Relative Total Performance Index – An International Comparison in a New Perspective

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Hungary is facing fundamental challenges in the coming years. On the one hand, according to the strategy of Europe 2020, she has to find the way to develop a knowledge-based, more competitive and sustainable economy. On the other hand, relative weakening of her position enhances the importance of convergence. The processes of sustainability and convergence require a new approach to quantify the performance of the member states (among them Hungary), as well as that of the candidate countries. We propose to develop a (relative total performance) index based on international rankings that both expresses the different interpretations of sustainability and gives an opportunity for a comprehensive comparison of different countries.

KEYWORDS:
Sustainable growth.
Convergence theory.
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A new strategy and a novel methodological approach were developed for the next period of the history of the European Union. The policy titled "Europe 2020" is to serve as a fundamental reform programme of the Union. One of the key challenges of this renewal is to integrate growth, employment, and *sustainable development*.

Last year two important statistical committees have published papers on how to *reform methodology*. *Stiglitz*, *Sen* and *Fitoussi*'s report summarised what principles and methods were recommended by their research group to measure socio-economic performance (*Stiglitz–Sen–Fitoussi* [2009]). At the same time, the European Committee issued a communication on social progress entitled "GDP and beyond. Measuring progress in a changing world" (*Commission of the European Communities* [2009]). It is important that both papers see the problem of socio-economic performance not as a narrowly defined issue of methodology but as a politico-strategic subject.

By 2010, the transition and development of Hungary reached a milestone. The importance of convergence is continued to be highlighted by the relatively poor performance of the past two decades as well as the negative effects of the crisis. All efforts are to be made to implement both the short- and long-term goals set out by the current development strategy of Hungary (*Adamecz et al*. [2009]).

The issue of how sustainable development and convergence can be harmonized and what methodology can support it are of key importance for domestic economic policy. In addition, in the wider perspective of sustainable development, the relations existing between the Europe 2020 strategy and the monitoring system of socio-economic development raise some important questions:

1. Are the objectives set out by the strategy really based on sufficiently up-to-date premises?

2. Should the opportunities to utilise Europe's outstanding competitive advantages in certain areas and her international position be given up due to the grave impact of the current crisis? Is it necessary and possible to elaborate a new strategy based on a different approach?

3. Is the set of indicators linked to the Lisbon Strategy or the most complex database of the European Committee and Eurostat (SDI – sustainable development indicators) or the annually updated OECD Factbook (Economic, Environmental and Social Statistics) sufficient to evaluate the candidate countries?

The next chapters will give response to these questions.

1. The fall of strategic thinking

The announcement of the Lisbon Strategy and its priorities reflected the international and European euphoria of the year 2000. Nevertheless, the *integration* of the aspects *of economy, society, technology and legal harmonisation* that were previously subject to separate observations was a major breakthrough. This also continued to serve as a basis for revising strategies (*Zádor* [2005a], [2005b]).

By 2009 it had became clear that the Lisbon strategy and its 2005 renewal did not result in a fundamental change in how Europe progresses and it was not enough to reverse the process during which the United States outperformed the European Union internationally. It was aggravated by the unfolding international financial and economic crisis, which underlined the fact that neither the Union nor most of the member countries have a clear vision.

The Commission has proposed the *European Economy Recovery Plan* to manage the downturn. It shall *co-ordinate budgetary stimulus similarly to the Stability and Growth Pact*, boost demand, and restore confidence, taking into account what bases the member states have and what efforts were made in response to the economic problems. In line with the Recovery Plan agreed on by the European Council, member states are to revise and re-submit their respective stability or convergence programmes assessed by the Commission, considering the *need to ensure the reversibility of fiscal deterioration, to improve budgetary policy-making and to guarantee a long-term sustainability for public finances.*

Europe 2020 involves *four main pillars* (research, development and innovation; business environment; employment opportunities and an integrated energy/infrastructure policy) that were identified by the European Council as priority areas. It is to integrate the main elements of the different strategic programmes of the past decade, like knowledge-based society, sustainable development and social cohesion, and to result in a strategy of smart, sustainable and inclusive growth (*EC* [2010]).

2. Sustainability and strategy – a renewal

Today one of the strategic goals of the EU is to elaborate a set of tasks to ensure new, qualitative convergence. The Europe 2020 strategy aims at harmonising the demand of the European catching up with sustainable development. The Lisbon Strategy, launched in 2000, has made efforts to integrate long run social visions with the short run needs of economic growth in a sustainable way but it has lacked an overall success.

There is a need to renew strategic thinking (*Gáspár* [2008a]), involving the lately emerging trends of the global world. Its content, just like that of competitiveness should be aligned with the principle of sustainability. The actual matter of *sustainable development* must be determined keeping the importance of *social and environmental issues* and the resolutions thereof in mind, as well as taking the diverse correlation between these problems and *economic development* into consideration (*Szabó* [2007]). The *separate and integrated analyses of these three latter areas are a prerequisite for evaluating the international position* of a country, and the tasks emerging from the assessment must also be approached in the same way.

Each individual area was given a thesis (*Zádor* [2009]):

Thesis No 1: Sustained, that is balanced development and growth of the economy presupposes the socially and ecologically sustainable stabilization of the economy. In other words:

a) Economic growth does not result in major domestic and external imbalances; the involvement of external funding is not to finance an already imbalanced situation;

b) Human resources, economic restructuring, innovation, and adaptation are key assets to ensure external and internal funding;

c) Economic growth does not lead to environmental degradation; sustainable development means intensive high-tech rather than extensive development.

Thesis No 2: Social sustainability is about the integration of economic growth and social cohesion. That is, there is a social and political consensus to prevent social degradation. To this end, the systems of social distribution and international funding have to promote solidarity, fairness, and social incentivisation: the redistribution of centralised revenues shall create opportunities through education and an efficient health care system. Social sustainability presupposes a social dialogue to disseminate information and enhance involvement. Quality of life is a key issue for a sustainable society, it is about economic, social and environmental sustainability, in other words about environmentally conscious work and life.

Thesis No 3: One of the key aspects of sustainable development is a holistic approach in which both planning and control take into consideration how the society, economy and environment interact with each other to ensure balanced operation. From an environmental point of view it can be achieved if *a)* the economic and social stakeholders are interested in an environmentally friendly way of work and life; *b)* the development of the urban and transport systems is to enhance the quality of life for the members of society; *c)* the use of available energy supplies is based on a nation-wide consensus.

3. Monitoring and evaluation – an alternative method

Several attempts were made to use composite indices to measure progress (*Bandura* [2005]). We selected from the available, most widely used rankings in order to cover as many aspects of the socio-economic and environmental development as possible. We believe that the findings of the individual rankings will call forth a comprehensive picture that is suitable to assess and compare the development level of the Balkan and East-Central Europe respectively, while offering an exciting opportunity to compare the results of the different types of development analyses (*Adamecz et al*. [2008]). On the one hand, it is to outline the relative situation of a country by *examining several aspects at the same time*; on the other hand, to provide a detailed socio-economic comparison based on *particular indicators* of statistical and questionnaire surveys of individual rankings. Our presentation covers both areas.

3.1. International rankings and the relative total performance index

To handle the findings in a uniform way and to give a comprehensive overview, it must be taken into account that the *rankings mainly reflect the attitudes and value judgments of the Euro-Atlantic world* and only summarize a framework to infer how developed Hungary is and what perspectives of strategic development she has.

One of the main difficulties of a comprehensive analysis is the diverse nature of rankings created for various countries. However, a socio–economic overview requires standardization. A too narrow group of countries (for example regional or subregional groups such as the Visegrád countries) is not adequate to make worldwide comparisons and to explore central/peripheral situations. At the same time, a too wide group may result in a distorted picture: the individual aspects of development do not change in a linear fashion from country to country, their density is greater in the first third of the ranking lists. A wide spectrum is also not proper to highlight qualitative differences between developed and quasi-developed countries.

At first, we included a total of thirty OECD countries in our research, then supplemented it with five countries invited to be full members of the organisation in 2007 – Chile, Israel, Slovenia, Estonia, and Russia, from which the first three became full member in 2010 – as well as five potential members (Brazil, China, India, Indonesia and South Africa) being part of the process of enhanced engagement. Non-OECD EU countries, neighbouring countries and South-Eastern European countries were also covered to make a regional comparison possible. From the latter we have excluded Albania and Moldova because of their largely different development and State Union of Serbia and Montenegro due to the high number of missing data in

some areas. Thus, the circle of countries was extended by ten more (Malta, Cyprus, Bulgaria, Romania, Latvia, Lithuania, Croatia, the Ukraine, Bosnia and Herzegovina, and Macedonia) to include fifty countries in total.

International rankings offer two types of situation analysis: the first is *based on ranking positions,* the second *on the underlying sets of values*. When drawing conclusions from the first ones, we face many issues in addition to the problems of non-cumulative and directly non-comparable rankings. On the one hand, the purpose of country rankings reflects *competitiveness*. To be more precise, it is about the assumption that a higher ranking reflects a better state of affairs and indicates increasing conditions to shape the future as well as a more promising position to develop. On the other hand, the ranking position of individual countries does not reflect the difference between the quality levels of their respective performance and the uneven changes or leaps thereof.

For these reasons, the *sets of values themselves are more representative*. Obviously, due to their nature they are not cumulative either. It can also be an issue that the value data of some indices does not reflect the general standard of performance of the examined countries. That is, it cannot be judged how much a good performance as per a given aspect (for example the level of freedom of economic activities) is actually worth on an international scale, and how much it contributes to the development possibilities.

Therefore, ranking data are also needed to express the hierarchic structure of the global economy and the opportunities for development. In addition, the data are not concentrated around one composite variable, they are comprehensive enough to describe realistic potentials and conditions. Finally, we must add that the current global financial system is based on Euro-Atlantic values and competitiveness, and Hungary is also subject to them.

When comparing the aspects of rankings both the values and the positions must be considered in a complex way. Each must express the *relative performance of the given country compared to the leading ones.* The basis of reference is not a special reference value – which is not even available most of the time – but the best and worst performing countries. It is to examine the actual range of values, since the bottom value is not zero. However, this approach shall not go beyond the scope of competitiveness but to ensure adequate evaluation.

The combined effect of ranking and value data has been considered according to their respective geometric average as follows here (*Gáspár* [2008a]):

$$\text{Relative total performance} = \sqrt{\left(1-\frac{R_H}{R_{min}}\right)\left(\frac{V_H - V_{min}}{V_{max} - V_{min}}\right)},$$

where R stands for ranking, V for the index value underlying the position, H stands for the Hungarian position or value, respectively. The minimum position is R_{min}=50, with one exception: the indices of Malta, Cyprus, and Luxembourg are not ranked because of their small size in the case of ESI (environmental sustainability index). Calculating $1-\frac{R_H}{R_{min}}$ will give the relative ranking score of the country, while $\left(\frac{V_H - V_{min}}{V_{max} - V_{min}}\right)$ results in the relative ranking value. The final value of the index combines the two relative performance levels by geometric mean. It can run from 0–1 or 0–100 percent and refers to the overall performance in terms of the country of the higher value.

We have selected four international indicators to compare and to link the rankings numerically. These are as follows:

– global competitiveness index (GCI) prepared by the World Economic Forum;

– index of economic freedom (IEF) published by the Heritage Foundation. It has administrative and social aspects too;

– environmental sustainability index (ESI) calculated by the Universities of Yale and Columbia; and

– human development index (HDI) of UNDP.

These indicators, when used together, embrace the economic, social, and environmental aspects of competitiveness and sustainability. In addition, instead of one index they provide a more detailed image in some aggregate particular indices (see Table 1).

Regarding values of individual indices of the selected countries, it is realistic and reasonable to distinguish three main groups – *leaders, middle-range and catching-up countries* – and two *subgroups* (*bottom* and *top*) within each of them, that is, we have altogether six groups[1]: *a*) Absolute leaders give 82.6–100 percent of the best performance of the countries; *b*) second line of leaders 66.1–82.5 percent; *c*) top middle range 50.1–66.0 percent; *d*) bottom middle range 33.1–50.0 percent; *e*) promising catching-up countries 16.6–33.0 percent; while *f)* countries falling behind 0–16.5 percent of that.

[1] Note that these names refer to the selected group of developed and semi-developed countries. Therefore, the "falling behind" category does not allude to the development level of the poorest regions of the world.

Table 1

Relative total performance of Hungary, 2008

Denomination	Ranking score*	Relative ranking score	Ranking value	Relative ranking value	Relative total performance (percent)
GCI	**42**	**0.16**	**4.22**	**0.30**	**21.91**
Basic requirements	39	0.22	4.43	0.22	22.00
Efficiency enhancers	38	0.24	4.31	0.38	30.20
Innovation factors	37	0.26	3.75	0.31	28.39
IEF	**28**	**0.44**	**67.20**	**0.53**	**48.29**
Business freedom	29	0.42	73.90	0.53	47.18
Government size	45	0.10	26.50	0.26	16.12
Freedom from corruption	28	0.44	52.00	0.38	40.89
Labour freedom	18	0.64	66.80	0.36	48.00
ESI	**27**	**0.42**	**52.00**	**0.36**	**38.88**
Environmental systems	32	0.31	38.40	0.23	26.70
Reducing environmental stresses	15	0.68	49.50	0.64	65.97
Reducing human vulnerability	7	0.85	79.80	0.95	89.86
Social and institutional capacity	24	0.48	67.00	0.72	58.79
Global stewardship	35	0.25	30.60	0.25	25.00
HDI	**30**	**0.40**	**87.40**	**0.73**	**54.04**
Life expectancy index	37	0.26	79.90	0.70	42.66
Educational index	24	0.52	95.80	0.90	68.41
GDP index	30	0.40	86.60	0.67	51.77

* Among 50 countries, except for ESI, where 47.

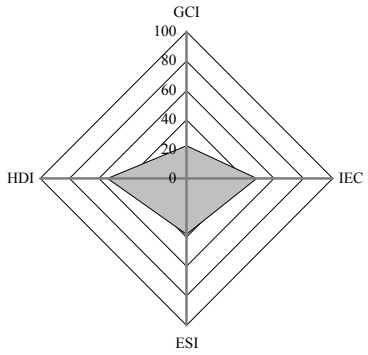
3.2. Relative total performance of Hungary[2]

Hungary, in general, *is in the middle range* of the developed–semi-developed countries, though she shows large discrepancies *by key criteria*: for example, human resources are in the top middle range, business freedom is also ranked close to this, while the environmental conditions are in the bottom middle range. As opposed to

[2] The following analysis is *based on* the RTP results which are enriched by information from indicators of a wide range of other rankings relying on inward foreign direct investment, outward direct investment, or such as capital access index, doing business index, Kearney's globalisation index, UN index, Fitch Ratings', Standard & Poor's, Moody's ratings, OECD Employment Outlook, OECD Taxing Wages Report, Economic Intelligence Unit's database, EIU e-readiness index, World Economic Forum network readiness index, European scoreboard rankings of the European Committee. For further details, see *Adamecz et al.* [2008].

these, in terms of competitiveness, Hungary is amongst the catching-up countries. This is remarkable because the individual aspects are interrelated, that is, general competitiveness is also about the availability of human resources, the state of the natural environment as well as environmental attitudes.

Figure 1. Relative total performance of Hungary by four indices, 2008
(percent)



On the one hand, a deeper analysis requires detailed factors. For these latter, key indicators of the composite indices were chosen, for which the rankings also provide performance values. On the other hand, the textual analysis is supplemented with information gained from the overview of other indices and their underlying indicators.[3] These are to provide a deeper insight. (See Figures 2 and 3.)

It should be noted that these individual indices result in a "combined" overview. That is, they indicate *disproportions and* some *inherent stress factors* in how Hungary develops: she belongs to the leading countries in certain areas, but in others, her performance is similar to that of those falling behind. However, not only the entirety of the factors but also *the individual aspects* shows disproportion. The cobweb graphs well illustrate the distortions (or rather imbalances). This *dual disproportion* is a key feature of the Hungarian economy and society.

Out of the fifteen examined individual indicators, seven are in the middle-range, six in the catching-up and only two are in the leader group. It is a good base to characterize the relative situation of our country. Since nine indicators fall into the lower middle-range group or into the catching-up category, that is, in their case, *Hungary performed below the average of the fifty examined countries.*

[3] For example, ESI that comprises five indicators is calculated by the weighted averaging of their 21 components and their respective 76 variables. These indices include: energy supply, energy supply and economic growth, nuclear energy, electricity generation, energy supply per capita, renewable energy, energy production, oil production, oil prices, water consumption, fisheries, emission of carbon dioxide, municipal waste, energy efficiency, energy intensity, energy dependency, etc.

Figure 2. Composition of the four main indices in terms of relative total performance, 2008
(percent)

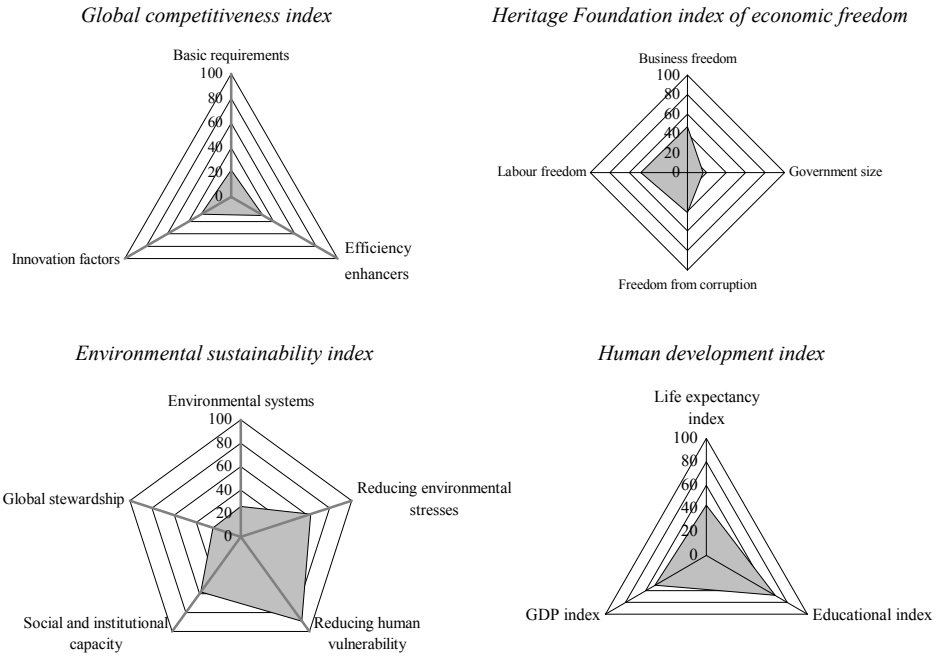
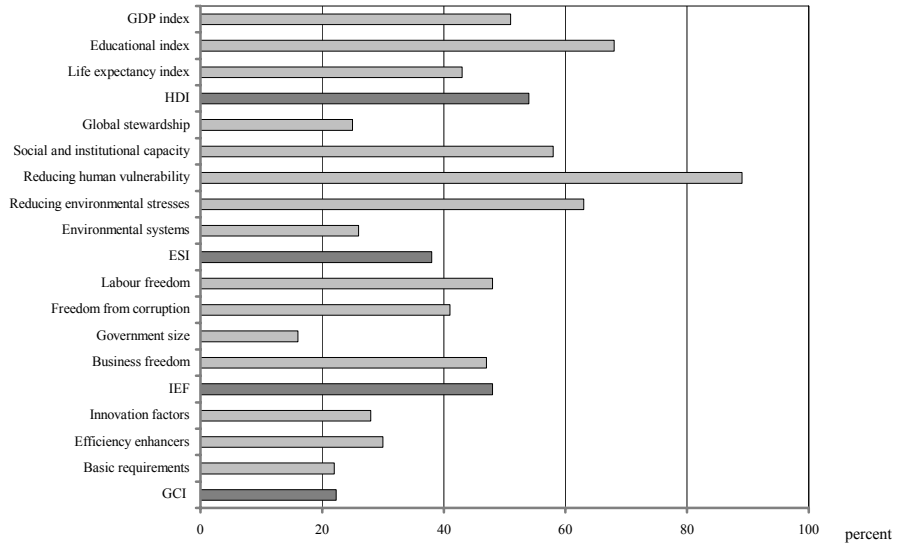


Figure 3. State of the development categories of Hungary in terms of relative total performance, 2008



As regards human factors (*environmental attitudes,* education and training), we are among the most developed countries. The reduction of human vulnerability – in which our country has promising results – means that socio-economic changes do not bring about environmental degradation. However, our outstanding value is somewhat misleading since the comparison included every country of the world and it was based on such specific variables, like the death rate caused by infections or by floods, hurricanes and draughts, the level of malnutrition, accessibility of drinking water.

Concerning education and training, Hungary is a developed country – the educational index of HDI offsets the low level of incomes. The index of IT society and the GCI indicators show further imbalances: our mathematical and science education is outstanding and we have workforce of diverse qualifications. However, the technical and scientific qualifications show a much less favourable picture, namely the comparative advantages of this asset are not exploited. Another complicating factor that both basic education and adult training are mainly theoretical, not practical: the Pisa research showed above-average scientific and factual knowledge and below-average reading comprehension as well as deductive and practical skills. Based on the parameters, higher education shows deficiencies in the skills of organisation and application management as well as in life-long learning. In other words, our knowledge assets are theoretical, not practical. Our highly qualified workforce is only *a declining potential, namely, it is rather an asset factor than capital*.

From the classical aspect of development/catching-up, based on the *purchasing power parity value of national GDP*, Hungary is at the *bottom of the higher middle range*. The remaining social indicators of environmental sustainability – the social and institutional capacity and the reduction of stress – are mainly peculiar to this category. These indices include indicators on education and research to enhance the understanding of what attitudes the private and public stakeholders show in terms of environmental policies. Environmental stress, water, and air pollution, etc. values have always given a favourable picture compared to those of the developed countries.

The 1990s saw the end of central planning and the revival of a market economy. At the end of 2000, the private sector accounted for 86 percent of the gross domestic product (GDP). Following the crisis of the early 1990s, triggered by political transformation and the collapse of East European markets, the economy rebounded at the end of the decade. Appreciating this, the European Union started accession negotiations with our country in 1998, and she became a full member of the European Union on May 1, 2004.

In 2008, Hungary was in the *bottom middle range* concerning the *freedom of certain economic factors*. This rank is based on economic freedom indicators, on other indices of competitiveness and on the findings of e-readiness rankings. One of the key lessons is that the countries in the middle range show great differences. Our

country is strongly globalized even compared with developed countries: each index on openness and freedom of mobility shows clear signs of liberalization and cross-border integration in terms of economic relations, trading policies, foreign direct investments (FDIs) and the division of labour. The Hungarian legal regulations aim at facilitating foreign direct investments.

At the same time, cross-border flow of FDIs shows discrepancies: inbound FDI is twice as much as what would be required based on the performance of the country, while outbound FDI is less than what the same measure would justify (capital access index). International integration and foreign direct investments need more efficient *state administration* (regulatory environment, governmental efficiency, etc.) than it is today (*falling-behind*) since our political and regulatory environment is complicated and hardly efficient.

This led us to the following issue: each particular indicator *of global competitiveness ranks Hungary in the group of the catching-up countries* of the developed and dynamic world. The rankings of the World Economic Forum is based on institutional, infrastructural, health and educational features and the stability thereof, in which Hungary position is the worst, even if education is far better than the others. The indicators show stability problems and excessive state interference. In terms of financial risks, the credit rating agencies rate Hungary to the upper medium class. This is detailed further by other indices of financial stability. Based on the index measuring the implementation of the Lisbon objectives, there is a significant drop in the performance of Hungary. On the social side, the index of life expectancy within HDI pulls down the index of relative income.

The efficiency enhancers of the global competitiveness index is to highlight the characteristics of the market as well as the technical and higher education. *The Hungarian state* is criticized as oversized, expensive, and *inefficient*. The doing business index shows a contradiction: our business regulations, start-up environment, and lending conditions are ranked as middle range. However, favourable start-up conditions do not offset high taxes and the deficiencies of investor protection, transparency, and responsibility. The capital access index emphasizes a better than average financial environment of capital acquisition, however, the development of the stock market is weak. Another issue is the already mentioned discrepancy between the available human resources and labour market requirements. Foreign investors have different labour market demands and they mainly need blue-collar workforce; the economic activity and employment of technical workforce is below the OECD average; however, Hungary ranked fifth and third respectively in terms of rates of taxes and social contributions among the most developed countries.

Innovation is a key to competitiveness in the group of the most developed countries. There are indicators on how sophisticated and innovative the business environment is. GCI classified Hungary into the catching-up group. This rating can be

supplemented by other indices. In spite of relatively high research and development expenditures and an education system that outperforms the EU average, the *innovative potential of Hungary is low*. One of its causes is the low level of application of the formerly mentioned available assets of knowledge, as well as that of innovation of the business sector. Note that our economy and governance are highly globalised, but our technological adaptation is quite low and the people are not sufficiently open to foreign ideas (with the exception of tourism). Another factor is the low-grade adaptation and exploitation of cutting-edge technologies in enhancing development.

Hungarian consumers are not open to innovative solutions. This may be in connection with their not adequate environmental consciousness highlighted by the index of environmental sustainability. It may result in environmental degradation, for example in water and soil degradation and in the decline of ecosystems and of biodiversity. At the same time, our biodiversity is one of the most valuable national assets.

3.3. Relative total performance of the international environment of Hungary

We have studied which countries are the closest to Hungary in terms of performance. Due to the fact that the different lists of values are not comparable alone and the relative total performance calculations are not available for all the countries, we have chosen a temporary solution: the respective data of only three countries below and above Hungary in the rankings we calculated. Thus, they, together with Hungary, make up 14 percent of the fifty countries. (See Table 2.) We are aware that this list changes from year to year, therefore, we did not weight them based on the vicinity in the rankings, we only paid attention to the characteristics of the group. It is apparent from the summary that the majority of countries showing similar performance to that of Hungary are among the *less- and semi-developed countries*, together with Italy, which underperforms because of its great internal division. The Visegrád countries are all present in the nearest circle, together with the Baltic States. Looking at the entire list, the lower section of the more developed countries, namely the Mediterranean countries, the second and third wave countries of the North in the EU (Lithuania, Latvia, Poland), as well as the semi-periphery of the North American Free Trade Agreement (Mexico) show performance similar to Hungary. It is worth mentioning that the United States of America, the United Kingdom, and Germany have all been listed near Hungary regarding environmental sustainability. In other words, some East-Central European transitional countries have caught up with the most developed regions of the world since the regime change in terms of environmental issues.

Table 2

Position of countries in relation to Hungary in the ranking list of fifty countries

Denomination	Country below and above Hungary in the rankings*					
	–3	–2	–1	+1	+2	+3
GCI	**Indonesia**	**Mexico**	**Croatia**	**Turkey**	**Brazil**	**Greece**
Basic requirements	Russia	Italy	Mexico	Macedonia	South Africa	Poland
Efficiency enhancers	Lithuania	Malta	Latvia	Russia	Indonesia	Brazil
Innovation factors	Indonesia	Latvia	Slovakia	Malta	Poland	Turkey
IEF	**Czech Republic**	**Latvia**	**Republic of Korea**	**Mexico**	**Israel**	**Malta**
Business freedom	Italy	Latvia	Romania	Slovakia	South Africa	Cyprus
Government size	Finland	Malta	Croatia	Austria	Denmark	Belgium
Freedom from corruption	Malta	Israel	Cyprus	Republic of Korea	Italy	Lithuania
Labour freedom	Cyprus	Belgium	India	Slovakia	Latvia	Mexico
ESI	**Chile**	**USA**	**Slovakia**	**Bosnia and Herzegovina**	**Israel**	**United Kingdom**
Environmental systems	Mexico	Germany	United Kingdom	Romania	Poland	Greece
Reducing environmental stresses	Ukraine	Turkey	India	Macedonia	Sweden	Norway
Reducing human vulnerability	Iceland	Czech Republic	Austria	Poland	Sweden	Netherlands
Social and institutional capacity	Ireland	Italy	Estonia	Poland	Czech Republic	Israel
Global stewardship	Macedonia	Estonia	Slovakia	Australia	Czech Republic	China
HDI	**Portugal**	**Czech Republic**	**Malta**	**Poland**	**Chile**	**Slovakia**
Life expectancy index	Bosnia and Herzegovina	Slovakia	Macedonia	Bulgaria	Lithuania	China
Educational index	Lithuania	Latvia	Italy	Russia	Germany	Poland
GDP index	Czech Republic	Portugal	Malta	Slovakia	Estonia	Lithuania

* *Note*. Higher numbers mean better results.

On the OECD basis, the relative total performance of ten Balkan and East Central European countries was calculated (see Figures 4–7). These are (in alphabetical order) Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Poland, Romania, the Slovak Republic, and Slovenia. Owing to the high number of missing data, Serbia and Montenegro were not involved in the research. Although this is a great loss; the comprehensive comparison of fifty countries was a good starting point to develop an alternative view on how developed the selected countries of our region are. (See Figures 4–7.)

In terms of *global competitiveness* (see Figure 4), most countries of the region are in the *catching-up or falling behind category*, except for Slovenia and the Czech Republic, which reach the (lower) middle layer of relative total performance. Of the surveyed Balkan countries, Croatia performed better overall than Romania, Bulgaria, and Macedonia, while Bosnia and Herzegovina ranked worst on an OECD basis. Among the competitiveness factors, the basic requirements have the relatively highest position in the Balkan countries where Bulgaria has the most even performance in terms of the different factors. Concerning efficiency, Romania, while in terms of innovation, Croatia held a more advantageous position. Efficiency is the key to competitiveness of the East Central European countries. Only the Czech Republic and Slovenia shows a relative innovation advantage.

The *performance* of the observed countries, on average, was *better* in terms of *economic freedom* (see Figure 5) than in competitiveness. Most of them are classified as "catching up" or "falling behind" on an OECD basis. The East Central European countries approximate the top middle range (the Czech Republic and Slovenia even fall in it), Bulgaria reached the bottom middle range, while Romania and Macedonia are also close to the latter one. At the same time, Croatia performs worse. Note that *overall freedom performance integrates many types and underlying characteristics of freedom*. Transition resulted in a large-scale privatisation mainly in Romania, Macedonia, Bulgaria, and Bosnia-Herzegovina. Oversized government is still a limiting factor in Hungary, Croatia, and Slovenia. Another general characteristic of the Balkan countries is that the advanced stage of privatisation and labour market liberalization are accompanied by deficiencies in the fight against corruption – except for Croatia –, and in the establishment of a business friendly start-up environment.

Environmental issues (see Figure 6) show a quite different picture. Croatia, Slovakia, and Romania reach the top middle range while Bosnia-Herzegovina, Hungary and Poland ranked in the bottom middle one. As a result of the overall state of development, Bulgaria and Macedonia perform better environmentally than Slovenia and the Czech Republic. The factors of "*reducing environmental stresses*" *and* "*reducing human vulnerability*" *play the leading role in the observed countries.* According to international surveys and comparisons, Poland, Croatia and Slovakia are the most environment-friendly countries.

The human factor (see Figure 7) of sustainability is measured by the human development index, which is in all cases in the bottom or top middle categories or very close to them. The differences among the countries are also smaller than for competitiveness or economic freedom. *The structure of the human development index is quite divergent*. Life expectancy indices are the most even as expected. In terms of education, the differences are much higher; however, the GDP performance polarises the countries to the greatest extent. It seems that the Balkan and East Central Euro-

pean countries are better developed in terms of human factors than economically-technically, which offers a better chance to catch up. In case of Slovakia, the Czech Republic and partly Croatia, the three factors of human development are quite even, while Slovenia, Poland, Hungary, Romania, and Bulgaria take an education-based approach.

Comparison over time shows that the *rating of Hungary* improved by 2000 and *declined in the last 8 years*, even set against other stagnating or developing Visegrád countries.

Table 3

Relative total performance of the selected countries
(percent)

Denomination	Bosnia and Herzegovina	Bulgaria	Croatia	Czech Republic	Hungary	Macedonia	Poland	Romania	Slovak Republic	Slovenia
GCI	**0.00**	**9.33**	**23.35**	**48.22**	**22.00**	**5.34**	**29.36**	**14.12**	**37.22**	**43.44**
Basic requirements	0.00	9.80	34.87	40.44	22.11	20.87	18.09	7.66	33.21	50.60
Efficiency enhancers	0.00	10.27	12.87	52.15	31.12	3.66	37.15	22.56	47.00	41.52
Innovation factors	0.00	8.16	25.69	55.09	28.69	4.90	25.69	13.95	30.55	45.50
IEF	**8.37**	**34.66**	**13.11**	**53.55**	**48.48**	**28.80**	**21.72**	**30.50**	**54.93**	**25.63**
Business freedom	17.20	31.65	19.90	25.15	47.30	27.33	14.48	48.52	36.71	45.45
Government size	48.80	58.30	18.35	44.06	16.23	68.57	40.75	80.91	53.97	27.39
Freedom from corruption	7.45	24.04	16.67	35.59	41.37	4.08	19.93	9.86	32.96	53.39
Labour freedom	15.16	60.12	8.02	55.71	48.39	33.10	14.14	20.19	45.20	0.00
ESI	**37.06**	**30.50**	**65.30**	**21.59**	**39.53**	**23.48**	**47.68**	**52.48**	**57.49**	**18.83**
Environmental systems	53.33	42.96	57.40	18.76	27.35	44.12	37.82	81.40	68.24	39.53
Reducing environmental stresses	85.66	42.96	96.19	18.11	65.90	64.62	44.93	90.60	30.51	48.26
Reducing human vulnerability	53.28	48.42	74.58	92.93	90.04	34.65	55.12	45.97	97.03	7.19
Social and institutional capacity	4.56	17.91	35.07	51.85	54.40	12.07	53.14	7.47	65.27	30.29
Global stewardship	19.59	17.67	43.39	22.20	25.52	31.68	64.77	13.90	44,62	37.85
HDI	**30.81**	**35.95**	**41.48**	**58.56**	**54.06**	**27.02**	**52.28**	**33.34**	**48.76**	**65.34**
Life expectancy index	49.11	40.89	53.01	56.56	42.79	45.30	51.33	32.78	47.31	59.66
Educational index	30.88	51.24	38.68	53.67	69.95	33.07	63.89	42.82	47.53	81.51
GDP index	15.26	26.62	38.98	57.89	51.86	17.34	42.60	25.10	48.67	61.66

Figure 4. Global competitiveness index of the selected countries, 2008

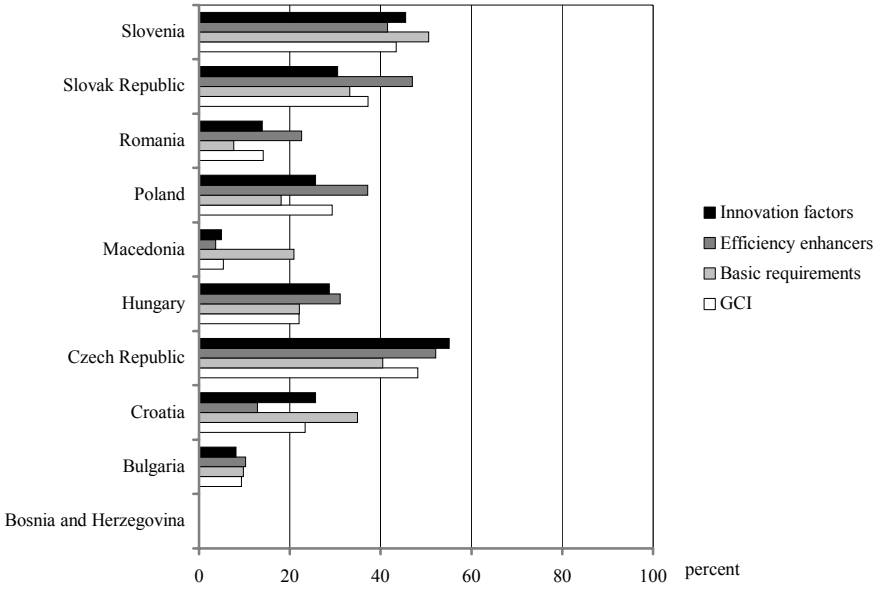


Figure 5. Index of economic freedom of the selected countries, 2008

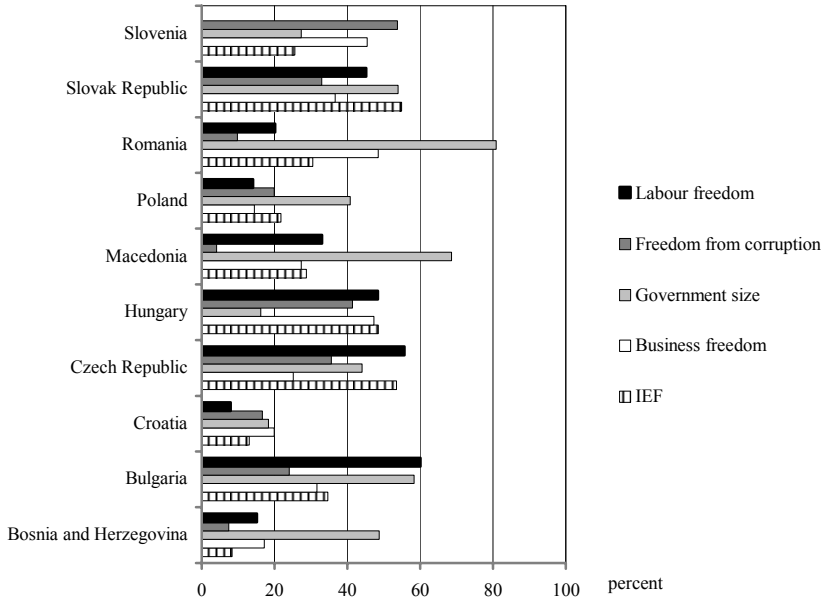


Figure 6. Environmental sustainability index of the selected countries, 2008

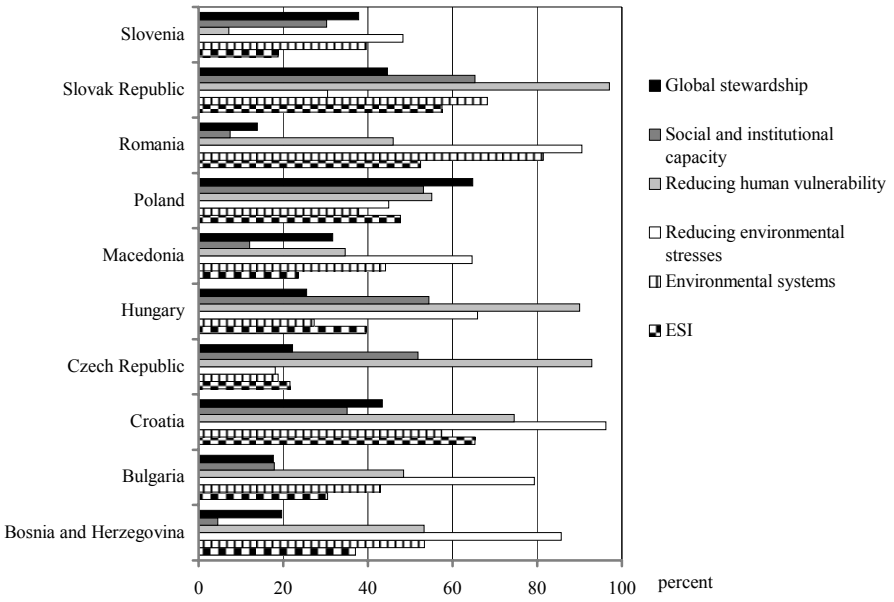
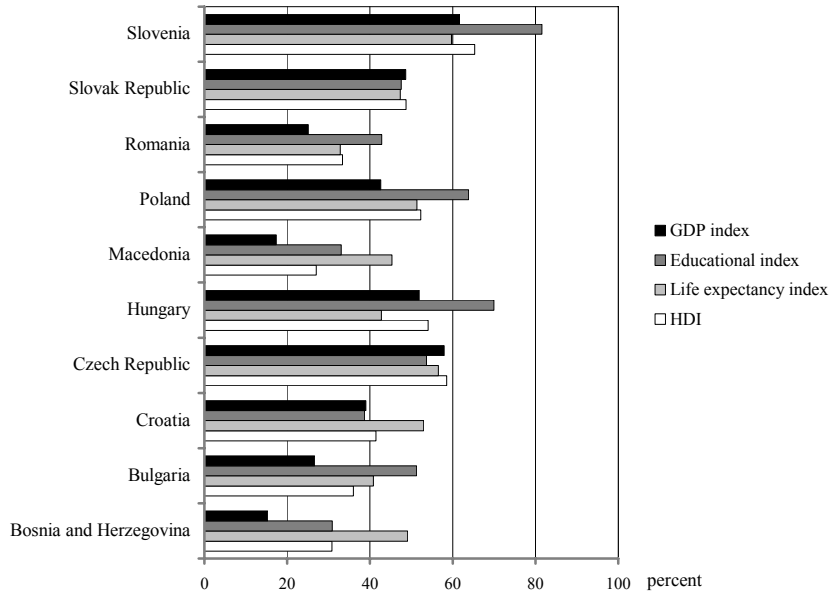


Figure 7. Human development index of the selected countries, 2008



4. Conclusions

The strategy of Europe 2020 is to face fundamental challenges in the coming years. On the one hand, it has to find the way to develop a knowledge-based economy of high competitiveness on the wide interpretation of sustainability. On the other hand, it facilitates European convergence and integration. The processes of sustainability and convergence *require a new approach* to quantify the performance of the member states as well as that of the candidate countries. We suggest *developing a relative total performance index from international rankings* that both expresses the different interpretations of sustainability, using much background information as well as makes a comprehensive cross-country comparison possible.

International *rankings are based on the values and underlying elements of the Euro-Atlantic world*: on a modernisation approach developed over centuries and on the comprehensive concept of sustainable development. Our statements and conclusions on sustainability and convergence of the economy and society of Hungary are supported also by these values. Each ranking highlights a certain factor, their *combined examination* provides a more complex, detailed, and comparable overview on domestic processes and related international reactions based on many indices with several hundred indicators.

Hungary is ranked in the bottom middle range of the developed and quasi-developed world. Our position, which was *not stable*, deteriorated in the second half of the post-regime-change period. Compared with other East Central European countries, Hungary is still ranked currently as a leading country but she is in the lower part of that group.

The performance of our country is approximately *half of the relative performance of the leading countries of the developed world*. The indices showed some *inherent tensions and significant contradictions* typical of the current Hungarian conditions. One of these is the strong economic and political globalisation of the past decades: there are close international relations, investment-friendly legal and institutional systems facilitating cross-border integration, however, cross-border integration and openness are accompanied with weak domestic performance and an inefficient and complicated system of state administration. That is, the channelling guidance, control and strategic management of global impulses are missing. The potentials of international integration are not exploited effectively. Consequently, changes in the global economy may result in detrimental effects on the domestic economy and raise the issue of *reviewing the strategic characteristics of how Hungary becomes an integral part of the global economy*.

The high level of foreign capital inflow to Hungary *is* another *contradiction*. It is excessive in volume. In other words, the incoming capital does not supplement local

savings but substitutes them. It has a serious strategic risk because a basic feature of working capital transfer is that any additionally required working capital will be offset by an exponentially growing amount of revenue expenditure. At the same time, foreign direct investments to Hungary have limited effects on innovation, additional income generation and local production. High value added products are mainly exported and have low local content. In other words, the relatively abundant inflow of working capital may result in resource extraction and decline in our international competitiveness and in our ranking.

Another essential element to competitiveness is *human capital* that shows the third important contradiction. The indices refer to valuable human assets in Hungary – but the latter ones are *not capitalised*. Firstly, because of deficiencies in equipment (that is, additional assets are required to exploit them), and secondly, because the labour market is less globalized than economy and governance. Thirdly, high value knowledge assets are not applied, not marketed effectively: theoretical skills are not appropriate to accelerate convergence. In addition, consumers and businesses are not sufficiently open to adapt and accept innovations. Finally, our workforce is creative but less sociable and cultured (their individual or specific strengths do not result in a useful and efficient social system to facilitate convergence (in terms of sectors and products)).

Another setback is *our declining international position*. The preservation of the status quo needs a considerable amount of energies. However, they do not serve the convergence of the Hungarian society and economy: there is harsh competition in the middle range to attain a better intra-range position. A lower intra-range position with lower relative performance may result in downgrading and narrowing future perspectives.

In summary, the current situation of Hungary may be well described by the scientific term of "*underperforming latent state of development*": an *emerging economy with considerable and promising but (because of financial and technical deficiencies) not fully utilized human assets*.

References

ADAMECZ, A. ET AL. [2009]: *A magyar gazdasági-társadalmi kitörési stratégia és az új nemzetközi kihívások*. ECOSTAT. Budapest.

ADAMECZ, A. ET AL. [2008]: *Magyarország gazdasági-társadalmi fejlettségének megítélése nemzetközi rangsorok alapján. Betekintés a legismertebb ország-rangsorok módszertanába*. ECOSTAT. Budapest.

BANDURA, R. [2005]: *Measuring Country Performance and State Behaviour: A Survey of Composite Indices*. UNDP. New York.

EC (EUROPEAN COMMISSION) [2010]: *Europe 2020. A Strategy for Smart, Sustainable and Inclusive Growth*. http://ec.europa.eu/eu2020/index_en.htm

GÁSPÁR, T. [2008a]: *A stratégiaalkotás új módszertani kihívásai. A gazdaságelemzés módszerei.* 1. ECOSTAT. Budapest.

GÁSPÁR, T. [2008b]: Az eredmények együttes értékelése. In: *Belyó, P*. (ed.): *Magyarország gazdasági-társadalmi fejlettségének megítélése nemzetközi rangsorok alapján*. ECOSTAT. Budapest. pp. 91–105.

COMMISSION OF THE EUROPEAN COMMUNITIES [2009]: *GDP and Beyond. Measuring Progress in a Changing World*. Brussels.

KOZMA, F. [2004]: A legnagyobb kincs – még egyszer a latens fejlettségről. *Társadalom és Gazdaság*. Vol. 26. No. 1. pp. 1–15.

STIGLITZ, J. – SEN, A. – FITOUSSI, J-P. [2009]: *Report by the Commission on the Measurement of Economic Performance and Social Progress*. www.stiglitz-sen-fitoussi.fr

SZABÓ, L. [2007]: *A fenntartható fejlődés jellemzői*. Időszaki közlemények. XXVII. ECOSTAT. Budapest.

ZÁDOR, M. [2005b]: *A lisszaboni folyamat dinamizálása, valamint a „négy szabadság" elve és gyakorlata. Az Unió strukturális deficitjei és tartalékai*. Bővülő Európa 2. ECOSTAT. Budapest. pp. 54–80.

ZÁDOR, M. [2005a]: *Makrogazdasági egyensúly, versenyképesség és az Unió kihívásai*. Bővülő Európa 3. ECOSTAT. Budapest. pp. 62–91.

ZÁDOR, M. [2009]: *Spain and Hungary Compared in Post-Lisbon Strategy. A New Approach*. Manuscript. ECOSTAT. Budapest.