



Grażyna KARMOWSKA • Nino MIKIASHVILI

THE ASSESSMENT OF DEVELOPMENT CONVERGENCE AMONG POST-SOCIALIST COUNTRIES BASED ON SELECTED INDICES

Grażyna **Karmowska**, Associate Prof. (ORCID: 0000-0002-2264-3176) – *West Pomeranian University of Technology in Szczecin*

Nino **Mikiashvili**, Prof. (ORCID: 0000-0001-8840-4859) – *Ivane Javakhishvili Tbilisi State University, Georgia, The Department of Economic and Social Statistics, Faculty of Economics and Business*

Correspondence address:

Janickiego Street 31, 71-270, Szczecin, Poland

e-mail: gkarmowska@zut.edu.pl

ABSTRACT: The aim of the paper was to determine development convergence between post-socialist countries and changes taking place in this respect. The research covered the period of 2000-2018 and focused on 25 post-socialist countries (11 EU, 7 East European and 7 Asian states). Statistical methods and econometric models were employed to analyze the HDI, EPI and EFW indices. The research revealed that there is very little convergence among post-socialist countries on social development (ca. 5%), environmental performance (ca. 2%) and economic freedom (ca. 1%). All of the study countries were classified as highly developed (HDI>0.79), and “mostly free” in terms of economic freedom (EFW>0.6). Higher variation was observed for environmental performance, with only 16 countries out of 25 with an EPI>60. The post-socialist EU countries scored higher on the three indices than the other post-socialist nations, though Asian countries registered higher growth rates.

KEYWORDS: convergence, HDI index, EPI index, EFW index, post-socialist countries

Introduction

The analysis of convergence allows researchers to answer the question of whether the countries that differ significantly in terms of macroeconomic variables will converge in these respects or diverge over time. Real convergence is the process whereby lower-income economies catch up with those of higher-income economies, whereas the distancing of more developed economies from the less developed is understood as the process of divergence (Sulima, Woźna, <https://mfilep.pl/pl/index.php/Konwergencja>).

Convergence occurs when two or more economies reach a similar level of development and wealth over time (absolute convergence σ) or when low-income countries catch up with higher-income countries (absolute convergence β). Divergence is the opposite of convergence (Próchniak, Rapacki, 2007).

To assess the overall development of European regions, the researcher has to select methods of analysis that are adequate to address the research objective. Ultimately, the choice of methods, indicators or indices depends on the study area and questions posed.

The aim of this paper is to determine the level of convergence between post-socialist countries and the changes occurring in this respect. To achieve that aim, the following questions have been posed:

- Do the study countries converge in terms of socioeconomic welfare (HDI) and environmental performance (EPI)?
- Do economically highly developed countries score high also on social development?
- To what extent do economic freedom foster social welfare and environmental performance of the study countries?
- Is the growth rate determined by the trend function similar to Asian and European countries?

For the purposes of this paper, convergence is understood as closing the gap between the countries not only with regard to their economic, social and environmental welfare levels, but also their economic freedom as measured by selected indicators.

25 countries out of all post-socialist countries were selected for a detailed analysis due to, in particular, data availability.

An overview of the literature

The main goal of sustainable development is to improve the quality of life and ensure a good living environment for present and future generation. This can be achieved by building sustainable societies which are able to use resources efficiently and to tap the ecological and social innovation potential of the economy. Such societies and communities will indeed ensure economic welfare, environmental protection and social cohesion. It is necessary for people to understand that without environmental sustainability, no human welfare is possible. And in turn, the prerequisite for building a sustainable welfare society is economic welfare, which is not a goal in itself (Karmowska, 2017).

1. The basic and most commonly used measure of socio-economic growth of a region, and thus the convergence/divergence, is the GDP *per capita*. However, since this standard measure does not exhaustively answer the research questions posed, other economic, environmental and social measures of development will be considered in the study. Since some of the study characteristics are not directly comparable, they are used to build synthetic variables – indices that allow for comparisons between different states.
2. One of the most popular composite measures of development is the *Human Development Index* (HDI) (<http://hdr.undp.org/en/composite/trends>). It was created in 1990 as an acknowledgement that economic development alone cannot capture human development, and that people and their potential must be considered as well. HDI is composed of three principal areas of interest: GNI *per capita*, life expectancy at birth and education (Karmowska, Marciniak, 2015, 2016). The HDI is a single index measure and a geometric mean of the three key dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. HDI utilizes four key metrics. The key metrics for assessing population's health is life expectancy at birth, the metrics of education is the average years of schooling received by people aged 25 and older, and the years of schooling that children of school entrance age can expect. The standard of living is assessed by Gross National Income (GNI) *per capita*. The HDI uses the logarithm of income to reflect the diminishing importance of income with increasing GNI *per capita*. The scores for the three HDI dimensions are aggregated into a single composite index using geometric mean. HDI simplifies and captures only part of what human development entails (<http://hdr.undp.org/en/content/human-development-index-hdi>).

The environmentally sustainable economic development of post-socialist countries is rarely a subject of academic publication. Undoubtedly, most of the research focuses on the EU states and for the purposes thereof, indices are built that include, i.a., environmental welfare (Sustainable Society Index, SSI), environmental efficiency (Environmental Performance Index, EPI) or efficiency of natural resource management (ECO-Innovation Scoreboard) (Karmowska, Czaja, Jach-Chrząszcz, 2018).

The Environmental Performance Index was constructed in 2012 as a continuation of the Environmental Sustainability Index (published over the years 1999-2005). EPI provides a data-driven summary of the state of environmental health and ecosystem vitality for countries around the world identifies targets for environmental performance and measures how close each country comes to these objectives. EPI goals encompass key environmental topics such as clean air, water quality, greenhouse gas emission, use and preservation of natural resources and environment protection (www.epi.yale.edu). The EPI is based on 2 fixed policy objectives and 32 performance indicators across 11 issue categories. It uses a scoreboard from 0 to 100. A score above 65 (high score) is achieved by strong performers across most issues, leaders in environmental sustainability, a score of 60-65 (average score) shows average environmental performance, and a score below 60 (low score) indicates that much more attention must be paid by these countries to environmental sustainability requirement.

The backdrop for our analysis is the assessment of economic freedom in individual countries, which is often equated with the free market. Economic freedom, from the liberal free-market perspective, is defined as the freedom to conduct business activity, produce, trade and consume any goods and services acquired without the use of force, fraud or theft. On the one hand, it gives entrepreneurs equal economic opportunity, and on the other, ensures consumers' freedom of choice. The Index of Economic Freedom (IEF) or Economic Freedom of the World (EFW) are the two indices that measure economic freedom. The index captures and measures the performance of main market institutions, such as money, property rights and trade in individual countries. The score allows us to compare the level of economic freedom between countries and also, track the changes over time (Karmowska, 2017a, 2017b).

The Economic Freedom of the World (*EFW*), a survey published annually since 1995 by a Canadian think-tank, Fraser Institute, seeks to measure the degree of economic freedom in most of the world's nation. EFW incorporates 42 distinct economic variables, grouped in 24 components, to create an index. It measures the degree of economic freedom in five major areas: Size

of Government, Legal System and Security of Property Rights, Sound Money, Freedom to Trade Internationally, Regulation of credit, loans, and business.

Each component is placed on a scale from 0 to 10, reflecting the distribution of underlying data, where 10 stands for greatest economic freedom. Averaged component ratings within each area are then averaged to derive ratings for each of the five areas, and then the five area ratings are averaged to derive a final score – summary rating for each country. A lower summary EFW rating demonstrates more state's interference in the economy and relatively little economic freedom.

Data and research methods

The paper employed statistical data from the World Bank, Eurostat and the Sustainable Society Foundation. Performance of 25 post-socialist countries was researched over the period of 2000-2018. Research problems were examined from the static and dynamic point of view.

To measure variation in regional development the following statistical measures were used, i.a.: area of feature variation, maximum value, minimum value, standard deviation, coefficient of variation. According to Kukuła (2010, p. 27), the values of these measures provide information on the degree of variation in development between the spatial objects studied.

The HDI, EPI and EFW were the main indices analyzed.

Moreover, trend models of the study indicators were calculated for their means, medians and maximum and minimum values (Nowak, 2002, Kukuła, 2003).

Range R was adopted as one of the convergence measures, R being the difference between the maximum (x_{max}) and minimum values (x_{min}) of the indicator:

$$R = x_{max} - x_{min}. \quad (1)$$

Another measure employed was the coefficient of variation

$$V = \frac{x_{mean}}{S} \cdot 100, \quad (2)$$

where:

x_{mean} – indicator's mean value,
 S – standard deviation.

And the annual average rate of convergence/ divergence coefficient K which is based on the coefficient of variation and captures the annual average increase in convergence/ divergence expressed in % (Williamson, Fleming, 1996).

$$K = \frac{V_{t_1} - V_{t_2}}{V_{t_1}(t_2 - t_1)} \cdot 100, \quad (3)$$

where:

K – average annual rate of convergence/ divergence,

V_{t_1} – coefficient of variation at the start year,

V_{t_2} – coefficient of variation at the last year.

Convergence occurs when the value of the K indicator is above zero ($K > 0$), whereas when it is below zero ($K < 0$) divergence occurs in the study group of countries.

Based on the HDI and EPI, that is on the level of socioeconomic development and environmental performance, the countries analyzed were put into three groups (table 1).

Table 1. Socioeconomic development and environmental performance by country groups

Group	HDI range	EPI range	level of socioeconomic development/ environmental performance
1	0.80 – 1.00	66 – 100	high
2	0.50 – 0.79	60 – 65.9	average
3	0.00 – 0.49	0 – 59.9	low

Source: author's work.

Based on the Summary Economic Freedom Ratings (EFW), countries are put in 5 groups:

1. *Free* 8.0 – 10,
2. *Mostly free* 7.0 – 7.9,
3. *Moderately free* 6.0 – 6.9,
4. *Mostly unfree* 5.0 – 5.9,
5. *Repressed* 0 – 4.9.

Changes occurring in individual countries should be viewed in the spatial context of a region as no state operates in isolation from the neighbouring countries and region. The issue of inequality and economic, social and environmental convergence is the subject of vast research efforts in the EU and worldwide (Baumol, 1986; Barro, Sala-i-Martin, 1992; Mankiw, Romer, Weil, 1992; Gawlikowska-Huckel, 2002; Malaga, Kliber, 2007; Malaga, 2004, among many others).

Results of the research

Spatial variation in economic development is a fundamental challenge for the present day economy. The balancing of regional economic disparities is the primary goal of regional policies (Todl, 2001). Classification of countries according to their socioeconomic development (HDI) and environmental performance (EPI) provides a basic insight into the level of development and variation in the development of the study countries.

A classification of the study countries according to HDI and EPI in 3 years: 2000, 2010 and 2018 is provided in table 2.

Table 2. Country classification by HDI and EPI

Class	HDI	EPI
2000		
1	Slovenia	
2	Armenia, Azerbaijan, Bulgaria, Bośnia and Herzegovina, Belarus, Croatia, Czechia, Estonia, Georgia, Hungary, Kazahstan, Kirgizstan, Latvia, Lithuania, Moldova, Macedonia, Poland, Romania, Russia, Serbia, Slovenia, Tajikistan, Ukraine, Uzbekistan	Czechia, Croatia, Latvia, Lithuania, Poland, Slovakia
3		Armenia, Azerbaijan, Bulgaria, Bośnia and Herzegovina, Belarus, Estonia, Georgia, Hungary, Kazahstan, Kirgizstan, Moldova, Macedonia, Romania, Russia, Serbia, Slovenia, Tajikistan, Ukraine, Uzbekistan
2010		
1	Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia,	Latvia, Slovakia
2	Armenia, Azerbaijan, Belarus, Bulgaria, Bośnia and Herzegovina, Bulgaria, Georgia, Kazahstan, Kirgizstan, Moldova, Macedonia, Romania, Russia, Serbia, Tajikistan, Ukraine, Uzbekistan	Croatia, Czechia, Lithuania, Poland, Slovenia
3	-	Armenia, Azerbaijan, Bulgaria, Bośnia and Herzegovina, Belarus, Estonia, Georgia, Hungary, Kazahstan, Kirgizstan, Macedonia, Moldova, Romania, Russia, Serbia, Tajikistan, Ukraine, Uzbekistan
2018		
1	Belarus, Bulgaria, Croatia, Czechia, Estonia, Hungary, Kazahstan, Latvia, Lithuania, Poland, Romania, Russia, Slovakia, Slovenia	Bulgaria, Czechia, Latvia, Lithuania, Slovakia, Slovenia

2	Armenia, Azerbaijan, Bośnia and Herzegovina, Georgia, Moldova, Macedonia, Serbia, Slovenia, Tajikistan, Ukraine, Uzbekistan	Armenia, Azerbaijan, Belarus, Estonia, Croatia, Hungary, Poland, Macedonia, Romania, Russia,
3	-	Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Serbia, Tajikistan, Ukraine, Uzbekistan

Source: author's work.

A cross-country comparison of HDI shows that the study countries successfully maintained their high socioeconomic development and welfare over the years (>0.79 HDI). In 2000 only one country, namely Slovenia, showed very high human development, while all other countries ranked as highly developed (> 0.5 HDI). A decade later, the top-ranking group expanded totalling as many as 9 countries, including Poland. In 2018 it expanded even further, with 14 countries ranked as very highly developed in socioeconomic terms.

Environmental performance of the study countries, measured by EPI, presents a different picture. In 2000, none of the subject countries ranked in the highest-ranking class, with only 6 countries classified in the second top class. In 2010, two countries, Latvia and Slovakia, moved to the top-ranking class, whereas only one country, Slovenia, was upgraded from the 3rd to 2nd class. By 2018, a significant improvement had been made and 6 countries scored above 66 on environmental performance. 16 out of the 25 study countries received an average and above-average score. It is definitely a positive change, especially in view of high social development observed in these countries.

The classification of countries by EPI and HDI allows to identify the leader. As illustrated by figure 1, 13 countries ranked in the top grouping with best results in environmental performance and socio-economic development.

As mentioned above, the analysis was extended to include an additional factor, that is economic freedom of the study countries measured by EFW index. Since economic freedom is, among other things, the unfettered opportunity to engage in business activities whilst ensuring equal opportunity to all entrepreneurs who are able to satisfy consumer demands better than their competitors, it can be assumed that it has a significant impact on both socioeconomic and environmental welfare.

In view of the fact that not all of the study countries had their economic freedom assessed in the first study year, the research had to be narrowed down to 2010 and 2018. The list is not exhaustive, with Uzbekistan missing, and Belarus included in the economic freedom ranking for the first time in 2016 (table 3).

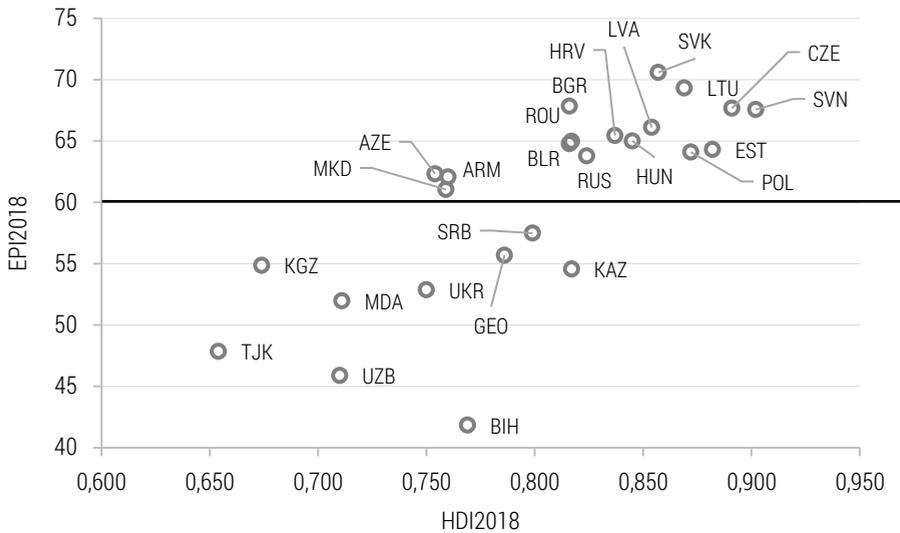


Figure 1. EPI and HDI in 2018

Source: author’s work based on <https://ec.europa.eu/eurostat/data/database> [11-11-2018].

Table 3. Country classification by EFW index

classes/year	2010	2018
Free	Estonia	Georgia, Lithuania
Mostly free	Armenia, Bulgaria, Czechia, Georgia, Hungary, Latvia, Lithuania, North Macedonia, Poland, Romania, Slovakia, Slovenia	Armenia, Bulgaria, Croatia, Czechia, Estonia, Hungary, Kazakhstan, Latvia, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia
Moderately free	Bosnia and Herzegovina, Croatia, Kazakhstan, Kyrgyz, Moldova, Russian Federation, Serbia, Tajikistan	Azerbaijan, Belarus, Bosnia and Herzegovina, Kyrgyz, Moldova, Russian Federation, Tajikistan, Ukraine
Mostly unfree	Azerbaijan, Belarus, Ukraine	
Repressed		

Source: author’s work.

The average score on economic freedom in the 24 post-socialist nations was 7.05 in 2010, and 7.25 in 2018.

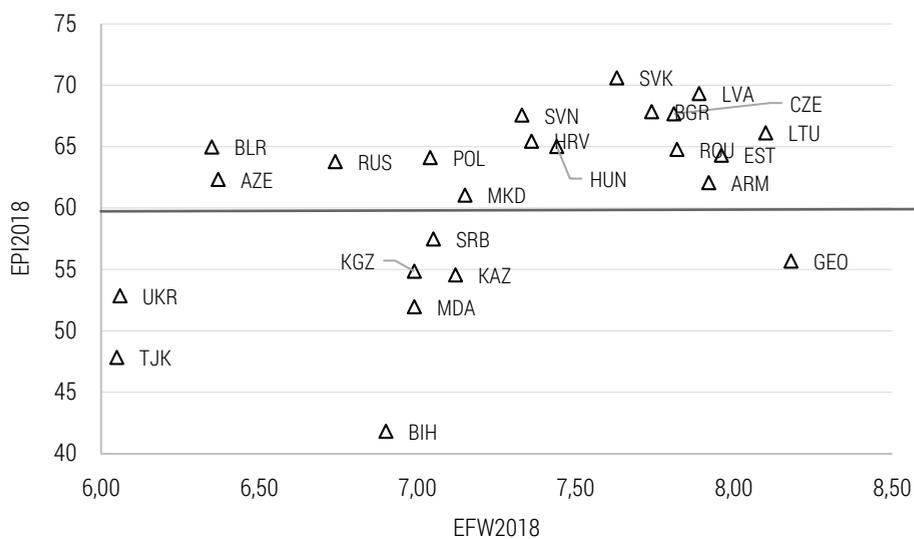


Figure 2. EFW and EPI in 2018

Source: author's work.

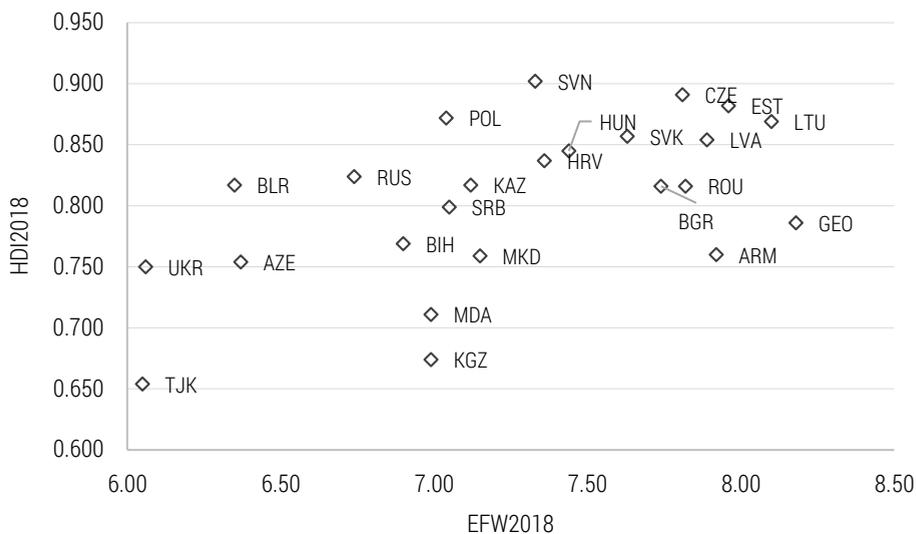


Figure 3. EFW and HDI in 2018

Source: author's work.

Most countries fell into the *Mostly free* and *Moderately free* category. This is in stark contrast to 2010 when only Estonia was deemed *Free* and 3 countries were classified as *Mostly unfree*. Surprisingly, in 2018 five nations – Estonia, Hungary, Poland, Slovakia and Tajikistan – scored lower on economic freedom than in 2010. Two countries, Georgia and Lithuania, showed big change in economic freedom and went up in the ranking.

Most study countries (16) score well on both indicators, that is environmental performance and economic freedom (figure 2).

The outcome is even more positive when one looks at the countries' economic freedom and socioeconomic welfare (figure 3).

In view of the research scope and aims set, a more thorough analysis has not been conducted. However, the author believes that such kind of analyses, from the general to the particular, is most interesting and deserve a separate, dedicated paper.

Convergence

As proven by statistical data (table 4), changes in socioeconomic welfare and environmental performance resulted in the gradual closing of the gap between the study countries. Over the 2000-2018 period, the highest average annual rate of convergence was observed in the area of socio-economic development, with $K_{HDI}=4.21\%$. By contrast, from 2010 onwards, the environmental performance of the study countries showed divergence (average annual of 0.17%) even though convergence at an average annual rate of $K_{EPI}=1.95\%$ was noted. Similarly, the analysis of the variance of the EFW index also indicates that economic freedom levels are slowly converging, with the coefficient of convergence of $K_{EFW}=0.9\%$.

Besides the statistics for HDI, EPI and EFW indices, GDP *per capita* was incorporated to give an idea of what the changes in economy looked like as captured by this particular measure. Cross-country variation in GDP *per capita* (measured by the coefficient of variation) is very high with 60% in 2000 and 47% in 2018. It means that disparities between the study countries become smaller, although the range in GDP *per capita* widened two times over the research period (from ca. USD 17 thousand to 37 thousand). This was partly caused by a higher growth rate of GDP *per capita* of the richest countries (by an average annual of USD 1152), with the poorest countries recording an average annual growth rate of USD 132 over the same period of time. After GDP *per capita* was added in the calculations, the annual average speed of convergence of the study countries was merely $K_{GDP}=1.12\%$ (figure 3).

Table 4. HDI, GPD, EPI and EFW

Statistics	2000	2010	2018
HDI			
Variation	9.76%	8.77%	8.28%
Range	0.286	0.251	0.248
The average annual rate of convergence/divergence		0.76%	4.21%
GDP			
Variation	60.42%	48.68%	47.55%
Range	16 960	25 517	37 078
The average annual rate of convergence/divergence		1.02%	1.12%
EPI			
Variation	21.24%	21.90%	12.44%
Range	34.7	38,6	28.8
The average annual rate of convergence/divergence		-0.17%	1.95%
EFW			
Variation		9.24	8.49
Range		2.20	2.13
The average annual rate of convergence/divergence			0.90%

Source: author's work based on data published by the World Bank.

Trends

The next stage of research was to determine trend functions for the study indices and their values. Because of the completeness and continuity of data, it was possible to determine a growth trend only for GDP per capita and HDI (figures 4 and 5).

All trend functions were linear, with a very high coefficient of determination. They meet all of the standard significance criteria, which is why the coefficients of regression can be treated as a measure of the average annual growth of a given indicator.

In the study period, the lowest HDI was recorded for Tajikistan (0.538 in 2000 and 0.654 in 2018). Similar HDI values were observed for Kirgizstan (HDI=0.594 in 2000 and HDI=0.674 in 2018), and Uzbekistan (HDI=0.596 in 2000), however in the latter case socioeconomic improvement was much slower (HDI=0.710 in 2018). The average annual rate of growth was 0.0064 for Tajikistan, 0.0045 for Kirgizstan and 0.0066 for Uzbekistan.

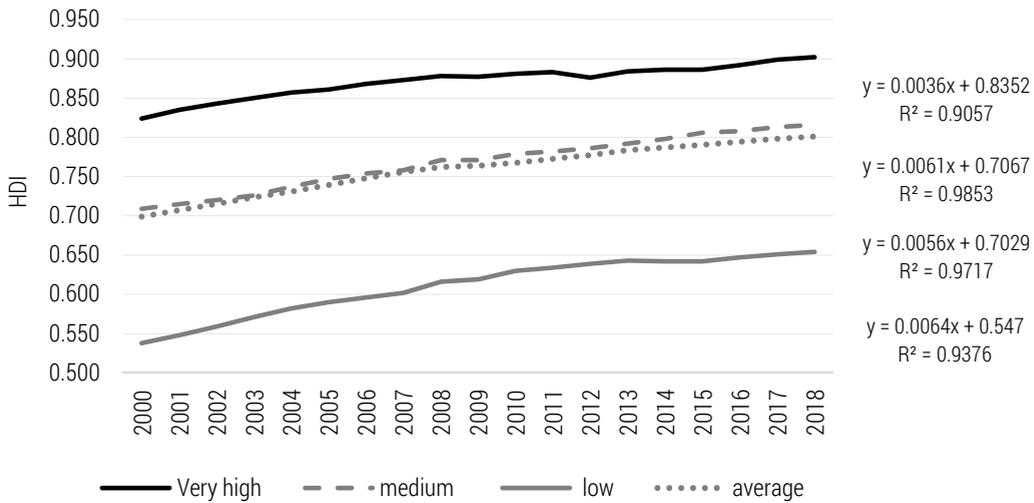


Figure 4. HDI trends of the study countries over the years 2000-2018

Source: author's work based on data published by the World Bank.

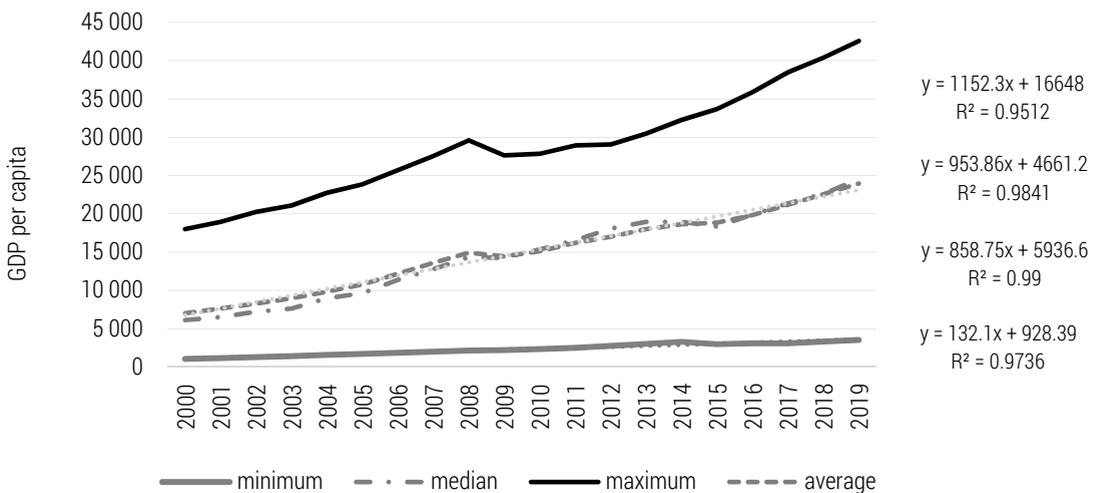


Figure 5. GDP per capita of the study countries

Source: author's work based on data published by the World Bank.

Slovenia was the indisputable leader of development over the entire study period (HDI=0.843 in 2000, and HDI=0.902 in 2018). The country's relatively low average annual growth rate of only 0.0036 can be explained by the fact that already in 2000 Slovenia was an advanced, high-income economy with a very high HDI.

Since GDP *per capita* is a component of HDI, the least developed countries also have the lowest GDP *per capita* (figure 5).

Conclusions

The analysis conducted has cognitive and applicative value as it allowed to answer the research questions posed in the introductory part of the paper.

1. Definitely, the study countries converge with regard to socioeconomic welfare, environmental performance and economic freedom. The speed of convergence varies across regions.
2. In 2018 the EPI and HDI indices showed relatively high correlation ($R=0.7334$), which confirms the top-ranking countries on the Environmental Performance Index also score high on social welfare.
3. The answer to the question of the extent to which economic freedom facilitates and support social welfare and environmental performance in the study post-socialist countries is not unequivocal. The indices are positively correlated with an average of $R=0.5045$ for the EFW and EPI, and $R=0.5482$ for EFW and HDI. Such correlation means that as economic freedom became stronger, environmental performance and social welfare improved.
4. In an attempt to answer the question: "Is the growth rate determined by the trend function similar for Asian and European countries?", the study countries were classified into 3 groups: 1) the EU member states (11); 2) East European states (7) and 3) Asian states (7). The estimated linear trends with high significance and good fit quality, indicate an average annual HDI growth rate of 0,0062 for the countries from 1) group, 0.0051 for 3) group and 0.0035 for group 2). The HDI score was high in 2000 for the group of Asian countries (ca. 0.7), yet in 2004 it dropped to 0.565 and since then it went up continually.
5. As it comes to environmental performance, the EU states scored higher than the other countries (with an average EPI=66.6 in 2018), however since 2000, the EPI index grew by a mere average of 5.3. Environmental performance of the other post-socialist, non-EU states was at a similar level, ca. 55, but their EPI score increased significantly – by ca. 12 points for Eastern European countries and by 10.5 points for Asian countries.

The research conducted, aside from its theoretical value, may be seen as valuable input to inform decisions of policymakers regarding regional development on the global scale.

The contribution of the authors

Grażyna Karmowska – 50%

Nino Mikiashvili – 50%

References

- Barro, R., Sala-i-Martin, X., 1992. Convergence. *Journal of Political Economy*, 100, 223-251.
- Baumol, W., 1986. Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show. *American Economic Review*, 76, 1072-1085.
- Gawlikowska-Hueckel, K., 2002. Konwergencja regionalna w Unii Europejskiej. *Gospodarka Narodowa*, 10, 91-113.
- Human Development Reports 2020, <http://hdr.undp.org/en/composite/trends> [22-08-2020].
- Karmowska, G., 2017a. Ocena konwergencji krajów unii europejskiej z wykorzystaniem wybranych indeksów. *Metody ilościowe w badaniach ekonomicznych*, XVIII/2, 252-262.
- Karmowska, G., 2017b. Rozwój gospodarczy wybranych krajów Unii Europejskiej w ocenie Indeksu Wolności Gospodarczej. *Research Papers of Wrocław University of Economics*, 475, 76-89.
- Karmowska, G., Czaja, J., Jach-Chrzaszcz, A., 2018. *Rozwój społeczno-ekonomiczny krajów Unii Europejskiej. Konwergencja czy dywergencja?* Sophia University Press, Katowice.
- Kukuła, K., 2003. *Elementy statystyki w zadaniach*. Polish Scientific Publishers PWN, Warsaw.
- Kukuła, K., 2010. *Statystyczne studium struktury agrarnej w Polsce*. Polish Scientific Publishers PWN, Warsaw, 27.
- Malaga, K., Kliber, P., 2007. *Konwergencja i nierówności regionalne w Polsce w świetle neoklasycznych modeli wzrostu*. Poznań University of Economics Press, Poznań.
- Mankiw, G., Romer, D., Weil, D., 1992. A Contribution to the Empirics of Economic Growth. *Quarterly Journal of Economics*, 407-437.
- Nowak, E., 2002. *Zarys metod ekonometrii*. Polish Scientific Publishers PWN, Warsaw.
- Próchniak, M., Rapacki, R., 2007. Konwergencja beta i sigma w krajach postsocjalistycznych w latach 1990–2005. *Bank i Kredyt*, p. 42-60.
- Sulima, A., Woźna, A. Konwergencja, <https://mfilep.pl/pl/index.php/Konwergencja> <https://mfilep.pl/pl/index.php/Konwergencja> [27-08-2020].
- Tondl, G., 2001. *Convergence after divergence? Regional Growth in Europe*. Springer Wien New York, p. 118.
- Williamson, J.B., Fleming, J.J., 1996. Convergence theory and the social welfare sector: A cross-national analysis. In: Inkeles, A., Sasaki, M. *Comparing nations and culture*. Englewood Cliffs, NJ: Prentice Hall, 348-355.