

# THE COMPARISON OF ECONOMIC INDICATORS AND HAPPY PLANET INDEX IN SELECTED COUNTRIES

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## Abstract

The paper describes the development of some selected countries during the period 2000 – 2013. The first part is the analysis of the main economic indicators, such as gross domestic product, rate of unemployment, rate of inflation and current account balance. But only economic indicators are not fully satisfied for the analysis of society. Therefore are used alternative indicators, for example Happy Planet Index (HPI). This index deals with experienced well-being, life expectancy and ecological foot print. The comparison of the development of economic indicators, such for example GDP per capita with the development of Happy Planet Index is very interesting and useful for further analyze. Many wealthy countries have very low HPI and very poor countries have high HPI. For example Costa Rica has HPI 64,0 but GNI per capita in 2012 only 8820 current US dollar. Luxemburg has HPI only 29,0 but GNI per capita 52340 current US dollar.

**Key words:** Main Economic Indicators, GDP per capita, Happy Planet Index

**JEL Code:** D 60, E 30, Z 00

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## Introduction

For description and analyzes of countries (states) are two categories (terms): growth and development. Economic growth means quantitative changes, economic development is qualitative indicator. Main indicators for economic position of country are gross domestic product (GDP), rate of unemployment, deflator GDP and external economic position (balance of payment.. These indicators in some selected countries were analyzed in last articles for MSED (Breňová 2012, 2013). For qualitative characteristics of the country are used other various alternative indicators (time series).

## 1 Selected economic indicators

Most important indicators characterized economic growth are real GDP (percentage change from previous year), output gaps (deviations of actual GDP from potential GDP as a per cent of potential GDP) and GDP per capita.

### 1.1 Real GDP

The table 1 reveals that fluctuations of rates of growth of GDP during the period 2000 – 2008 have positive rates, higher and lower in all selected countries and whole EA. Up to the year 2009. During the year 2009 the positive rate of growth followed by absolute decrease of real GDP. Poland is a exception with tremendous decrease of the rate of growth.

During 2010 and 2011 all selected countries have positive rates of real GDP. This recovery during 2010 and 2011 was followed by economic depression in Czech Republic, Hungary and whole EA. Such situation is described as double –dip downturn typical for USA, Czech Republic and other countries. Further growth sometimes is described as a secular stagnation as it was predicted by OECD Outlook.<sup>1</sup>

**Tab. 1: Real GDP (percentage change from previous year)**

|                 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Czech Republic  | 4,2  | 3,1  | 2,1  | 3,8  | 4,7  | 6,8  | 7,0  | 5,7  | 3,1  | -4,5 | 2,5  | 1,8  | -1,0 | -1,5 |
| Hungary         | 4,2  | 3,7  | 4,5  | 3,9  | 4,8  | 4,0  | 3,9  | 0,1  | 0,9  | -6,8 | 1,1  | 1,6  | -1,7 | 1,2  |
| Poland          | 4,5  | 1,3  | 1,5  | 3,9  | 5,2  | 3,6  | 6,2  | 6,8  | 5,0  | 1,6  | 3,9  | 4,5  | 2,1  | 1,4  |
| Slovak Republic | 1,4  | 3,5  | 4,6  | 4,8  | 5,1  | 6,7  | 8,3  | 10,5 | 5,8  | -4,9 | 4,4  | 3,0  | 1,8  | 0,8  |
| Euro Area       | 3,9  | 2,0  | 0,9  | 0,7  | 2,0  | 1,8  | 3,4  | 3,0  | 0,2  | -4,4 | 1,9  | 1,6  | -0,6 | -0,4 |

Source: OECD Economic Outlook No 94: Annex-Tables, tab. 1, [www.oecd.org](http://www.oecd.org)

<sup>1</sup> The term „secular stagnation” was used by Larry Summers in a speech at Harvard University in 2008 – see the article “Stagnant Thinking” in the Economist December 7<sup>th</sup> 2013.

## 1.2 Output gaps

Output gaps are percentage deviations of actual product from potential product. The potential product means output produced by full employment of all factors of production - (including rate of growth of technical progress – multifactor productivity).

The following table reveals cyclical fluctuations of actual GDP round potential product.

The highest positive gap was in Slovakia (8,9%) in 2008, the highest negative gap in Hungary (-6,8%) in 2009.

**Tab. 2: Output gaps (Deviations of actual GDP from potential GDP as a per cent of potential GDP)**

|                 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Czech Republic  | -1,5 | -1,7 | -3,3 | -3,3 | -2,5 | 0,3  | 3,6  | 6,1  | 6,2  | -0,6 | 0,2  | 0,6  | -1,6 | -4,3 |
| Hungary         | -2,0 | -1,8 | -0,7 | 0,0  | 1,8  | 3,2  | 5,2  | 3,7  | 3,5  | -3,8 | -3,2 | -1,8 | -3,5 | -2,6 |
| Poland          | 1,2  | -1,2 | -2,8 | -2,2 | -0,8 | -1,6 | -0,4 | 1,1  | 1,4  | -0,6 | 0,3  | 1,8  | 0,8  | -0,7 |
| Slovak Republic | -4,6 | -5,0 | -4,5 | -3,8 | -3,2 | -1,3 | 2,0  | 7,6  | 8,9  | 0,0  | 1,6  | 1,2  | -0,4 | -2,6 |
| Euro Area       | 2,0  | 1,8  | 0,8  | -0,2 | 0,1  | 0,3  | 2,0  | 3,5  | 2,3  | -3,1 | -2,1 | -1,3 | -2,7 | -3,8 |

Source: OECD Economic Outlook No 94: Annex-Tables, tab. 10, [www.oecd.org](http://www.oecd.org)

## 1.3 GDP per capita

In the following table 3 are time series of GDP per capita in PPS, when the base of index is 100 on EU 28.

GDP per capita in countries of Visegrad Four was the highest in Czech Republic (index 81 in the year 2012), but the development of this index in Czech Republic shows certain tendency of stagnation.

Slovak Republic follows (index 76 in the year 2012) and Hungary and Poland had the same position (index 67 in the year 2012).

The highest index of all countries was in Luxembourg (263 in the year 2012). USA follows with index 152 and Germany with index 123. The lowest index is in Bulgaria (less than the half of the index EU 28).

**Tab. 3: GDP per capita in PPS (index EU 28 = 100, data from November 2013)**

|                 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |      |      |      |      | x    |      |      |      |      |      |      |      |
| EU 28 countries | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| EU 27 countries | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| EA 18 countries | 112  | 111  | 110  | 109  | 109  | 109  | 109  | 109  | 108  | 109  | 109  | 108  |
| EA 17 countries | 112  | 111  | 110  | 109  | 109  | 109  | 109  | 109  | 109  | 109  | 109  | 108  |
| Czech Republic  | 73   | 74   | 77   | 78   | 79   | 80   | 83   | 81   | 83   | 81   | 81   | 81   |
| Hungary         | 58   | 61   | 63   | 63   | 63   | 63   | 62   | 64   | 65   | 66   | 67   | 67   |
| Poland          | 48   | 48   | 49   | 51   | 51   | 52   | 55   | 56   | 61   | 63   | 65   | 67   |
| Slovak Republic | 53   | 54   | 56   | 57   | 60   | 63   | 68   | 73   | 73   | 74   | 75   | 76   |
| USA             | 162  | 160  | 162  | 163  | 165  | 160  | 156  | 151  | 150  | 151  | 149  | 152  |
| Germany         | 116  | 115  | 116  | 116  | 116  | 116  | 116  | 116  | 115  | 120  | 123  | 123  |
| Luxemburg       | 234  | 241  | 248  | 253  | 254  | 276  | 275  | 264  | 253  | 263  | 266  | 263  |
| Bulgaria        | 30   | 32   | 34   | 35   | 37   | 38   | 40   | 44   | 44   | 44   | 47   | 47   |

Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec001>

14, X = break in time series

## 1.4 GNI per capita

GNI per capita in current US dollar is alternative indicator used as description of economic situation of the country. The result is the same as GDP per capita, it means, that Luxemburg had in the year 2012 the highest GNI per capita and Costa Rica the lowest. This result is very important for following comparison with alternative indicators.

**Tab. 4: GNI per capita, Atlas Method<sup>2</sup>, current US dollar**

| Country         | 2009  | 2010  | 2011  | 2012  |
|-----------------|-------|-------|-------|-------|
| Czech Republic  | 18000 | 18450 | 18710 | 18130 |
| Hungary         | 12980 | 12930 | 12900 | 12410 |
| Poland          | 12190 | 12400 | 12340 | 12660 |
| Slovak Republic | 15920 | 16140 | 17100 | 17190 |
| Costa Rica      | 6140  | 6910  | 7740  | 8820  |
| Luxemburg       | 48040 | 48960 | 50650 | 52340 |
| Germany         | 42550 | 43300 | 44560 | 45070 |
| USA             | 48040 | 48960 | 50650 | 52340 |
| Bulgaria        | 6200  | 6430  | 6640  | 6840  |

Source: data.world bank.org

## 2 Alternative indicators to GDP

It is necessary to make new indicators for measurement of human progress. There have been long lasting discursions among economists, sociologists and other scientists about cognitive usefulness of macroeconomic indicator GDP.

“...the construction of indicators such as GDP does not monitor the quality of population, environmental changes or changes in stocks of non-renewable natural recourses, it

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<sup>2</sup> Atlas Method is a special method of conversion and it is used by World Bank. This applies a conversion factor that averages the exchange rate for a given year and the two preceding years, adjusted for differences in rates of inflation between countries, and through 2000, the G-5 countries (France, Germany, Japan, United Kingdom, USA), from 2001 EA, Japan, United Kingdom, USA).

is necessary to take this into account (GDP is primarily an aggregate of production) and look for indicators that would allow a more complex analysis of not only economic performance, but also its social and environmental aspects.” (Nečadová, 2012, p.23)

Socially responsible business is an important factor in ensuring sustainable economic growth. (Džbáňková, 2011a, 2011b). There is a problem of discussion about competitiveness and its measurement. (For example Nečadová, Soukup, 2013).

The conference “Beyond GDP” took place in November 2007. The authors of Study on “Alternative progress indicators to GDP as a means towards sustainable development” say, that “...the different indicators, indices or indicator systems have been grouped into three different categories: ADJUSTING, REPLACING and SUPPLEMENTING GDP as the dominant measure of development and societal progress.

1. The category ADJUSTING GDP includes those approaches where traditional economic performance measures like GDP or national saving rates have been adjusted by including monetized environmental and social factors.

2. The category REPLACING GDP on the other hand contains indicators that try to assess wellbeing more directly than GDP, e.g. by assessing average satisfaction (like the Happy Planet Index) or the achievement of basic human functions (like the Human Development Index).

3. The category SUPPLEMENTING GDP consists of approaches, which have been designed to supplement GDP. Here GDP is not adjusted or replaced by constructing new indices but complemented with additional environmental and/or social information.” (Gossens, Maripa, 2007, p. 20)

Following text is detailed description of Happy Planet Index - HPI. This index was introduced by the New Economic Foundation (NEF) in July 2006. The third global HPI report was published in 2012. Such index has cognitive ability of human well-being and environment. It means that the HPI shows efficiency of countries in exploitation of environmental resources for sustainable development. (For example Ng. Yew-Kwang, 2008, or Kranjac, Henny, Sikimic 2012).

HPI was constructed for 178 countries and was based on three parts: experienced well-being ( subjective element) and life expectancy and ecological footprint (objective elements)

The indicator of experienced well-being and the indicator of life expectancy are important for generate Happy Life Years.

Happy Planet Index has formula:  $HPI = \text{Happy Life Years} / \text{Ecological Footprint}$

In the next table are values of HPI in selected countries in 2012.

**Tab. 5: Happy Planet Index**

| Country         | Happy Planet Index | Experienced well-being | Life expectancy | Ecological foot print |
|-----------------|--------------------|------------------------|-----------------|-----------------------|
| Czech Republic  | 39,4               | 6,2                    | 77,7            | 5,3                   |
| Hungary         | 37,4               | 4,7                    | 74,4            | 3,6                   |
| Poland          | 42,6               | 5,8                    | 76,1            | 3,9                   |
| Slovak Republic | 40,1               | 6,1                    | 75,4            | 4,7                   |
| Costa Rica      | 64,0               | 7,3                    | 79,3            | 2,5                   |
| Luxemburg       | 29,0               | 7,1                    | 80,0            | 10,7                  |
| Germany         | 47,2               | 6,7                    | 80,4            | 4,6                   |
| USA             | 37,3               | 7,2                    | 78,5            | 7,2                   |
| Bulgaria        | 34,1               | 4,2                    | 73,4            | 3,6                   |

Source: [www.happyplanetindex.org./data](http://www.happyplanetindex.org./data)

Costa Rica had the highest HPI in absolute terms with its given resources in 2012. To the contrary to other countries Luxembourg had the lowest HPI although Luxembourg had values GDP per capita and GNI per capita highest among above mentioned countries.

## Conclusion

It is clear, that according indicator HPI we are not living on happy planet. No country is able to fulfill all three goals of HPI, it means high life expectancy, high experienced well-being and living within environmental limits.

Some authors (Kranjac, Henny, Sikimic, 2012) say that there is very positive correlation of sustainable development of countries with absorption of EU funds.

New Economic Foundation launched a Happy planet charter. NEF is calling to adopt new measures for economic development, which will be able to establish better conditions for all countries.

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