WORLD'S MACRO-REGIONS: DIVERGENT AND CONVERGENT TRENDS SINCE EARLY 1970s

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Abstract: Current global trends are in the focus of scientific research. This article deals with one of the crucial problems: do the differences among different parts of the world tend to grow or not? In other words, what prevails globally: divergent or convergent processes? Global changes are studied in specially designated parts of the world, so-called world's macro-regions. Changes in the period 1970–2016 (when multipolar world has replaced the bipolar one) are examined. Using different methodical approaches, the study aims to clarify which global process are rather divergent/convergent and how these processes look like in different world's macro-regions. For several reasons, especially in the pursuit of economic growth and the fulfillment of geopolitical interests, today several states and macro-regions are trying not only to gain regional dominance, but also to gain the position of a global world player. Changing character of global trends are discussed, too.

Keywords: global processes, divergence and convergence, differences throughout the world, world's macro-regions

1   INTRODUCTION

Current global trends are studied by scholars from many scientific fields including economics, social sciences, political sciences, and geography. Different parts of the world (world's macro-regions) have different abilities to influence these global trends and vice versa: general global trends have different impacts on different regions. This article deals with one of the crucial current issues: are the differences among world's macro-regions growing or declining? Do divergent trends prevail, or are the convergent processes more important (Hampl, 2014)?

Global trends are studied in specifically designated areas, so-called world's macro-regions. Trends are evaluated by basic economic and socio-geographic indicators. Two major periods of time are compared: that of bipolar world (1970–1990) and unipolar world (1990–2016). Changes of different indicators and their impact on

different world's macro-regions are discussed. The final part discusses the typology of world's macro-regions and assesses divergent/convergent trends in different regions. The changing importance of different indicators over the time is assessed, too.

Divergent and convergent trends are evaluated by world's macro-regions. The authors have critically discussed delimitation of these regions in one of the previous studies (Anděl, Bičík and Bláha, 2018a) and have offered their own perspective in another one (Anděl, Bičík and Bláha, 2018b). The latter includes methodological explanations and also division of world's macro-regions into three types/categories (according to Wallerstein, 1991): core, semi-peripheral, and peripheral ones.

The social and economic growth have been characterized by polarization in the time of next 50 years, in global and national level. This phenomenon results in an emergence of the economic growth and stagnation both, countries and macro-regions. The distribution of these regions and its variability are affected by diverse growth factors which lead to convergence or divergence of the growth rate. While the very fact of developmental differences is accepted in market economy, the increasing growth diversity in global or national levels results in numerous negative consequences and is perceived as one of the strongest barriers to an economy´s good performance. This leads to a situation when intervention is imperative as part of the cohesion policy which, irrespective of the adopted model (be it the compensation or the polarization-diffusion model) is aimed at growth convergence on all the spatial levels (Churski, 2014).

The significance of the current changes in the context of the development of the world's main macro-regions cannot, of course, be limited to the development of the economy. However, differentiated economic growth and the corresponding redistribution of wealth between countries and macro-regions is a primary condition for changes in the geostrategic world order. Of course, differentiated economic growth also has a number of other political, social, cultural and environmental consequences.

A number of issues related to unequal development in different world's macro-regions are discussed by the authors. Is the long-term "Western dominance" still increasing? Does the West still form the "global core" within the concept of world system (Wallerstein, 1979, 1991)? This was true at least since the early stages of Industrial Revolution and during the 19th and 20th centuries (Taylor, 1989; Lindert and Williamson, 2001; Landes, 1998; Novotný, 2007; Pieterse, 2011). However, the increase of Western dominance has been recently weakened and even replaced by a reversed trend. Many political scientists and geographers (Layne, 2006; Zakaria, 2008, etc.) now agree on the idea that unipolar world does not exist any more and that the Northern Atlantic core has lost its leading position.

2 WORLD'S MACRO-REGIONS: BASIC FEATURES

Global trends can be properly assessed neither on the basis of nation states (these differ extremely from each other by size, population, and economic perfor-

mance) nor by continents (some are highly heterogeneous, for instance Asia). Large regions that are similar in size and internally homogeneous form a better bases for such studies. Such regions are delimited on the grounds of social, cultural, and economic homogeneity; they should be contiguous and should not differ much in terms of size.

Different approaches have been adopted for delimitation of world's macro-regions: social-economic (Morris, 1972), social-cultural (De Blij and Muller, 1997; Huntington, 1996; Fellmann et al., 2008), and technical-economic one (Cole, 1996).

This article is based on the concept explained in earlier study (Anděl, Bičík and Bláha, 2018b) and works with the following methodical approaches. World is divided into ten relatively homogeneous regions; first, these are examined as a whole. For the sake of comparison, all regions are assessed in the same way. It is a sort of synthesis that combines four different concepts that had been adopted by De Blij and Muller (1997), Cole (1996), Huntington (1996), and Hampl (2010b).

Social and cultural aspects are treated as the most important ones, reflecting the concept of "civilizations" brought by Huntington (1996). Choosing suitable names for different regions has proved to be a real problem as some parts of the world are traditionally called by rather complicated names reflecting the geographical position on the global scene (South-Western Asia, Northern Africa, etc.). We tried to avoid the culturally determined nomenclature using cardinal points. As a result, we have decided to adopt the concept that was used by Hampl (2009) for integrity assessment of subglobal systems, with two exceptions (Anglo-American and Indonesian Region) and a few minor differences (Chinese-Japanese Region). In our vision, world is divided into ten macro-regions that are contiguous and include culturally, socially and economically similar areas (see Table 1 and Figure 1).

Table 1 Basic Indicators of World's Macro-Regions (2018)

No.	Macro-region	1	2	3	4	5	6	7	8	9	10
1	European	3.7	7.1	106.0	23.8	36 500	44 000	100	82	***	***
2	Angloamerican	16.0	4.8	16.5	26.3	60 500	61 000	100	80	***	***
3	Russian	16.2	3.8	13.0	2.9	8 300	20 000	100	72	***	***
4	Australian-Oceanic	6.2	0.5	4.5	2.0	40 500	40 000	95	82	***	***
5	Sino-Japanese	8.6	21.9	141.0	24.5	12 300	21 000	95	77	**	***
6	Indonesian	3.3	8.5	140.0	3.1	4 000	13 000	95	72	**	**
7	Indian	3.7	23.7	344.0	4.0	1 900	7 000	70	69	**	*
8	Islamic	8.9	7,3	41.0	5.1	7 700	21 000	80	73	**	***
9	Latin American	15.0	8.3	31.0	6.2	8 100	16 000	95	75	**	***
10	African	18.4	14.1	40.0	2.0	1 600	4 000	65	61	*	*
	Total	100.0	100.0	54.0	100.0	11 000	18 000	85	70	.	.

Legend: 1 – Size in sqkm (%)

2 – Share of World's Population (%)

3 – Population Density (People per sqkm)

4 – Share of World's GDP (%)

5 – GDP per Capita $ by exchange rates

6 – GDP per Capita by purchasing power parity

7 – Literacy (%)

8 – Life expectancy (years)

9 – Homogeneity Economic (*** – high, ** – medium, * – low)

10 – Homogeneity Cultural (*** – high, ** – medium, * – low)

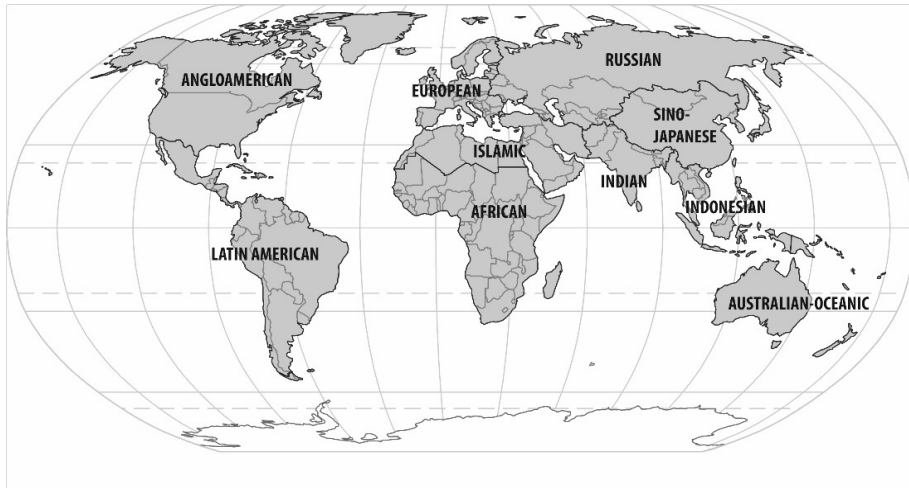Source: World Bank, CIA World Factbook, United Nations 2019, 2020

Figure 1 Wordl's macro-regions as defined in this study.
Source: Anděl, Bičík and Bláha, 2018b

1. **European Region** differs from the concept of European continent. It does not include Belarus, the Ukraine, Moldova, and western parts of Russia. These territories are part of the Russian region on the grounds of common history and religion that are different from European Region. The concept of *European Civilization* (that includes cultural, social, and ethical Christian values) is the key integrating factor of European Region. High living standards are typical for European Region, reflected for instance by high life expectancy (79 years for men, 85 for women), literacy rate close to 100%, etc. European Region has the second biggest share of world's gross domestic product (23.8%, see Table 1) and is quite *homogeneous economically and culturally*. The idea of European identity is much supported by the existence of European Union, political and economic project with the highest level of integration.

2. **Anglo-American Region** covers the United States of America, Canada, and Greenland. Most people speak *English*, many also share *immigrant ancestry*.

"American" consumer-style society has developed over the past decades there. The idea of influential super-power leading the world has recently emerged as an integrating factor, too. The region enjoys high prosperity and belongs among the economically most developed parts of the world (the share of world's gross domestic product equals 26.3%). Anglo-American Region has a *high level of economic and cultural homogeneity*.

3. **Russian Region** (Northern Eurasia) is identical with former Soviet Union, excluding Baltic countries. It is the biggest world's macro-regions measured by area (16.2% of habitable Earth's surface). The *heritage of former Soviet Union* is the main integrating factor, accompanied – paradoxically – by rather *diverse natural and economic conditions*. Large distances within the region, industrial branches generating only low value added, and focus on export of raw materials and weapons are among the major problems of Russian Region.

4. **Australian-Pacific Region** is by far the least populous of all macro-regions (only 0.5% of world's population) and has a very low population density (just 4.5 people per sqkm). There is a lot of *cultural and linguistic diversity*, also duo to immigration. Stark contrasts still exist between the population of Australia and New Zealand on one side and some Pacific islands on the other side (e.g. Solomon Islands).

5. **Chinese-Japanese Region** (Eastern Asia) includes China, Japan, Korean Peninsula, Taiwan, and Mongolia. The region has quite a high share of world's population and economy, concentrating about 20% of world's GDP. It is the second most populous world' macro-regions; measured by economic performance, Chinese-Japanese Region ranks third in the world. *Economic prosperity, export-oriented character of national economies, and high dynamics of economic development* (last 60/30 years in Japan/China) are among the chief integrating factors. The current problems are primarily of political nature (complicated relations among Communist and democratic countries). There are also a number of nature-related risks (extremely polluted environment especially in Chinese megacities, desertification, volcanic activity, earthquakes, tsunami, etc.).

6. **Indonesian Region** (South-East Asia) forms a special unit that includes innumerable islands, channels and straits. Economic activity tends to concentrate on the coast. Despite the *complex religious structure of the region, the coexistence of diverse religious groups* (*Islam, Buddhism, Hinduism, Confucianism, and Christianity*) *remains largely tolerant*. For centuries, the region has been mainly influenced by Buddhism and China, later also by European colonial powers, and recently (20th century) also by the United States. Indonesian region is integrated by its colonial past and also by relatively recent creation of independent nation states (after World War II). Many countries nowadays belong among the so-called "Asian Tigers". However, Indonesian Region copes with a number of social and economic problems (pronounced inequalities in terms of quality of life, difficult coexistence among democratic and Communist countries, and extraordinarily high linguistic diversity).

7. **Indian Region** covers the former British India and it is the most populous of all worlds' macro-region (23.7% of world's population). *Overpopulation, high natality, and important role of religion (Hinduism, Islam, Buddhism)* are among the most important integrating factors. The same, sadly, applies to *poor economic conditions* – GDP per capita is among the lowest of all macro-regions (just 7,000 USD per person in 2018). There is an extremely high proportion of rural population, low life expectancy (68 years for men, 71 for women) and high illiteracy rate (30%). Indian Region features a high degree of *cultural and economic heterogeneity* (see Table 1). Over a long period of time, Indian Region was ruled by European colonial powers. Whether this fact contributes to current lower-than-average performance is a matter of debate. In our opinion, ethnic and religious tensions play a more important role. It is also important that after the end of colonial rule, power was transferred to local elites that often lacked proper education and experience.

8. **Islamic Region** forms a belt of predominantly Islamic countries from Morocco to Iran. It is the Islamic religion and Islamic civilization that presents the most important integrating factors as well as long common history. Despite high level of homogeneity, however, *internal cultural and ethnic differences* often lead to high tensions. Economic progress of selected countries, based on *oil and gas extraction*, presents an important integrating factor, too. Islamic Region belongs among the most conflict-prone areas of the contemporary world and it has been repeatedly plagued by foreign interference (United States, Russia, China). External powers try to promote their own interests in the area looking for potential future benefits.

9. **Latin-American Region** covers the southern and central part of the Americas up to the US-Mexican border. It features high level of integrity based on *Romance languages and Christian religion* as well as on *high urbanization and very low population density*. Widespread crime (often linked to endemic drug business) and extreme economic disparities belong among the chief problems.

10. **African Region** (Sub-Saharan Africa) includes the countries located south of Morocco, Algeria, Tunisia, Libya, and Egypt. It is the largest world's macro-regions by area, covering 18.4% of Earth's landmass. *Poverty, widespread illiteracy* (one third of population can not read or write), *frequent epidemics, overpopulation, ethnic tensions, and colonial heritage* are among the integrating factors of African Region. Undemocratic regimes prevail, often governed by the military or oppressive semi-official forces. High incidence of corruption and so-called tribalism (enforcement of tribal/clan interests) are typical. African Region produces just 2% of the world's nominal GDP. Still. there is a handful of countries that have recently managed to launch a marked economic progress, with annual increase of GDP by 8–10%. In general, however, GDP per capita in African Region remains on the lowest level among all world's macro-regions. The region annually receives large sums of development aid. Also Sub-Saharan Africa was for decades ruled by European colo-

nial powers and many African nation states are nowadays plagued by ethnic and religious tensions. Quite often, local elites are not prepared for power-sharing and some countries are dominated by the military or local para-military groups.

World's macro-regions can be sorted into different classes by social and economic standards (see Figure 2):

I. European, Anglo-American, and Australian-Pacific Regions

These regions show high levels of all parameters (GDP per capita more than 40,000 USD, literacy rate 95% plus, life expectancy 77 years/men and 81 years/women), are quite homogeneous as regards economic prosperity (all subregions are highly developed) and cultural patterns (belong to one single civilization as defined by Huntington 1996, see also Figure 1). The only exception is cultural heterogeneity of Australian-Pacific Region where pronounced differences exist between Australia and New Zealand on one side and Pacific islands on the other side. All these regions can be called **world's core regions**.
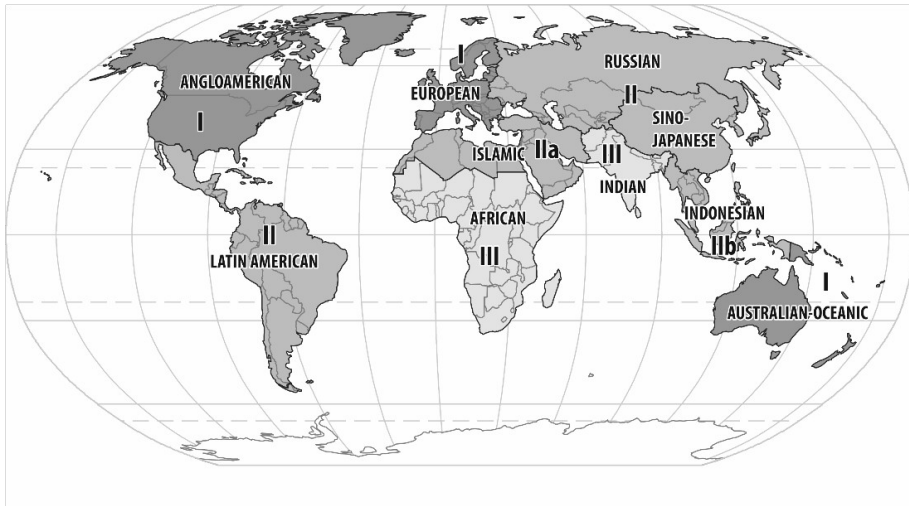

Figure 2 Classes of world's macro-regions by social and economic standards.
Source: Results from Table 1 (elaborated by authors)

II. Rusian, Chinese-Japanese, and Latin-American Regions

Most parameters show values around world's average (GDP per capita 16,000 to 21,000 USD, literacy rate 95% or more, life expectancy 68–75 years/men, 70–80 years/women). Cultural homogeneity is rather high (Orthodox, Chinese/Japanese, and Latin-American civilizations), economic heterogeneity

around average. All these regions can be called **world's semi-peripheral regions**.

II.a and II.b Islamic and Indonesian Regions

This subtype includes two specific regions with similar levels of life expectancy (roughly 70 years/men, 75 years/women), average economic performance, and high heterogeneity of economic standards. Literacy rates, however, vary a lot – in Islamic Region especially women's literacy rate remains quite low. Islamic Region has a quite high cultural homogeneity, while in Indonesian Region the opposite is true.

III. Indian and African Regions

All indicators show very low values (GDP per capita below 8,000 USD, literacy rate below 70%, life expectancy is also low). Economic and cultural heterogeneity is quite high in both regions. The existing civilizations as defined by Huntington (1996) are ethnically extremely diverse. These regions can be called **world's peripheral regions**.

3 GLOBAL CHANGES IN WORLD'S MACRO-REGIONS 1970–2018: CRITICAL ASSESSMENT

Divergent and convergent trends of world's macro-regions are examined by representative indicators. Three different years are compared: 1970, 1990, and 2018. Leading sociologists, political scientists, and economists agree on the fact that early 1970s was the period when industrial societies in developed countries were gradually changing into post-industrial ones (Bell, 1973; Hampl, 2014). The year 1990 marks the crucial point when bipolar world came to its end.

Probably the biggest attention of politicians, economists and the public today is attracted by the scale and direction of the redistribution of the world economy and especially the extraordinary growth of the Chinese economy. Competition between China and the United States is not only media-attractive, but also has a major impact on the distribution of geostrategic forces in the world. Several world-renowned scientific institutes predict that in 2030, China's economy will catch up with the US economy as measured by GDP (Hampl, 2014).

Human development index (HDI) reflects different indicators of economic, social, and demographic nature (Stanton, 2007). HDI is roughly an aggregation of gross national income, life expectancy index, and educational index. In this article, the latter is modified into literacy rate.

In order to assess convergent/divergent trends in world's macro-regions, comparison of different indicators (in different years as mentioned above) is crucial. The shares of world's population and gross domestic product by different regions in 1970, 1990, and 2018 are shown in Tables 2–4. This allows to analyse the positions of all world's macro-regions within the global system and to compare dynamism of changes over the time.

3.1 The World in 1970

In **1970**, world was dominated by Cold War and had a strikingly bipolar character (Labanca, 2008). The Anglo-American and Russian Regions played the leading roles. The latter excelled in military and geopolitical aspects, while the Anglo-American Region was much more developed: the economic "weight" of the Russian Region was less than half compared to the Anglo-American one, with roughly the same population. The European Region was performing remarkably well: its proportion of world's GDP was about 2.5 times higher than that of world's population. The Australian-Pacific Region can also be considered "core region", with high levels of quality indicators despite limited potential in absolute terms (see Table 2).

Table 2 World's Macro-Regions by Population, GDP, Literacy, and Life Expectancy (1970)

No.	Macro-region	1	2	3	4	5	6	7
1	European	500	13.3	920	30.6	1 800	100	72
2	Angloamerican	225	6.1	885	29.4	3 900	95	72
3	Russian	240	6.8	360	12.0	1 500	95	69
4	Australian-Oceanic	20	0.5	30	1.0	1 500	95	71
5	Sino-Japanese	940	25.3	430	14.2	450	65	64
6	Indonesian	280	7.6	35	1.7	125	65	50
7	Indian	725	19.5	65	2.1	90	30	46
8	Islamic	190	5.1	65	2.1	350	40	52
9	Latin American	295	7.9	155	5.1	525	80	63
10	African	295	7.9	55	1.8	185	30	42
	Total	3 710	100.0	3 000	100.0	810	65	62

Legend: 1 – Population (mil.)

       2 – Share of World´s Population (%)

       3 – GDP (billion USD)

       4 – Share of World's GDP (%)

       5 – GDP per Capita (USD)

       6 – Literacy (%)

       7 – Life expectancy (years)

Source: Calendario Atlante De Agostini, World Bank, CIA World Factbook, United Nations (1991, 1992), authors' computations

The above mentioned four core regions concentrated 73% of world's GDP. This makes a big contrast with population statistics: Anglo-American, European, Russian, and Australian-Pacific Regions combined concentrated "only" 26% of world's population in 1970. Measured by GDP per capita, the ratio between the most and least developed regions (Anglo-American vs. Indian) was 20:1. Literacy rates also showed large disparities (95% in core regions vs. 30% in the case of Indian and African Regions) and the same was true in the case of life expectancy. The latter in-

dicator exceeded 71 years in the core regions (with the exception of Russian Region – 69 years), while in Indian Region life expectancy was 45 years, in Africa only 41 years.

3.2 The World in 1990

The year **1990** marks the beginning of post-bipolar world (Labanca, 2008). The Russian Region lost its former influential position and became a semi-peripheral region. GDP per capita in the Russian Region was only about one third compared to the core regions, life expectancy stagnated at 69 years. In terms of economic performance measured by GDP, the European region was the strongest one in 1990. Though only one tenth of world's population lived in Europe, the region produced almost one third of world's GDP (see Table 3).

Table 3 World's Macro-Regions by Population, GDP, Literacy, and Life Expectancy (1990)

No.	Macro-region	1	2	3	4	5	6	7
1	European	508	9.9	6 790	31.8	13 000	100	75
2	Angloamerican	277	5.4	6 045	28.3	21 800	100	76
3	Russian	280	5.4	1 475	6.9	5 300	100	69
4	Australian-Oceanic	28	0.5	355	1.7	12 700	95	75
5	Sino-Japanese	1 316	25.5	4,07	19.0	3 100	85	70
6	Indonesian	437	8.5	345	1.6	800	85	61
7	Indian	1 102	21.4	400	1.9	350	45	57
8	Islamic	255	4.9	540	2.5	2 100	65	63
9	Latin American	481	9.3	1 070	5.0	2 200	90	67
10	African	483	9.4	285	1.3	600	50	52
	Total	5 167	100.0	21 375	100.0	4 100	75	66

Legend: 1 – Population (mil.)

       2 – Share of World's Population (%)

       3 – GDP (billion USD)

       4 – Share of World´s GDP (%)

       5 – GDP per Capita (USD)

       6 – Literacy (%)

       7 – Life expectancy (years)

Source: Calendario Atlante De Agostini, World Bank, CIA World Factbook, United Nations (1991. 1992), authors' computations

Taking into account GDP per capita, Europe was about at the same level as the Australian-Pacific Region (the latter, however, had twenty-time less inhabitants). The Anglo-American Region was the richest one in 1990: GDP per capita in Northern America was 50% higher than in Europe. In absolute terms, however, Europe's GDP was still slightly higher.

These two richest world's macro-regions combined, European and Anglo-American, accounted for more than 60% of world's GDP. Comparison with the four poorest world's macro-regions provides a striking contrast: African, Indian, Indonesian, and Islamic Regions combined produced only 7.3% of world's GDP, with 43% of world's population. In terms of GDP per capita, the richest region (Anglo-American) was 62 times better off than the poorest one (Indian).

3.3 The World in 2018

The world's average GDP per capita in **2018** was about 2.5 times higher than in 1990. Table 1, however, shows marked differences among world's macro-regions. The biggest increase has been recorded in the developing world as the initial values (1990) were rather low. These world's macro-regions (Indonesian, Indian, Islamic, and African) now concentrate 57.9% of world's population, but only 14.2% of GDP. The two most advanced regions combined (Anglo-American and European) produced 50.1% of world's GDP in 2018 which is a clear decline compared to 1990 (the same applies to population share – 11.9%). As regards GDP per capita, the ratio of the economically most advanced region (Anglo-American) to the poorest one (African) has decreased significantly and now equals 38:1 (measured by exchange rates). Comparison by purchasing power parity (ppp), however, shows a much lower ratio – only 15:1.

4   DIVERGENT AND CONVERGENT TRENDS

Comparison of Tables 1, 2, and 3 shows that **convergent trends have pre-vailed** in the world over the past 50 years. In other words, differences among ten world's macro-regions have in general decreased. A closer look, however, reveals that it is not an outright trend. As an example, detailed changes of GDP per capita in 1970, 1990, and 2018 are shown in Table 4. Figures in the table are related to the highest value in particular year, which was GDP per capita in the Anglo-American region.

Table 4 reveals the following trends:

1. Convergent trends clearly prevail on the global level.
2. The European, Australian-Pacific, Chinese-Japanese, and Islamic Regions have made a marked move towards the maximum.
3. On the contrary, Russian Region shows a clear divergent trend and has moved in the opposite direction. Its economic well-being compared to Anglo-America sank from 38.5% (1970) down to 13.7% (2018), i. e. almost three times. It seems to be a continuous process.
4. Interesting changes have been observed in the Indonesian Region. First, there had been a stagnation in the period 1970–1990, followed by convergent trend between 1990 and 2018 (see Table 4).

5. Latin-American Region showed divergent trends in the period 1970–1990 and convergent trends in the period 1990–2018. Thus, it at least succeeded to return to its original position.
6. Indian and African Regions showed divergent trends in the period 1970–1990 and moderate convergent trends in the period 1990–2018. Both regions remain at the bottom of the list (3.1% and 2.6% of the maximum).

Table 4 Changes of Gross Domestic Product per Capita by World's Macro-Regions (1970, 1990, and 2018)

No.	Macro-region	1	2	3	4	5	6
1	European	1 800	46.2	13 000	59.6	36 500	60.0
2	Angloamerican	3 900	100.0	21 800	100.0	60 500	100.0
3	Russian	1 500	38.5	5 300	24.3	8 300	13.7
4	Australian-Oceanic	1 500	38.5	12 700	58.3	40 500	66.9
5	Sino-Japanese	450	11.5	3 100	14.2	12 300	20.3
6	Indonesian	125	3.2	800	3.7	4 000	6.6
7	Indian	90	2.3	350	1.6	1 900	3.1
8	Islamic	350	8.9	2 100	12.4	7 700	12.7
9	Latin American	525	13.5	2 200	9.6	8 100	13.3
10	African	185	4.7	600	2.8	1 600	2.6
	Total	810	23.1	4 100	18.8	11 000	18.2

Legend: 1 – GDP per Capita 1970 (USD)

2 – GDP per Capita 1970 related to the Anglo-American Region (%)

3 – GDP per Capita 1990 (USD)

4 – GDP per Capita 1990 related to the Anglo-American Region (%)

5 – GDP per Capita 2018 (USD)

6 – GDP per Capita 2018 related to the Anglo-American Region (%)

Source: authors' computations based on the World Bank, CIA World Factbook, and United Nations data (1971, 1972, 1991, 1992, 2019, 2020)

Lorenz curve (Figure 3) shows changing trends as regards GDP and population distribution in the period 1990–2018. The economic supremacy of Anglo-American and European Regions *has been slightly weakened* as the share of these two world's macro-regions combined on world's GDP has decreased from 60.1% to 50,9%. Though the poorest regions (African and Indian) improved their position, the shift is not great (from 3.2% to 5.6% of world's GDP). Among the *developing regions*, the Islamic Region was performing particularly well (increase from 2.5% up to 5.7% of world's GDP).

In general, the Lorenz curve indicates a **slight convergency**. In other words, differences among world's macro-regions measured by population and GDP de-

creased in the period 1990–2018. The world's average GDP per capita has increased from 4,100 USD (1990) to 11,000 USD (2018), i. e. ca. By 270%.
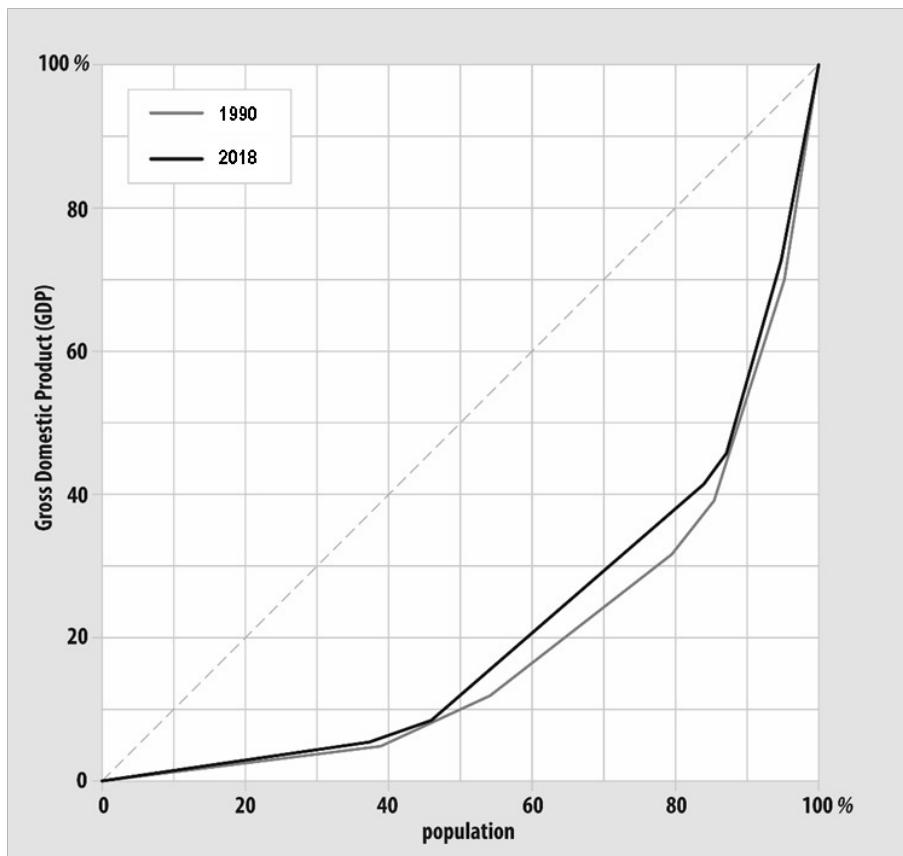

Figure 3 Uneven distribution of population and GDP in the world's macro-regions
(1990, 2016). Source: Elaborated by authors

Table 5 shows changes of literacy rates and life expectancy in a simplified manner. For the sake of complexity, population density is included in the table, too. **Literacy rates** show clear convergence in all developing macro-regions (e. g. in Indian have increased from 30% to 70% and African Regions have increased from 30% to 65% of maximal value of European macro-region, literacy rates have increased over 40% in Indian and 35% in African). **Life expectancy** has similar trend. Indian, Islamic and African macro-regions show the highest degree of convergence, values of these macro-regions increased by 20%, 17% and 16%. Russian Region constitutes the only exception to this rule: the "distance" of life expectancy in Russia from the maximum has decreased from 95% to 86%.

Table 5 Selected Indicators of World's Macro-Regions between 1970 and 2018: Changes of relative values to the maximal value of indicator (100)

No.	Macro-region	1	2	3	4	5	6
1	European	70.0	35.0	100	100	100	100
2	Angloamerican	7.0	5.0	95	100	100	98
3	Russian	7.0	4.0	95	100	95	88
4	Australian-Oceanic	2.0	1.5	95	95	99	100
5	Sino-Japanese	50.0	40.0	65	95	89	94
6	Indonesian	38.0	40.0	65	95	69	88
7	Indian	100.0	100.0	30	70	64	84
8	Islamic	10.0	12.0	40	80	72	89
9	Latin American	10.0	10.0	80	95	88	91
10	African	7.0	12.0	30	65	58	74
	Total	17.0	17.0	65	85	86	85

Legend: 1 – Population Density 1970

       2 – Population Density 2018

       3 – Literacy (%) 1970

       4 – Literacy (%) 2018

       5 – Life expectancy (years) 1970

       6 – Life expectancy (years) 2018

       Explanation: Values of macro-regions shown in the table are related to maximal values of respective indicators (population density, literacy rate, and life expectancy) which equals 100.

Sources: authors' computations based on World Bank, CIA World Factbook, and United Nations data (1971, 1972, 2019, 2020)

5 DISCUSSION AND CONCLUSIONS

American global hegemony undoubtedly has a wide scope. However, it is not firmly anchored, it is subject to both internal and external restrictions. Part of this American hegemony is the exercise of decisive influence in the political and economic spheres. However, unlike previous empires, this is not happening directly today. The sheer size of Eurasia, as well as the political and economic power of some European and Asian states (Germany, France, the United Kingdom, Russia, Japan, China, India, Indonesia, Iran, Turkey, and others), reduces the depth of American influence and the degree of American control over global events (Brzezinski, 2012).

World's macro-regions have gone through fundamental changes over the past 50 years and some of these regions have changed its position within the global system profoundly. Character of these changes, however, much depends on which indicator is used and also reflects uneven progress and developments in different parts of the world. Both life expectancy and literacy rates show clear convergent trends

(though differences do exist); economic indicators, however, show a much more complex picture (details in further text).

Ambiguous character of convergent trends is shown in Table 6, including the polarity between convergence and divergence. The Table shows how differences between respective regions and the maximum values developed over the time. Changes of selected indicators (population density, GDP per capita, literacy rate, and life expectancy) are sorted into four groups: convergence, strong convergence, divergence, and strong divergence; the relation towards maximum value is always crucial. "Stability" means minute changes only; "maximum" indicates the highest value of all world's macro-regions in the period 1970–2018.

Table 6 Changes of Selected Indicators in World's Macro-Regions 1970–2018

No.	Macro-region	1	2	3	4
1	European	==	xx	oo	oo
2	Angloamerican	=	oo	oo	oo
3	Russian	==	==	oo	==
4	Australian-Oceanic	o	xx	o	o
5	Sino-Japanese	=	xx	xx	x
6	Indonesian	o	xx	xx	xx
7	Indian	oo	o	xx	xx
8	Islamic	o	xx	xx	xx
9	Latin American	o	o	x	o
10	African	xx	==	xx	x
	Total	xx	=	x	o

Legend: 1 – Population Density

2 – GDP per Capita

3 – Literacy Rate

4 – Life Expectancy

Explanations: oo … maximum, o … stability, x … convergence, xx … strong convergence, = … divergence, == … strong divergence

Each indicator shows different trends over the time. **Population density** remains largely stable; in the case of developed regions, however, strong divergence was indicated. African Region (where demographic transition has not yet been finished) constitutes the only exception: high population increase pushes Africa close towards Indian Region.

By contrast, **economic well-being** (measured by GDP per capita) is a completely different story. Anglo-American Region is the richest part of the world and most of the remaining world's macro-regions have been nearing North America – in accordance with theories proposed by a number of scholars (Pieters, 2011; Agnew, 2009). There are, however, two parts of the world that show stability (Indian and Latin-American Regions) as they have been enjoying some economic progress only

over the past ten years. Lastly, African and Russian Regions show a very different picture: a number of African nation states have recently experienced economic decline and the situation in Russian Region looks simply alarming.

Literacy rates show clear convergent trends: less developed regions are getting closer to those with the highest literacy rates (almost 100%). Latin-American Region is the "slowest" one.

Trends in **life expectancy** are much more complex. Indonesian, Indian, and Islamic Regions (parts of the world where life expectancy was very low in 1970 – see Table 5) have made a big progress and are getting close to the most advanced regions (European and Anglo-American). The differences between Europe and North America on one side and other developed regions on the other side remains rather stable. Russian Region, again, shows a contradictory picture: difference in life expectancy between Russian Region and the most developed parts of the world has increased significantly – divergence was taking place. Over the past 50 years, life expectancy in Russia has more or less stagnated, especially in the case of men.

Data in Table 6 can be **interpreted as follows**:

1) *European*, *Anglo-American*, and *Australian-Pacific Regions* share *many similar features*. Indicators either show maximum values or are close to it. Population density is the only exception, with divergent trends.

2) GDP per capita and other indicators show *strong convergent trends*. Population density is the only exception, with prevailing stability, inevitably linked to biological aspects of the population. These are – unlike social or economic aspects – rather stable.

3) *Russian Region differs* a lot from the other world's macro-regions. In the global context, it lags behind its competitors.

4) *Latin-American Region* remains largely *stable*.

5) *African Region* shows both *convergent trends* (population density, literacy rate, and life expectancy) as well as *divergent* ones (GDP per capita).

The analysis of past trends and study of scientific sources (e. g. Cox, 2012) allow to construct a **number of scenarios** as regards future developments of world's macro-regions. In general it can be predicted that *extreme inequalities* in the world are likely *to be reduced* in the future and that existing differences will tend to shrink. *Chinese-Japanese Region* will probably become stronger in future and the same is expected in the case of *Russian* and *Indian Regions* – both have great economic potentials to be exploited. In distant future, however, it may be difficult to keep the current economic growth as natural resources are limited and technological progress will depend on finances and quality of educational systems.

A number of scholars attempt to explain differences among world's macro-regions and historical trends including effects on the society. Regional differences are reflected in changing patterns of international labour markets and in creation of global production chains (Hampl, 2010, 2014). The study carried out by Cox (2012) examines qualitative aspects of global economy that are inevitably linked with science, research, and technologies on the one hand, and with organizational structures and financial strength of multinational corporations on the other.

Uneven economic development and distribution of wealth is crucial for reshaping of the global power structure; it has, however, a number of social, cultural, and environmental consequences (Layne, 2006; Zakaria, 2008). Some scholars emphasize geopolitical aspects of the above mentioned changes (Pieterse, 2011, Agnew, 2009; Acemoglu and Robinson, 2012). The changing character of world's macro-regions may explain some reasons of dynamic changes of selected areas or nation states like China or India (Turner, 2016).

Acknowledgements

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Makro-regióny sveta: divergentné a konvergentné trendy od začiatku 70. rokov 20. storočia

Súhrn

Makro-regióny sveta prešli za posledných 50 rokov zásadnými zmenami a niektoré z týchto regiónov zásadným spôsobom zmenili svoju pozíciu v globálnom systéme. Charakter týchto zmien však veľmi závisí od použitého ukazovateľa a odráža tiež nerovnomerný pokrok a vývoj v rôznych častiach sveta. Očakávaná dĺžka života aj miera gramotnosti vykazujú na jednej strane jasné konvergentné trendy (aj keď rozdiely existujú), ekonomické ukazovatele, na druhej strane, však ukazujú oveľa zložitejší obraz.

Zmeny vybraných ukazovateľov jednotlivých makro-regiónov (hustota obyvateľstva, HDP na obyvateľa, miera gramotnosti a dĺžka života) môžeme rozdeliť do štyroch skupín: konvergencia, silná konvergencia, divergencia a silná divergencia. Každý ukazovateľ ukazuje odlišné trendy v čase. Hustota obyvateľstva napr. zostáva prevažne stabilná, hoci v prípade rozvinutých regiónov však boli zaznamenané určité rozdiely. Jedinou výnimkou je africký región, kde v dôsledku ešte neukončeného prvého demografického prechodu hustota zaľudnenia rastie. Vysoký prírastok obyvateľstva „tlačí" Afriku smerom k hodnotám indickému regiónu.

Naopak, úroveň ekonomického rozvoja (meraná HDP na obyvateľa) je úplne iný príbeh. Angloamerický región je najbohatšou časťou sveta a väčšina zostávajúcich makro-regiónov sa približovala k Severnej Amerike, v zhode s teóriami predstavenými viacerými bádateľmi (Pieters, 2011; Agnew, 2009 a iní). Existujú však dve časti sveta, ktoré vykazujú v sledovanom období určitú stabilitu (indické a latinskoamerické regióny), keďže tieto makro-regióny zažívajú pozorovateľný hospodársky pokrok až za posledných desať rokov. A nakoniec, úplne odlišný obraz poskytujú africký a ruský región. Veľa afrických národných štátov nedávno zažilo hospodár-

sky pokles, čo v čase globalizácie až tak neprekvapuje a situácia v ruskom regióne vyzerá jednoducho alarmujúco, na čom sa pravdepodobne výrazne podieľa jeho súčasná geopolitická pozícia.

Miera gramotnosti vykazuje zreteľné konvergentné trendy. Menej rozvinuté makro-regióny sa približujú k regiónom s najvyššou, prakticky 100 %-nou mierou gramot-nosti. Tempo dynamiky zvyšovania gramotnosti je „najpomalšie" v Latinskoame-rickom makro-regióne, čo možno dať do súvislosti s viacerými skutočnosťami, od zložitej politickej situácie v jednotlivých štátoch, cez značné ekonomické problémy viacerých štátov, až k značne komplikovaným prírodným podmienkam, ktoré „pris-pievajú" k izolovanosti niektorých pomerne rozsiahlych oblastí.

Trendy vo vývoji strednej dĺžky života sú oveľa zložitejšie. Indonézske, indické a islamské regióny, časti sveta, kde bola stredná dĺžka života v roku 1970 veľmi nízka, dosiahli pri tomto indikátore „veľký pokrok" a pomaly sa približujú sa naj-vyspelejším makro-regiónom, k európskemu a angloamerickému. Rozdiely medzi Európou a Severnou Amerikou na jednej strane a ostatnými v tomto indikátore dobre rozvinutými regiónmi na druhej strane, zostávajú pomerne stabilné. Ruský región opäť ukazuje rozporuplný obraz. Rozdiel v strednej dĺžke života medzi rus-kým makro-regiónom a najvyspelejšími časťami sveta sa pomerne výrazne zvýšil. Za posledných 50 rokov očakávaná stredná dĺžka života v Rusku viac-menej stag-novala, najmä v prípade kategórie mužov.

Analýza uplynulých trendov a štúdium vedeckých zdrojov umožňujú vytvoriť nie-koľko scenárov, pokiaľ ide o budúci vývoj svetových makro-regiónov. Všeobecne sa dá predpovedať, že extrémne nerovnosti vo svete sa v budúcnosti pravdepodobne znížia a že existujúce rozdiely sa budú zmenšovať. Čínsko-japonský makro-región sa v budúcnosti pravdepodobne posilní a to isté sa očakáva v prípade ruského a in-dického makro-regiónu. Obidva majú totiž obrovský ekonomický potenciál, ktorý budú v najbližších obdobiach pravdepodobne využívať. Vo vzdialenejšej budúcnos-ti však bude ťažké udržať očakávaný ekonomický rast ruského makro-regiónu len na báze prírodného bohatstva, pretože prírodné zdroje sú obmedzené a ekonomický, resp. hospodársky pokrok bude závisieť hlavne od znalostnej ekonomiky, schopnosti produkovať inovácie, stabilite finančného systému a kvality vzdeláva-cích systémov.