from misunderstanding the concept and ignoring the assumptions that it is based on¹.

The lack of an unambiguous answer to the questions about the methods to measure welfare or the relations between the welfare of an individual and the welfare of a society caused that GDP started to be used as a welfare indicator more and more frequently.

Over time, however, economists began to recognize the insufficiencies in the description of changes in well-being only with changes in domestic economic output, which were what GDP actually measured. This trend in economics led to the emergence of a new area of science – the economics of happiness. The prime goal of the economics of happiness is not to substitute income-based welfare indicators, but to supplement them with a wider group of factors which also affect the level of well-being.

This branch of economics is also founded on the assumption that people are not interested in unemployment data, inflation rates, the supply of money or even GDP, for the sake of them. All this information is significant if they can translate it into their personal level of well-being². The implementation of the assumptions of the economics of happiness is manifested in the creation and use of measures alternative to GDP.

One of the most interesting is the Human Development Index (HDI), created by UNDP, a United Nations agency. HDI is a composite measure of relative national well-being, published annually in the Human Development Report (HDR). It was created by Pakistani economist Mahbub ul Haq in cooperation with Nobel laureate Amartya Sen. The measure is an indicator of human development, defined by UNDP as “the process of creating opportunities for people”³. It is based on three pillars – health, measured by life expectancy, education, measured by mean and expected years of schooling, and, finally, the standard of living, based on domestic product per capita.

Another measure is the Happy Planet Index, created by the New Economics Foundation. What makes this indicator slightly different is the premise it is based on. In addition to well-being, it also measures environmental impact, which is extremely important from the SD perspective. As its creators argue, it measures ecological efficiency of supporting well-being in the world⁴. The index does not show the happiest country in the world, but a relative effectiveness of the countries in using their natural resources.

HPI consists of three components. The first one is life satisfaction. It is extremely subjective, so the capacity to measure it is limited. While calculating HPI, the data from the 2005 Gallup World Survey was used to determine the level of life satisfaction. What confirms the choice of life satisfaction as one of the factors contributing to HPI is the measure of subjective well-being created by the UK Government Department for Environment, Food and Rural Affairs, which incorporates life satisfaction as one of the indicators of sustainable development. The second component of HPI, similarly to HDI, is life expectancy. A concept that is particularly interesting for this study is the third parameter of HPI. It is referred to as the ecological footprint. The measures of life satisfaction and life expectancy show people's expectations. They do not, however, take into account the accompanying costs, while these costs are important, because the way in which we achieve our well-being determines both the well-being of other people and our future well-being. This is particularly significant in the context of sustainable development, so strongly emphasized by HPI. The ecological footprint is the amount of land necessary to supply the resources an individual consumes and the amount of biologically productive land necessary to absorb carbon dioxide produced both by this individual and in the process of manufacturing the goods he will consume. The unit of this measure is a global hectare. The classification of the countries based on the discussed indicators is presented in Table 1.

The leading positions in the GDP ranking, apart from Norway, are dominated by small, rich countries with small populations. Such countries are definitely easier to manage and, consequently, it is also easier to provide all citizens with a desired standard of living. It is notable that no Asian country (Qatar, Brunei, Kuwait and the UAE) that build their wealth primarily on natural resources features in the top of the HDI ranking. This is because of considerable inequalities stemming from the fact that only a small part of society benefits from the strong economic conditions.

The classification based on the HPI value is entirely different from the ones based on GDP per capita and HDI. The countries leading in terms of HPI have not made it to the top in terms of the other indicators. Among the countries presented in Table 1, South American and Asian states prevail. This may prove that despite living conditions worse than in Western Europe or the USA, their residents are relatively happier, which may stem from the mentality of these communities and some cultural factors. On the other hand, due to a lower level of economic development, in these countries the branches of industry that most contribute to environmental degradation are less developed. The ranking, however, also features the countries with dynamic economic growth rate, such as Brazil and China. In Brazil economic development and the resulting environmental burden are "distributed" among 200 million residents, so the ecological

footprint per capita does not reach a great value. A similar situation is in China. Despite a very dynamic economic growth, the environmental burden is “distributed” among almost 1.5 billion people, which has a significant influence on HPI.

Table 1. The classification of the countries according to different (GDP per capita PPP, HDI and HPI)

Rank according to GDP per capita	Country	GDP per capita (PPP, 2009) USD	Rank according to HDI	Country	HDI (2010)	Rank according to HPI	Country	HPI (2009)
1	Qatar	83,841	1	Norway	0.938	1	Costa Rica	76.1
2	Luxemburg	78,395	2	Australia	0.937	2	Dominican Republic	71.8
3	Norway	52,561	3	New Zealand	0.907	3	Jamaica	70.1
4	Singapore	50,523	4	USA	0.902	4	Guatemala	68.4
5	Brunei	49,11	5	Ireland	0.895	5	Vietnam	66.5
6	USA	46,381	6	Lichtenstein	0.891	6	Columbia	66.1
7	Switzerland	43,007	7	Holland	0.89	7	Cuba	65.7
8	Hong Kong	42,748	8	Canada	0.888	8	Salvador	61.5
9	Holland	39,938	9	Sweden	0.885	9	Brazil	61
10	Ireland	39,468	10	Germany	0.885	10	Honduras	61
11	Australia	38,911	11	Japan	0.884	11	Nicaragua	60.5
12	Austria	38,839	12	South Korea	0.877	12	Egypt	60.3
13	Kuwait	38,304	13	Switzerland	0.874	13	Saudi Arabia	59.7
14	Canada	38,025	14	France	0.872	14	Philippines	59
15	Iceland	38,023	15	Israel	0.872	15	Argentina	59
16	UAE	36,537	16	Finland	0.871	16	Indonesia	58.9
17	Sweden	35,965	17	Iceland	0.869	17	Butane	58.5
18	Denmark	35,757	18	Belgium	0.867	18	Panama	57.4
19	Belgium	35,422	19	Denmark	0.866	19	Laos	57.3
20	UK	34,619	20	Spain	0.863	20	China	57.1

Source: Own compilation based on *Human Development Report 2010*, UNDP, *The World Factbook 2010*, CIA, *The Happy Planet Index 2.0*, NEF.

It is notable that the correlation between HPI and GDP is insignificant, which confirms Figure 1. The linear regression line has a low, but negative slope. This is likely to result from one of the HPI components, the ecological footprint. Countries on a higher level of economic development, and the richest OECD states are definitely in this group, had to spend more natural resources on development. The members of these societies also consume more, which causes

that, according to the idea of the ecological footprint, they need more land, calculated in global hectares, to compensate for their activity. A very low value of R^2 (0,03) coefficient indicates, however, the poor fit of the model to the data, which confirms the lack of strong relationship between HPI and GDP per capita.

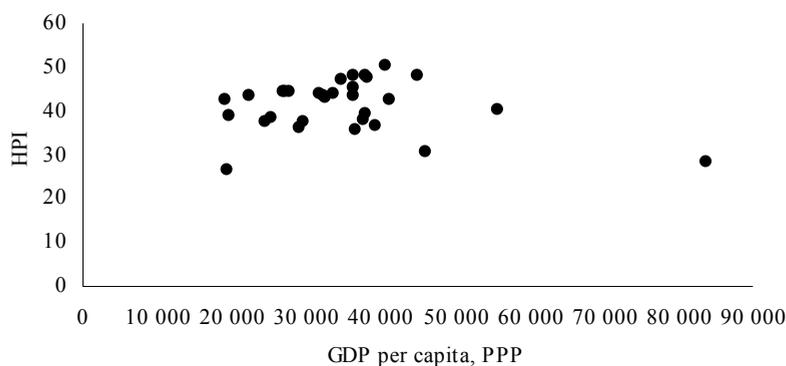


Fig. 1. The relationship between HPI and GDP per capita in selected OECD countries, 2009

Source: Own compilation based on the Happy Planet Index 2.0, 2009, NEF, and The World Factbook 2010, CIA.

The comprehensive evaluation of the standard of living in particular countries requires taking into account a number of different elements which contribute to the general understanding of well-being of their citizens.

2. The sustainable development strategy in the European Union

The sustainable development strategy (SDS), adopted in the EU in 2001, was to complement the Lisbon Strategy, 2000, according to which the strategic goal of the EU was to become the most competitive, dynamic and knowledge-based economy in the world, capable of sustainable economic growth contributing to more good jobs and better social cohesion⁵. Although the Lisbon Strategy had to be reviewed in 2005, it was the sustainable development that should give the EU “a positive long-term vision of the society that is more prosperous and more just, and which promises a cleaner, safer, healthier environment – a society which delivers a better quality of life for us, for our children, and for our grandchildren”⁶.

The 2005 review of the Lisbon Strategy defined a new focus on stronger and sustained growth and creating more jobs. As a result, the goals and rules for the implementation of

sustainable development, formulated in the single and coherent EU strategy relaunched in 2006, also changed. Due to its new character, the strategy was supposed to help fulfill the commitments that had been made earlier in a more effective way. On the other hand, the prime goal of the reviewed strategy was “to identify and develop actions to enable the EU to achieve continuous improvement of quality of life both for current and for future generations, through the creation of sustainable communities able to manage and use resources efficiently and to tap the ecological and social innovation potential of the economy, ensuring prosperity, environmental protection and social cohesion”⁷. The main goals of the SDS implemented in the EU now are environmental protection, social justice and cohesion, economic well-being, promoting sustainable development worldwide and ensuring that the European Union’s internal and external policies are consistent with global sustainable development and its international commitments.

The reviewed strategy does not contradict the goals that were set earlier, but aims to redefine them in such a way that they closely correspond with dynamically changing conditions both within the EU and globally.

It is notable that the national strategies of the EU member states have to be coherent with the strategy implemented at the EU level.

The failure of the reviewed Lisbon Strategy prompted the necessity to launch a new development strategy for the European Union. It also became necessary to take actions aiming to overcome the negative consequences of the crisis which affected practically all EU member states. These expectations were met by the “Strategy for smart, sustainable and inclusive growth 2020”, finally formulated in March 2010. The latest EU strategy – Europe 2020 – may be seen as a tool implementing SDS.

In addition to smart growth, i.e. growth based on knowledge and innovation and promoting social inclusion, high employment, economic, social and territorial cohesion, one of the „Europe 2020” priorities is the sustainable development connected with building the economy which uses natural resources effectively, is more environmentally friendly and more competitive.

3. SD indicators in the EU and welfare measures

The SDS implementation in the European Union is monitored with the Sustainable Development Indicators (SDI)⁸. The first set of indicators was adopted by the European Commission in 2005 to be reviewed two years later. The indicator set is built as a pyramid with three main levels reflecting the structure of SDS in the EU, which distinguishes between overall

objectives, operational objectives and actions. Accordingly, the top of the pyramid comprises the indicators monitoring SDS lead objectives, the next level groups the indicators relating to operational objectives – SDS priority objectives, and finally, the bottom level includes explanatory variables. The three levels are complemented with contextual indicators, which provide background information but do not evaluate directly the strategy's objectives.

The framework of indicators is based on ten themes, reflecting the seven key challenges of the strategy, as well as the key objective of economic prosperity in the EU. The themes are:

- socio-economic development,
- sustainable consumption and production,
- social inclusion,
- demographic changes,
- public health,
- climate change and energy,
- sustainable transport,
- natural resources,
- global partnership,
- good governance.

We can see a significant correlation between the measures of economic prosperity discussed earlier and the selected indicators of sustainable development used in the EU member countries.

The most classic measure of economic growth, which is GDP, is also a basic indicator of socio-economic development monitored in connection with the implementation of SDS.

Life expectancy is an important component of such welfare measures as HDI and HPI. From the SDS perspective, the public health theme is monitored on the first level based on healthy life years and life expectancy at birth.

One of the HDI elements is education, which is measured by expected years of schooling, whereas SDS and its social inclusion theme look at the percentage of people aged 18–24 who prematurely finish education at the lower secondary level and monitor the percentage of people aged 25–64 who have no more than lower secondary education.

Finally, we should remember that HPI takes into account the management of the environment and natural resources, which also falls under one of the SDS themes.

Conclusions

The issue of measuring well-being has been researched by economists since the beginning of the 20th century. The socio-economic situation in the world, however, has significantly changed since the basic indicator of economic growth, GDP, was created. First of all, we started to distinguish between economic growth and the standard of living, recognizing that the latter is affected by much more factors than just the economic output. Research has also shifted its perspective to include an individual's experience, not only an entire community or economy. Moreover, other values, such as leisure time, the environment, income distribution in society or even the subjective perception of one's situation, have become increasingly significant. Another important aspect is a long-term view on the decisions that we make today and attempts to analyze their future implications.

The basic SDS objectives in the EU are economic well-being, environmental protection, social justice and cohesion. These objectives correspond with new measures of the standard of living, which, contrary to GDP, account also for other elements determining the actual well-being of people that they concern.

As a result, we can expect that the consistent implementation of SDS, for example in the form promoted by the European Union, will be reflected in the improvement of such welfare measures as HDI or HPI in the countries implementing SDS, contributing to the actual improvement in the standard of living of their citizens.

Notes

¹ Kuznets (1934).

² Oswald (1997).

³ UNDP (2010).

⁴ New Economic Foundation (2009).

⁵ Note that the first element of the SD policy was the ecological policy, originating in the common policy of the environmental protection of the European Community in the 1970's.

⁶ COM(2001)264 final, p. 2.

⁷ EU Council, 10917/06, p. 3.

⁸ EUROSTAT (2009).

References

- Borys, T. (2005) *Sustainable development indicators*, Warszawa–Białystok: Publishing Ekonomia i Środowisko.
- EUROSTAT. (2009). Sustainable Development in the European Union, 2009 monitoring report of the EU Sustainable Development Strategy. Brussels: EUROSTAT.
- Kuznets, S. (1934). *National Income 1929–32*, New York: National Bureau of Economic Research.
- New Economic Foundation. (2009). Happy Planet Index 2.0. 4 July 2009, <http://www.neweconomics.org/publications/happy-planet-index-20>.
- Oswald, A. (1997). Happiness and Economic Performance. *Economic Journal*, 107.
- Sustainable Europe for the better world. The sustainable development strategy of the European Union. COM(2001)264 final, Brussels 15.05.2001.
- The review of the EU sustainable development strategy – Reviewed strategy, EU Council, 10917/06, Brussels 26.06.2006.
- UNDP. (2010) Report Human Development Index and its components. <http://hdr.undp.org/en/reports/global/hdr2010/>.
- Working together for growth and jobs – A new start for the Lisbon Strategy COM(2005) 24 final, Brussels 2.02.2005.