

## **AVALUATION OF SUSTAINABLE DEVELOPMENT INDICATORS FOR ROMANIA AND HUNGARY**

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**Abstract** - Avaluation of sustaineble development indicators for Ramonia and Hungary

The Sustainable Development Indicators (SDIs) are used to monitor the EU Sustainable Development Strategy (EU SDS). They are presented in ten themes. Of more than 100 indicators, eleven have been identified as headline indicators. They are intended to give an overall picture of whether the European Union has achieved progress towards sustainable development in terms of the objectives and targets defined in the strategy. Each indicator can be analyzed and presented for each country in the EU. In this study we evaluated some of the indicators for Romania and Hungary, two neighbor countries with similar natural conditions, but with different results as we can conclude after this research. The purpose of this paper is to understand how regional disparities can influence the development of countries.

**Keywords:** economic development, social inclusion, public health

### **INTRODUCTION**

The [EU Sustainable Development Strategy](#) (SDS) sets out a coherent approach to how the EU will more effectively live up to its long-standing commitment to meet the challenges of sustainable development. It reaffirms the overall aim of achieving continuous improvement of the quality of life and well-being on earth for present and 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.

The key objectives of the [EU Sustainable Development Strategy](#) are the following:

- **Environmental Protection.** Safeguard the earth's capacity to support life in all its diversity, respect the limits of the planet's natural resources and ensure a high level of protection and improvement of the quality of the environment.
- **Social Equity And Cohesion.** Promote a democratic, socially inclusive, cohesive, healthy, safe and just society with respect for fundamental rights and cultural diversity that creates equal opportunities and combats discrimination in all its forms.
- **Economic Prosperity.** Promote a prosperous, innovative, knowledge-rich, competitive and eco-efficient economy which provides high living standards and full and high-quality employment throughout the European Union.
- **Meeting International Responsibilities.** Encourage the establishment and defend the stability of democratic institutions across the world, based on peace, security and freedom.

## EVALUATION OF MAIN SUSTAINABLE DEVELOPMENT INDICATORS

The SDI framework is based on ten themes, reflecting the seven key challenges of the strategy, as well as the key objective of economic prosperity, and guiding principles related to good governance. The themes follow a general gradient from the economic, to the social, and then to the environmental and institutional dimensions. They are further divided into sub-themes to organise the set in a way that reflects the operational objectives and actions of the sustainable development strategy. With this paper we decided to analyze the theme indicators for Romania and Hungary, to understand the impact and effect of different economic and social actions on the local communities.

**A. Socio-economic development theme.** Sustainable socio-economic development is a core element of the European Union's Sustainable Development Strategy (EU SDS). The strategy sets out the objective of promoting a prosperous, innovative, knowledge-rich, competitive and eco-efficient economy, which provides high living standards and full and high-quality employment throughout the European Union.

The following table presents the evolution of GDP per capita as a percentage of the previous period. We can see that over the analyzed period, both at EU level and in Romania and Hungary has been a continuous growth of this indicator until 2009, when due to the global crisis, GDP declined by 6.9 % for Romania and 6.5% for Hungary, compared with 2008.

**Table 1. Real GDP per capita, growth rate and totals – percent change previous period**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-27	3,6	1,7	1	0,9	2	1,5	2,8	2,5	0,1	-4,6	1,6	1,5	1,9
Hungary	5,2	4	4,4	4,3	4,8	3,4	3,8	0,9	1	-6,5	1,2	2,9	3,3
Romania	2,5	5,8	8	5,5	8,8	4,4	8,1	6,5	7,5	-6,9	-1,7	1,7	4

From *Table 2* we can see that GDP per capita increased from 1,800 euros in 2000 to 2900 euros in 2009 for Romania. Although Hungary's GDP didn't increased as much, we see that throughout the analyzed period, the GDP per capita of Hungary has been and remains at levels two times higher compared to Romania.

**Table 2. Real GDP per capita, growth rate and totals – euro/ inhabitant**

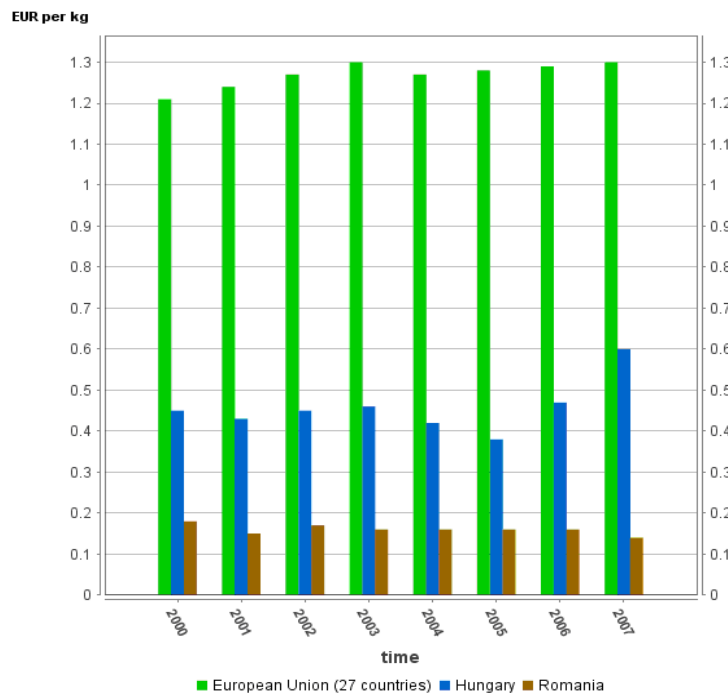
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU-27	19100	19400	19600	19800	20200	20500	21000	21600	21600	20600
Hungary	5000	5200	5500	5700	6000	6200	6400	6500	6500	6100
Romania	1800	1900	2100	2200	2400	2500	2700	2900	3100	2900

**B. Sustainable consumption and production theme.** The EU Sustainable Development Strategy (EU SDS) sets out the objective of promoting sustainable consumption and production patterns. Addressing social and economic development within the carrying capacity of ecosystems and decoupling economic growth from environmental degradation is an essential requirement for sustainable development. The indicator is expressed in Euro/Kg (the quantity of raw materials extracted from the domestic territory of the focal economy, plus all physical imports minus all physical exports).

**Table 3. Resource productivity EURO/kg**

	2000	2001	2002	2003	2004	2005	2006	2007
European Union (27 countries)	1,21	1,24	1,27	1,3	1,27	1,28	1,29	1,3
Hungary	0,45	0,43	0,45	0,46	0,42	0,38	0,47	0,6
Romania	0,18	0,15	0,17	0,16	0,16	0,16	0,16	0,14

Regarding this indicator, we observe that in particular Romania and Hungary, the values are very low compared to EU average, this being due primarily to a inefficient process of use of resources.



**Figure 1. Resource productivity**

**C. Social inclusion theme.** Overall Objective: To create a socially inclusive society by taking into account solidarity between and within generations and to secure and increase the quality of life of citizens as a precondition for lasting individual well-being.

Table 4 shows the population at risk of poverty. While this indicator for EU average is 23.1% in 2009, in Hungary it reaches 29.9% and for Romania recorded the highest percentage of 43.1%.

**Table 4. Population at-risk-of-poverty or exclusion - %**

	2003	2004	2005	2006	2007	2008	2009
European Union (27 countries)	-	-	26	25	24,5	23,6	23,1
Hungary	-	-	32,1	31,4	29	28,2	29,9
Romania	-	-	-	-	45,9	44,2	43,1

The value of this indicator is concern for Romania, reflecting the fact that almost half of our country's inhabitants live in precarious conditions, quality of life and standard of living are strongly affected by the low level of income, commercial facilities, etc.

**D. Demographic changes theme**

Table 5 presents the employment rate of older people. Regarding this indicator, we notice that 46% of elderly people (55-64 years old) in the EU were employed in 2009, in Hungary the figure is 32.8%, while in Romania it was 42.6%. This indicator reflects the fact that older people can find a job with real opportunities to have a place where they can work.

**Table 5. Employment rate of older workers - %**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU-27	36,9	37,7	38,5	40	40,7	42,3	43,5	44,6	45,6	46
Hungary	22,2	23,5	25,6	28,9	31,1	33	33,6	33,1	31,4	32,8
Romania	49,5	48,2	37,3	38,1	36,9	39,4	41,7	41,4	43,1	42,6

**E. Public health theme**

Overall objective: To promote good public health on equal conditions and improve protection against health threats

The indicator examined in Table 6 expresses the number of years lived by a person in good health, without requiring special care or intensive treatment for various age-specific diseases. As for Romania, this indicator is 62.6 years for women and 60 years for men.

**Table 6. Healthy Life Years**

	2003	2004	2005	2006	2007	2008
EU-27 women	-	-	-	-	62,3	-
Hungary women	57,8	-	53,9	56,97	57,6	58
Romania women	-	-	-	-	62,3	62,6
EU-27 men	-	-	-	-	61,5	-
Hungary men	53,5	-	52	54,2	55	54,6
Romania men	-	-	-	-	60,4	60

The table below shows the life expectancy at birth. Note that the highest value is recorded by the EU women, they lived on average 82.37 years, while women in Hungary live 78.25 years, and 77.22 years in Romania (for 2008). The men still live a few years less than women. However note that during the period under review, there is an increased life expectancy, regardless of gender or region.

**Table 7. Life expectancy at birth**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU-27 women	-	-	80,87	80,82	81,49	81,54	82,01	82,2	82,37	-
Hungary women	76,16	76,65	76,74	76,69	77,16	77,17	77,76	77,76	78,25	78,4
Romania women	74,75	74,88	74,7	75,04	75,53	75,7	76,18	76,86	77,22	77,39
EU-27 men	-	-	74,51	74,62	75,23	75,4	75,84	76,06	76,37	-
Hungary men	67,55	68,24	68,34	68,37	68,73	68,69	69,2	69,38	69,97	70,26
Romania men	67,74	67,54	67,35	67,66	68,25	68,68	69,21	69,71	69,71	69,83

**F. Climate change and energy theme.** Overall Objective: To limit climate change and its costs and negative effects to society and the environment.

Greenhouse gas emissions - index base year = 100

This indicator shows trends in total man-made emissions of the "Kyoto basket" of greenhouse gases. It presents annual total emissions in relation to "Kyoto base year". In

general the base year is 1990 for the non-fluorinated gases and 1995 for the fluorinated gases.

**Table 8. Greenhouse gas emissions - index base year = 100**

	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU-27	90,9	91,9	91,1	92,5	92,5	91,9	91,6	90,5	88,7
Hungary	79,2	81,3	79,1	82,2	81,2	82	80,3	77,8	75,1
Romania	56,3	58,2	60,8	63,5	64,2	61,8	63,7	63,1	60,3

From the table above we see that the index of emissions of greenhouse gases is the lowest in Romania's case, its value being 60.3 in 2008, while for Hungary is 75.1 and for the EU the index value being 88.7. This reduced index in Romania may be due to a steady decline in the industrial sector in our country. However, while this figure has declined over the period for the EU and Hungary, in Romania, the trend was increasing from 56.3 in 2000 to 60.3 in 2008.

**G. Sustainable transport theme.** Overall Objective: To ensure that our transport systems meet society's economic, social and environmental needs whilst minimising their undesirable impacts on the economy, society and the environment.

**Table 9. Energy consumption of transport relative to GDP - Index 2000 = 100**

	2000	2001	2002	2003	2004	2005	2006	2007
EU-27	100	99,1	98,7	99	98,9	97,6	96,7	95,5
Hungary	100	100,5	101,4	101,4	100,1	104,5	112,1	110,9
Romania	100	113,9	115,5	109,9	120,7	94,1	90,1	91

**H. Natural resources theme.** Overall Objective: To improve management and avoid overexploitation of natural resources, recognising the value of ecosystem services. This is an area where there is clearly unsustainable trends. There have been positive developments in areas such as water and air, although further efforts are needed. There is a growing demand for natural resources, which exceed the carrying capacity of Earth. This is a challenge to be addressed urgently. Biodiversity is declining worldwide and in the EU, due to damage ecosystems and the objectives set for 2010 were not met.

**I. Global partnership theme.** Regarding this theme, targets under the EU SDS focus on promoting sustainable development actively worldwide and ensure that the European Union's internal and external policies are consistent with global sustainable development and its international commitments. Official development assistance (ODA) consists of grants or loans that are undertaken by the official sector with promotion of economic development and welfare in the recipient countries as the main objective. From the next table we can see that ODA for the UE is 0,42% of GNI, while for Hungary this is only 0,09% and for Romania 0,08%.

**Table 10. Official development assistance as share of gross national income - %**

	2003	2004	2005	2006	2007	2008	2009
EU-27	-	-	0,41	0,41	0,37	0,4	0,42
Hungary	0,03	0,07	0,1	0,13	0,08	0,08	0,09
Romania	-	-	-	0	0,07	0,07	0,08

**J. Good governance theme.** Good governance issues are addressed in the EU Sustainable Development Strategy (EU SDS). The objective is to promote coherence between local, regional, national and global actions in order to enhance their contribution to sustainable development.

The operational objectives and targets for this theme are:

- Policy coherence and effectiveness
- Openness and participation
- Economic instruments

## CONCLUSIONS

There are several disparities but also some similarities regarding Romania and Hungary, two neighbor countries. We can see that even if the natural conditions are almost the same, there are other factors that can have an impact on the economic and social areas. The evaluation of progress since 2000 based on the headline indicators shows a rather mixed picture:

- Changes since 2000 are clearly favourable for GDP per capita in Hungary and Romania, and also at EU level. The resource productivity is also favourable for Hungary and EU, but in Romania we see a decrease regarding this indicator;
- Moderately favourable changes for energy consumption of transport in Romania and EU, while in Hungary the index has increased to 110,9; employment rate of older workers is favourable for Hungary and EU, while in Romania the rate has dropped from 49,5% in 2000 to 42,6% in 2009 ;
- The risk of poverty rate remained broadly stable but in Romania this rate is very high (43,1%) compared with the EU average (23,1%);
- Moderately unfavourable changes for Romania regarding greenhouse gas emissions, where the index is rising from 56,3 in 2000 to 60,3 in 2008, but this value is still under the EU (88,7) or Hungary (75,1) level.

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