

CONVERGENCE OF SUSTAINABLE ECONOMIC DEVELOPMENT IN EUROPEAN UNION

Mihaela VARTOLOMEI

Politehnica University of Timişoara, Romania

Abstract. This paper is especially focused on Romanian economic sustainable development case and represents a part of the author's preoccupations: convergence inside European Union. The nature of current research is conceptual, methodological, empirical study, and forecast the process. The author had shaped the methodology by means of statistics methods (find out the trends of sustainable development indicators), graphical methods, observation and economic analysis methods. The targets of methodological process are: to up-date the targeted dates (sustainable development, economic efficiency, economic growth indicators), to organise date we have, in order to simulate or draw up new directions, to give economic interpretation. The reason the author has chosen to used sustainable economic development indicators, especially economic growth (because they represents the level of living standards in a clean economic society), is related to own preoccupation to measure national disparities between EU's countries, and to catch the recuperation process inside EU (especially regarding Romanian situation). The paper contribution can be highlighted in 2 ways. First, it supplies a statistic analysis of EU-27 countries about part of sustainable economic development (in terms of growth and standards of living). Second, it analyse the situation of recuperation for CEE economies and the effect the crises had over EU region in these terms, delaying the process of catching-up.

Keywords: indicators, convergence, lags, catching-up process, eco-efficiency

1. Introduction

This paper is especially focused on Romanian economic sustainable development case and represents a part of the author's preoccupations: convergence inside European Union (henceforth EU). Using literature, macroeconomic assessment, empirical analysis and re-evaluation this paper depicts and analyses three problems. First the author presents catching-up process as part of convergence problem inside EU. Second the paper analyses EU's sustainable economic development indicators. Third, it studies Romanian gaps with developed EU's countries.

The study provides data analysis during a determined period in order to make them easier to work with later as well, being a part of more complex scientific work: EU convergence (real and nominal) and catching-up process in globalization framework.

It is already known that efficiency represents rational management of resources (rows materials, fuel, energy, labour, capital or entire effort spent in production) in maximizing final outputs conditions: more effect with less effort. Sustainable development is based on the equilibrium between all systems and reflects the living level of the country as well. Some of sustainable development indicators reflect economic efficiency, part we are interested in this work, in order to measure the convergence degree inside EU.

Sustainable development strategy offer o stable theoretic framework for decision makers, setting some directions regarding environment policies settlement in economic efficiency conditions. It is worth mentioning that the objective of sustainable development is to find solution to conciliate economic growth and environment protection as it represents an essential step towards improving standards of living.

The nature of current research is conceptual, methodological, empirical study, and forecast the process. The author had shaped the methodology by means of statistics methods (find out the trends of sustainable development indicators). graphical methods. observation and economic analysis methods. The targets of methodological process are: up-date the targeted dates (sustainable to development, economic efficiency, economic growth indicators), to organise date we have, in order to simulate or draw up new directions, to give economic interpretation.

Scientific and empirical evidence is realised by means of sources as follows: classic and modern bibliography, Eurostat, National Institute of Statistic (henceforth NIS), National Bank of Romania (henceforth NBR), International Monetary Fund (henceforth IMF).

2. Literature overview

It is obvious that disparities between countries and economies will never disappear. The catchingup process outlines the convergence process in economics, when developing countries' per capita incomes have the potential to grow at faster rate than the developed countries, because the diminishing returns behaviour is more reduced. Furthermore, the poorer countries can replicate the model of richer countries in production, management, technologies, or institutions terms.

A current tendency is to include the "catchingup" hypothesis in the neoclassical framework of exogenous growth, as in Parente and Prescott. This concept implies the hypothesis of the countries having so-called social capacity - which includes, at the same time, human capital, capacity of infrastructure and administration - in order to be able to adopt and use efficiently the new technologies, in all member states. Moses Abramovitz (1986) suggested that follower countries must have the ability (not only the capacity) to attract new technologies, absorb foreign capital and participate in global markets, before catch-up growth can occur [1] – this is the way Abramovitz explained the divergence in the world.

Nevertheless, investments represent necessary but not sufficient condition for convergence achievement.

Unlike neoclassical growth models, that foresee the realization of convergence, the models of endogenous growth assume the existence of multiple equilibriums and divergent behaviours of all countries involved, Azariadis and Drazen emphasised in 1990, also Kejak (2003), who developed an extended model of Lucas with some features [2].

Still, such a model of endogenous growth maintains the possibility of a divergent behaviour. Anyway, the concept of absolute divergence (implied by the marginal equilibrium), is replaced by a less evident concept, of temporary divergence, which cannot replace the general tendency of "catching-up", but which makes the transition process more dynamic, yet prolonging it.

The human capital meaning is referring to the following: intellectual capital, the process of diffusion of know-how is explicitly simulated and the accession process is perceived as a gradual opening of the economy as far as the capital cycles are concerned, on one hand, and as a massive technology transfer among economies, on the other hand, which allows the catching-up of the technology used by the advanced countries. The know-how diffusion implies that there is a 'frontier of theoretical knowledge' which is offered in an endogenous way and that its modifications represent great achievements in science, similar tot an industrial revolution. The economy can surpass this barrier through education, which facilitates the adoption and implementation of new technologies. According to Kejak (2003), such technological diffusion creates externalities of initial type or logistical externalities in the process of know-how accumulation, with the possibility of growing depending on the average level of know-how [2].

According to theory the catching-up process continues as long as the developing countries have something to learn from the developed countries, and will only cease when the knowledge discrepancy between them becomes very small and eventually exhausted.

Therefore Robert Lucas, concluded in 1990 that capital is not flowing from richer countries to developing counties despite of technologies relocation fear, stating so called 'Lucas Paradox' [3].

On the other hand, the European Union has settled a long-term Sustainable Development Strategy (henceforth EU-SDS) to harmonize the economically, policies for socially and environmentally sustainable development, its goal being sustainable improvement of the well-being and standards of living of current and future European and world generations. It is drawn-up on four separate pillars: economic. social. environmental and global governance, which need to reinforce one another. Nevertheless EU must assume its international responsibilities regarding sustainable development [4].

Thus, sustainable socio-economic development represents the main element of the EU-SDS. The strategy sets out the objective of promoting a prosperity, innovation, knowledge-rich, competitiveness and eco-efficiency in economy, which provides high standards of living throughout the EU. Sustainable economic development is a core element of Eu-SDS and Lisbon Strategy.

In addition, EU's strategies also must promote green public procurement, define environmental and performance targets for products social in cooperation with stakeholders, expand the distribution of environmental innovations and technologies environmental and produce information about and appropriate labelling of products and services [4].

The relationship between economic growth and environmental degradation must be taken into consideration and it is more and more very necessary for business environment to pay attention to how much ecosystems can tolerate [5] and to promote more sustainable models of production and and consumption [6]. Financial economic instruments are another way to engender a market that offers less polluting products and services at high quality and to change producer and consumer behaviour. Furthermore, financial support from European funds must be coordinated between the Commission and Member States to optimise efficiency [7]. Prices therefore need to reflect actual environmental and social costs, whereas fiscal measures should be applied to energy and resource consumption and/or pollution [8].

Obviously it is very important to develop business in order to recuperate the economic and industrial lags between economies, but limiting the negative impact they have on the environment, while at the same time not hampering their development is imperatively some for each country (so-called eco-business [9]).

The main problem for Romania is to get rid the lags by achieving economic convergence by GDP/capita, for create durable lacks of imbalances [7]. Although there are substantial costs to catchingup process [10], but taking into account environmental protection also, not least in the lagging regions where infrastructure needs tend to be greatest, there are also substantial potential gains from improvements in health and job creation in the eco-industries, as well as from more sustainable development [11].

3. Sustainable economic development overview in EU-27

Economic growth is measured as the growth rate of Gross Domestic Product (henceforth GDP) per capita, and it reflects the phases of the economic cycle [12].

Entity\year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011**	2012**
EU-27	3.6	1.7	1.0	0.9	2.1	1.5	2.8	2.5	0	-4.6	1.6	1.6	1.7
Belgium	3.4	0.4	0.9	0.4	2.8	1.2	2.0	2.2	0.2	-3.5	1.3	1.6	1.5
Bulgaria	6.3	7.5	5.2	6.4	7.3	6.9	6.8	7.0	6.7	-5.0	0.8	3.3	4.2
Czech Republic	3.8	2.9	2.1	3.6	4.4	6.0	6.5	5.6	1.4	-4.7	2.1	2.0	2.9
Denmark	3.2	0.3	0.1	0.1	2.1	2.1	3.1	1.2	-1.7	-5.7	1.3	1.4	1.2
Germany	3.1	1.1	-0.2	-0.3	1.2	0.8	3.5	2.8	1.2	-4.4	3.8	2.7	2.1
Estonia	10.5	7.9	8.4	8.0	7.6	9.7	10.8	7.1	-5.0	-13.9	3.1	4.7	3.9
Ireland	7.9	3.2	4.0	2.5	2.7	3.0	2.8	2.7	-4.7	-7.5	-0.6	0.3	1.7
Greece	4.1	3.9	3.1	5.6	4.0^{*}	1.9^{*}	4.7^{*}	3.9*	0.6^{*}	-2.4*	-4.7*	-3.7	0.9^{*}
Spain	4.2	2.5	1.2	1.4	1.6	1.9	2.4	1.7	-0.7	-4.4	-0.5	0.4	1.2
France	3.0	1.1	0.2	0.2	1.8	1.1	1.8	1.7	-0.6	-3.3	0.9	1.2	1.5
Italy	3.6	1.8	0.1	-0.8	0.5	-0.1	1.5	0.7	-2.1	-5.8	0.8	0.6	1.0
Cyprus	3.9	2.9	0.8	0.2	1.8	1.4	2.1	3.6	2.4	-2.5	0.6	0.9	1.7
Latvia	7.6	8.9	7.2	7.8	9.3	11.2	12.8	10.6	-3.8	-17.5	0.4	4	4.7
Lithuania	4.0	7.3	7.2	10.7	7.9	8.5	8.5	10.4	3.5	-14.3	2.9	6.2	5.5
Luxembourg	7.0	1.4	3.0	0.3	3.0	3.8	3.3	4.9	-0.3	-5.4	1.6	2	2.5
Hungary	5.2	4.0	4.4	4.3	4.8	3.4	3.8	0.9	1.0	-6.5	1.4	2.9	2.9
Malta	-	-2.4	1.9	-0.9	1.2	3.6	1.2	3.8	4.5	-3.7	2.6	1.7	1.8
Netherlands	3.2	1.2	-0.6	-0.1	1.9	1.8	3.2	3.7	1.5	-4.4	1.3	1.6	1.4
Austria	3.4	0.1	1.1	0.4	1.9	1.8	3.1	3.3	1.7	-4.2	1.8	2	1.6
Poland	4.3	1.2	1.5	4.0	5.4	3.7	6.3	6.8	5.1	1.5	3.7	3.9	3.7
Portugal	3.4	1.3	0	-1.6	1.0	0.3	1.1	2.2	-0.1	-2.6	1.3	-2.2	-1.7
Romania	2.5	5.8	8.0	5.5	8.8	4.4	8.1	6.5	7.5	-6.9	-1.1	1.7	3.9
Slovenia	4.0	2.8	3.7	2.9	4.4	3.8	5.5	6.2	3.5	-9.0	0.9	1.7	2.2
Slovakia	1.3	3.9	4.6	4.8	5.0	6.6	8.4	10.4	5.6	-5.0	3.8	3.4	4.3
Finland	5.1	2.1	1.6	1.8	3.8	2.6	4.0	4.9	0.5	-8.7	3.2	3.2	2.1
Sweden	4.3	1.0	2.2	2.0	3.8	2.7	3.7	2.6	-1.4	-6.1	4.8	3.9	2.2
United Kingdom	3.6	2.1	1.7	2.4	2.5	1.5	2.2	2.0	-0.7	-5.5	1.0	1.0	1.4

Table 1. Growth rate – real GDP per capita

Note: *=Provisional value, **=Forecast

Source: Eurostat, Accessed in 30/08/2011

GDP indicator includes goods and services that have markets and products produced by general government and non-profit institutions. For measuring the growth rate of real GDP (percentage change on previous period), the GDP at current prices are valued in prices of the previous year and the computed volume changes are imposed on the level of a reference year (chain-linked series). Real GDP per capita is calculated as the ratio of real GDP to the average population of a specific year. It is often used as welfare indicator being average of real income in a country. However, it is not a complete measure of economic welfare. For example, GDP does not include most unpaid household work. Neither does GDP take account of negative effects of economic activity, environmental degradation. Real GDP per capita is based on rounded figures. Discrepancies in tables between totals and percentages are due to rounding [13].

According to table number 1, we can notice a decrease in GDP growth on 2000-2003 period; in 2004 it has increased till 2007. Thus we can say EU-27 economic growth developed favourable over the period 2000-2007, but with rates lower than in the late 1990s, and was followed by a substantial drop in 2008. In the current global economic crisis, figures suggest that the GDP per capita growth rate will slump to a negative value in 2009 and vague increase after.

3.1. Economic development

Starting with GDP indicators we can take a look over economic development of EU-27: regional differences in Eu-27 are growing up. Furthermore we can take into consideration the investments by institutional sectors (table no 2) in order to shape the economic development.

Entity/year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU-27	21.07	20.66	20.09	19.81	19.92	20.35	21.19	21.57	21.38	19.32	18.8
Belgium	21.1	20.81	19.06	18.83	19.82	20.73	20.89	21.71	22.39	21.31	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	27.98	28.03	27.5	26.68	25.83	24.86	24.71	25.18	23.94	22.45	-
Denmark	20.18	19.77	19.59	19.26	19.3	19.52	21.66	21.75	20.83	18.16	-
Germany	21.45	20.01	18.34	17.87	17.51	17.4	18.2	18.69	19	17.63	-
Estonia	25.99	26.66	29.78	31.68	30.98	32.07	35.98	34.45	28.62	21.58	-
Ireland	-	-	21.59	22.45	24.44	26.7	27.07	26.44	22.11	15.47	-
Greece	21.61	21.63	22.48	23.29	22.02	19.95	20.91	20.93	19.12	17.09	-
Spain	25.83	26	26.28	27.18	28.04	29.38	30.6	30.68	28.66	24	-
France	19.47	19.48	18.76	18.84	19.3	19.95	20.66	21.45	21.79	20.56	-
Italy	20.32	20.32	20.91	20.35	20.51	20.73	21.09	21.21	20.72	18.91	-
Cyprus	16.98	16.74	18.08	17.51	18.93	19.31	20.61	22.04	22.77	20.58	-
Latvia	24.24	24.86	23.8	24.4	27.46	30.62	32.62	33.66	29.33	21.45	-
Lithuania	18.75	20.18	20.29	21.08	22.28	22.77	25.17	28.3	25.45	17.12	-
Luxembourg	-	-	-	-	-	1	19.19	20.74	20.28	17.27	-
Hungary	23.39	22.98	23.07	22.24	22.47	23.06	21.84	21.36	21.41	20.89	-
Malta	22.94	20.63	16.26	19.63	19.17	20.06	21.06	21.83	16.67	14.76	-
Netherlands	21.93	21.15	19.96	19.47	18.82	18.9	19.69	20	20.58	19.04	-
Austria	23.99	23.26	21.72	22.44	21.96	21.68	21.2	21.43	22.05	21.14	-
Poland	23.74	20.69	18.73	18.24	18.08	18.22	19.65	21.56	22.26	21.23	-
Portugal	27.75	27.04	25.67	23.67	23.32	23.04	22.39	22.22	22.46	19.91	18.98
Romania	18.82	20.49	21.29	21.53	21.77	23.72	25.61	30.2	31.92	26.23	-
Slovenia	26.09	24.73	23.05	23.95	24.94	25.47	26.54	27.69	28.8	23.94	-
Slovakia	25.79	28.51	27.37	24.75	23.99	26.54	26.49	26.15	24.74	20.6	-
Finland	20.04	20.18	18.68	18.95	19.35	20.07	20.01	21.33	21.55	19.54	18.53
Sweden	17.97	17.94	17.35	16.85	17.03	17.9	18.72	19.58	20.03	17.8	17.88
United Kingdom	17.12	16.81	16.79	16.38	16.66	16.73	17.11	17.76	16.63	14.6	-

Source: Eurostat, accessed in 30/08/2011

Investment indicator shows the investment for the total economy, government, business as well as household sectors. The indicator points the share of GDP that is used for gross investment. It is defined as gross fixed capital formation (henceforth GFCF) expressed as a percentage of GDP for the government, business and households sectors. GFCF consists of resident producers' acquisitions, fewer disposals of fixed assets plus certain additions to the value of non-produced assets realised by productive activity, such as improvements to land. Fixed assets comprise, for example, dwellings, other buildings and structures (roads, bridges etc.), machinery and equipment, but also intangible assets (software, patent, licence, etc.).

Fewer modifications in gross investment rate reflect fluctuation in business investment. Thus, downturns during period 2000 and 2003 reflect small development of business investments. Since 2003 investment rate steadily increased as consequence of expanded business spending fuelled determined by favourable economic conditions, till 2007 with 21.57%, moment of downturn again. With considerable uncertainty, forecasts for the next years reflect considerable cutbacks in investments, possible because of reducing business environment.

On the other hand, the rate of saving is another important indicator expressed as gross saving rate of households. There are more and more voices that recall savings (China Economy) as alternative to consumption economy (capitalist economy).

3.2. Competitiveness and eco-efficiency

Productivity development in the economy can be illustrated using real labour productivity per hour worked. The network regarding real labour productivity growth per hour worked is illustrated in figure 1. It is calculated as real output (deflated GDP measured in chain-linked volumes, reference year 2000) per unit of labour input (measured by the total number of hours worked).

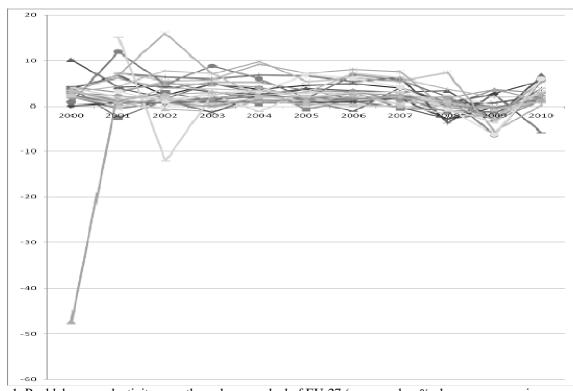


Figure 1. Real labour productivity growth per hour worked of EU-27 (expressed as % change over previous year, index 2000 = 100); Source: Eurostat, accessed in 30/08/2011

Labour productivity per hour worked provides a better picture of productivity than labour productivity per person employed, as it eliminates differences in the full time/part time composition of the workforce across countries and years. Labour productivity of the EU-27 countries is growing but at a slower rate than in 2003. Nevertheless, crosscountry differences remained. The growth rate in EU-27 labour productivity has fallen from 2.2 % in 2003 to 1.1 % in 2007. This has been largely due to a decline in the previously high growth rates of eastern European countries. The slowdown in labour productivity growth between 2003 and 2007, during an economic upswing, might be explained by many factors, such as declining investment per employee, slowdown in the rate of technological progress, les reorientation of the economy toward sectors with high productivity, a relatively small size of the EU's and, not the least, a stagnating share of research and development expenditure in.

4. Catching with the older

Until 2007 economic growth was strong in most of the eastern European Member States (figure 2), with several showing average growth rates of more than 6% over the period 2000-2007 and even as high as 9.4% in Latvia, being far higher than the EU-27 average of 2.0%. The high growth in these countries, mostly driven by exports, was expected to contribute to a progressive 'catching-up effect'.

At the same time the new Member States are being hit strongly by the 2008 financial crisis and nowadays fluctuations.

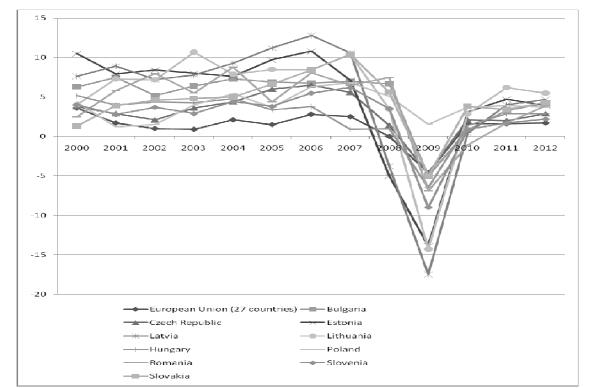


Figure 2. CEE disparities in 2003 (in % of the national GDP per inhabitant); Source: Eurostat, accessed in 30/08/2011

The sharpest declines between 2007 and 2008 occurred in these countries. Latvia's high growth rate of 10.6% in 2007 fell down to -3.8% in 2008 and in had 2009 Latvia the biggest decrease (-17%) followed by Lithuania and Estonia (Baltic Countries). In Estonia the growth rate felled by 12 percentages and other new Member States experienced drops of more than 3 percentage points. Figures show negative rates for all of these countries for 2009 and small positive figures for 2010. Slovakia, then Poland registered around 3 percentage points. Forecasts for 2011 and 2012 show the biggest increase of Eu-27 having Lithuania and other new Member States, over the average of the 10th Central and Eastern Europe (henceforth CEE). Also Romania was touched by the crises with -6.8 in 2009, -1.1% in 2010 and positive forecasts for 2011 (over 1 points) and 2012 (over 3 points).

Gross investments in GDP is relatively higher in newer countries and the share of total gross investments in GDP (26.23%) registered by Romania in 2009 was from afar the biggest one in EU-27, in the light of the current economic crisis.

Furthermore, it can be expressed the dispersion of regional GDP (at NUTS level 3) per inhabitant for CEE related to EU-27 countries (figure 3) in 2007 by summing the absolute differences between regional and national GDP per inhabitant, weighted with the share of population and expressed in percent of the national GDP per inhabitant. The indicator is calculated from regional GDP figures based on the European System of Accounts (ESA95). The dispersion of regional GDP is zero when the GDP per inhabitant in all regions of a country is the same, and increases if there is differences between a region's GDP per inhabitant and the country mean. We can notice a higher dispersion of regional GDP in Central and Eastern European countries in 2007 (the figure 3 shows values under 30%, exception with Slovenia 22.3% and Czech Republic 26.5% and Lithuania with 28.9%). Latvia 45.6%, Bulgaria 41.9, Estonia 41.6%, Hungary 41.3% are registered the highest figures of CEE countries'.

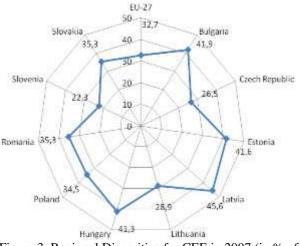


Figure 3. Regional Disparities for CEE in 2007 (in % of the national GDP per inhabitant) Source: Eurostat, accessed in 30/08/2011

Figure 4 illustrates the situation of the older EU countries and the figure 5 compares EU-15 with CEE-10. We can notice that EU-15's regional disparities not surpass anyway 30% level (Ireland registered the higher value by 30%) and CEE-10 not fall under 20% level (Slovenia 22.3% presents the less regional disparities) in 2007 figures handy. The surprise is Denmark with 0% regional disparities. A possible reason may be considered the country size looking to Poland result (34.5%) (Poland is one of the biggest country from EU), but Spain's result (19.8) can refute this hypothesis.

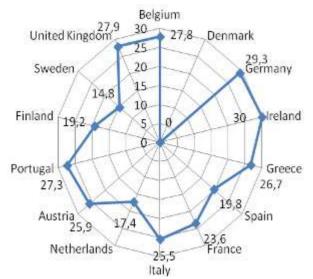


Figure 4. Regional Disparities inside EU-27 in 2007 (in % of the national GDP per inhabitant) Source: Eurostat, accessed in 30/08/2011

In figure 5 it can be clearly noticed the fact CEE regional disparities are above the older Member States (the core).

The rapid transition into market economies has apparently led to high and ongoing polarisation of economic output and an uneven distribution of wealth amongst the regions. Between 2001 and 2006 the within-country dispersion rate of regional GDP raised in 18 out of 24 Member States and there were favourable developments in only a few countries. In 2006, the highest rates of dispersion of regional GDP were in Latvia, Estonia, Hungary and Bulgaria, followed by Slovakia, Romania and Poland. The lowest rate of disparity in 2006 was found in Malta (with only two regions), and in Sweden, the Netherlands, Finland and Spain. Overall, the dispersion rate grew in the EU-27 by 1.1 percentage points between 2001 and 2006 (from 32 % to 33.1 %).

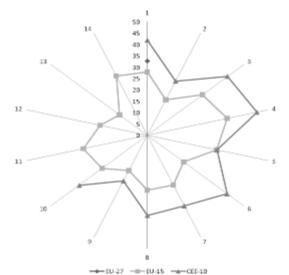


Figure 5. Regional Disparities for EU-27, EU-15 and CEE-10 in 2007 (in % of the national GDP per inhabitant)

Despite convergence, considerable differences between Member States persist.

EU labour productivity growth per hour worked in CEE countries is drawn in figure 6. In 2007, there were seven countries with growth rates higher than 4%: Latvia 7.5%, Estonia 6.2%, Slovakia 6.1%, Lithuania 5.7%, Romania 5.4%, Slovenia 4.2% and Czech Republic 4%. With the crises in front of the door, labour productivity has more decreased in all CEE countries. Romanian labour productivity has decreased considerable, becoming in 2010 the smallest figure in CEE: 0.3%. Despite some convergence of labour productivity growth rates over last few years, which was primarily driven by the slow-down in catching up of Member States in the eastern part of the EU, large difference between countries remains.

5. Conclusions

In this paper the author has chosen to used sustainable economic development indicators, especially economic growth (because they represents the level of living standards in a clean economic society), in order to measure national disparities between EU's countries, and to catch the recuperation process inside EU (especially regarding Romanian situation) can be easier simulated later.

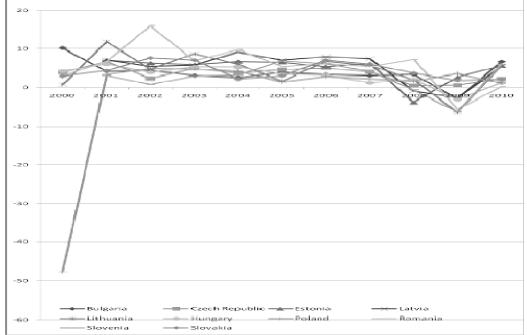


Figure 6. EU Real labour productivity growth per hour worked (% change over previous year, index 2000 = 100) Source: Eurostat

The upturn was not as strong, however, as in the previous economic cycle. As a result of the economic crisis, GDP per capita only grew by 0.4 % in 2008. GDP results release that financial crisis hit new Member States.

Investment rate shows the necessity of stimulus packages to restore confidence. In order to anticyclically compensate for the foreseeable decline in business investment, it is very necessary that cohesion policy, which is aimed at strengthening public investment, especially in the economically least-developed regions, to be re-emphasised inside EU. Cohesion policy is planned to account for almost 6% of expected GDP on average over the period 2007 to 2013. The envisaged measures are intended to stimulate private investment and consumption by restoring business and consumer confidence in the economy.

Nevertheless, enlargement has stimulated labour productivity. Several Member States' growth rates sharply declined.

At this stage it is too early to draw firm conclusions, but this negative trend may be explained by the economic crisis. As we can see above, effects of the crisis start to become visible in economic indicators that are tightly interconnected.

In conclusions, the economic reform is one of the most important steps in this process. Essentially, the reform can be structured in shares stages such as:

- macroeconomic stability, a lasting development premise;
- quicken of economic structural settings to recover the laggings in economic and social conversions range;
- steady monetary and fiscal policies for economic deficit setting and for economic activity providing;
- o regional and local development;
- o legislative and institutions harmonising;
- financial market development as a financial support for a future stable involving.

The global slowing down in growth, investments and relocation among sectors will influence all countries and regions in a similar way. We consider that intensity and duration of relocation slowing varies according to the constant growing rate or can be completely absent. Another issue illustrated is the fact that lower costs with the adoption of know-how are associated with a faster catching-up process [14]. An initial boom produced by the accession process (led by the capital infusion) was followed by recession, some countries being more affected than others.

The paper contribution can be highlighted in 2 ways. First, it supplies a statistic analysis of EU-27 countries about part of sustainable economic development (in terms of growth and standard of living). Second, it analyse the situation of recuperation for CEE economies and the effect the crises had over EU region in these terms, delaying the process of catching-up.

This work was supported by the project "Post-Doctoral Studies in Economics: training program for elite researchers - SPODE" co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/89/1.5/S/61755).

References

- Abramovitz, M. (1986) Catching Up, Forging Ahead, and Falling Behind. Journal of Economic History, Vol. XLVI, No. 2 (June 1986), p. 385-406, ISSN 0022-0507
- Kejak, M. (2003) Stages of Growth in Economic Development. Journal of Economic Dynamics and Control, Vol. 27, No. 5 (March, 2003), p. 771–800, ISSN 0165-1889
- Lucas, R.E.Jr. (1990) Why Doesn't Capital Flow from Rich to Poor Countries? The American Economic Review, Vol. 80, No. 2 (May, 1990), p. 92-96, ISSN 0002-8282
- 4. *** (2010) Sustainable Development Strategy. Available from www.europa.eu/legislation_summaries/environment/ sustainable_development/128117_en.htm, Accessed: 05/02/2011
- Barglazan, D., Draghici, A., Vartolomei, M. (2008) *Ecobusiness a solution for a sustainable business*. Transactions on Economics and Social Sciences, Vol. 6, No. 1-2, (December 2008), p. 19-24, ISSN 1583-7475
- Vartolomei, S., Draghici, A., Jadaneant, M., Vartolomei, M. (2008) Management of Energy Sources in Eco-Efficiency and Sustainable Development Conditions. Annals of Oradea University, Fascicle of Management and Technological Engineering, CD-ROM Edition, vol. VII (XVII), (March 2008), p. 2837-2842, ISSN 1583-0691

- Vartolomei, M. (2007) Integrarea europeană: "Jocul" convergenței (European Integration – the play of convergence). Ph.D. thesis. West University of Timisoara, Romania (in Romanian)
- 8. Popescu, M., Magda, A., Locovei, C., Belu-Nica, R., Vartolomei, M. (2008) La certification des compagnies a la condition d'assurance du management de la qualité et du milieu au soudage, conformément en ISO et les nouvelles directives EWF (Certification of companies under assurance of quality management and environment for welding in accordance with ISO and the new guidelines EWF). Proceeding of 1st International Conference, "Science and Higher Education in Function of Sustainable Development", p. 312-316, ISBN 978-86-83573-07-3, Užice, September 2008, Užice, Serbia (in French)
- Draghici, A., Izvercianu, M., Vartolomei, M., Duran, V. (2009) *Research on Eco-Business Training Requirements*, Environmental Engineering and Management Journal, Vol.8, No.4, July/August 2009, p. 709-713, ISSN 1582-9596, Iaşi, Romania
- Volkery, A, Swansson, D., Jacob, K., Bregha, F., Pinter, L. (2006) *Coordination, Challenges, and Innovations in 19 National Sustainable Development Strategies.* World Development Journal, Vol. 34 No. 12, (December 2006), p. 2047-2063, ISSN 0305-750X
- Vartolomei, M., Vartolomei-M, S., Ciobotaru, D. (2008) Development of some unconventional and non pollutant energy sources in economic efficiency and sustainable conditions. Proceedings of Quatrième Edition du Colloque Francophone sur Energie-Environnement-Economie-Termodinamique (COFRET), ISBN 2-6905267-61-5, L'Ecole de Mines Nantes, June 2008, Nantes, France
- Talvescu, D., Dima, A.M. (2008) Strategies for regional sustainable development in South West Oltenia. Journal of Management & Marketing, Vol.3. Nr. 3, p. 39-68. Available from www.managementmarketing.ro/pdf/articole/109.pdf, Accessed: 03/02/2011
- *** (2009) Monitoring Report of the EU Sustainable Development Strategy. Available from www.epp.eurostat.ec. europa.eu/cache/ityoffpub/865-en/en/865-en-en.pdf, Accessed: 09/03/2011
- 14. Beninin, R, Czyzewski, A. (2007) Regional disparities and economic growth in Russia: new growth patterns and catching up. Journal of Economic Change and Restructuring, Vol. 40, No. 1-2, (December 2007), p. 91-135, DOI 10.1007/s10644-007-9026-0