

This article was downloaded by: [109.72.76.80]

On: 16 December 2014, At: 14:07

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



[Click for updates](#)

World Futures: The Journal of New Paradigm Research

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/gwof20>

Globalization Shuffles Cards of the World Pack: In Which Direction is the Global Economic-Political Balance Shifting?

Leonid Grinin^a & Andrey Korotayev^a

^a National Research University, Moscow, Russia

Published online: 13 Dec 2014.

To cite this article: Leonid Grinin & Andrey Korotayev (2014) Globalization Shuffles Cards of the World Pack: In Which Direction is the Global Economic-Political Balance Shifting?, World Futures: The Journal of New Paradigm Research, 70:8, 515-545

To link to this article: <http://dx.doi.org/10.1080/02604027.2014.982474>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or

indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

GLOBALIZATION SHUFFLES CARDS OF THE WORLD PACK: IN WHICH DIRECTION IS THE GLOBAL ECONOMIC-POLITICAL BALANCE SHIFTING?

LEONID GRININ AND ANDREY KOROTAYEV
National Research University, Moscow, Russia

The article offers forecasts of the geopolitical and geo-economic development of the world in the forthcoming decades. One of the main accusations directed toward globalization is that it deepens the gap between the developed and developing countries dooming them to eternal backwardness. The article demonstrates that the actual situation is very different. It is shown that this is due to the globalization that the developing countries are generally growing much faster than the developed states, the World System core starts weakening and its periphery begins to strengthen. At the same time there is a continuing divergence between the main bulk of developing countries and the group of the poorest developing states. The article also explains why the globalization was bound to lead to the explosive rise of many developing countries and the relative weakening of the developed economies. In the forthcoming decades this trend is likely to continue (although, of course, not without certain interruptions). It is also demonstrated that this convergence constitutes a necessary condition for the next technological breakthrough. This has important implications for the hegemony debates. A rather popular theory of hegemony cycles implies that the eclipse of the global hegemony of the United States should be followed by the emergence of a new global hegemon. This generates the dichotomy of the two main current points of view—either the United States will continue the global leadership in the forthcoming decades, or it will be replaced by China in this capacity. We do not find the study of the future within this dichotomy fruitful. We believe that in a direct connection with the development of globalization processes the hegemony cycle pattern is likely to come to its end, which will lead to the World System reconfiguration and the emergence of its new structure that will allow the World System to continue its further development without a hegemon.

KEYWORDS: *Balance of power, change of the world leader, convergence, core, developed countries, developing countries, divergence, global hegemony, global middle class global technological breakthrough, globalization, hegemony cycles, periphery, the World System, weakening of the USA, world order.*

Address correspondence to Andrey Korotayev, Higher School of Economics, National Research University, 20 Myasnitskaya, Moscow 101000, Russia. E-mail: Akorotayev@gmail.com

Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/gwof.

A rather popular theory of hegemony cycles implies that the eclipse of the global hegemony of the United States should be followed by the emergence of a new global hegemon. This generates the dichotomy of the two main current points of view—either the United States will continue the global leadership in the forthcoming decades, or it will be replaced by China in this capacity. We do not find the study of the future within this dichotomy fruitful. We believe that in a direct connection with the development of globalization processes the hegemony cycle pattern is likely to come to its end, which will lead to the World System reconfiguration and the emergence of its new structure that will allow the World System to continue its further development without a hegemon.

DECLINE OF THE LEADERSHIP OF THE UNITED STATES AND THE WEST

The discussions of an inevitable eclipse of American might began already in the 1970s when this country confronted simultaneously political, economic, and currency crises. In the 1970s and the 1980s a number of forecasts appeared that predicted that the United States would be replaced by Japan in the role of the world economic leader (Vogel 1979; Kennedy 1987; Attali 1991). However, a new vigorous technological wave in the United States (that took place against the background of the economic stagnation in Japan) demonstrated the fallacy of such views. U.S. hegemony did not only turn out to be rather solid; what is more, it rose to a new level as a result of disintegration of the Communist block and the U.S.S.R.

However, these were just the 1990s when the number of forecasts predicting the inevitable decline of the American hegemony and the ascent of Asia to the leadership positions started growing rather rapidly (Thompson 1988; Attali 1991; Colson and Eckerd 1991; Frank 1998; Todd 2003; Wallerstein 1987, 2003; Kupchan 2002). At first such forecasts were taken rather skeptically, or were received as a sort of expression of leftist views and anti-American moods. However, with the growth of negative tendencies in the United States and successes of Asian countries the idea of the American decline started looking more and more grounded, which provoked (depending on one's orientation) feelings of triumph or apprehension. Nowadays, taking into account the consequences of the global crises, the forecasts of the decline of the U.S. role in the world appear to be shared by the overwhelming majority of analysts. The United States seems to have started putting up with the idea of the decline of the American hegemony—although many still seem to pin their hopes on some sort of technological or other miracle that will revive the American might (this is often expressed rather vividly in President Obama's speeches).

Thus, there is no much doubt that U.S. hegemony (which has continued for more than 60 years) is coming to its end. Sooner or later the United States will not be able to remain the World System leader in the sense that has become usual for us, as a result of which the global geopolitical landscape will change rather seriously (Grinin and Korotayev 2010, 2011; Grinin 2011, 2012). On the other hand, hopes of some political scientists and economists that a sort of total

collapse of the United States will take place very soon appear rather ungrounded; the relative decline of the United States will proceed gradually (and not without certain interruptions), while certain objective circumstances (including the rise of peripheral countries) will contribute to this. However, in the forthcoming two or three decades the United States will remain a sort of *primus inter pares* because of their superiority with respect to a few aspects of leadership and a certain “legality” of its leadership role (NIC 2012, XI). In addition, one should take into account the point that the world as a whole is still interested in the continuation of U.S. leadership.

Some Causes of the Weakening of the West

Since the end of the Second World War one could see in the world a rather unique situation when one country—the United States—became the world hegemon in so many respects: political, military, monetary, economic, technological, cultural, educational, artistic, innovations, and so on. For a rather long period of time this leadership was strengthened by the competition with world Communism, which unified the West and stimulated a vigorous energy in the United States. After the collapse of the U.S.S.R. the United States became the absolute hegemon of the world. And this may appear paradoxical, but it was the obtaining of the status of the absolute hegemon that contributed to the start of the eclipse of U.S. might. On the one hand, this weakened the country’s readiness to sacrifice anything (as was done in the framework of the Cold War); on the other hand, against the background of the apparent omnipotence, American leaders chose a generally wrong strategy trying to transform internal American tasks into goals of U.S. foreign policy (Kissinger 2001). As a result, within two decades U.S. administrations made many mistakes. Through their various actions they dissipated a certain safety factor that the United States had, shook their own might, accumulated exorbitant debts, and created a detonator for the global crisis whose consequences are not clear yet. In the meantime, within less than two decades, between 1991 and 2008, against the background of the weakening of Europe and continuing stagnation of Japan one could see the explosive growth of the Asian giants (China and India) as well as the formation of large group of fast developing countries (from Mexico to Malaysia) that will take leading positions in the world in foreseeable future.

How did this take place? And (what is most important) why? Quite a number of explanations have been suggested by now. For example, “Decline of the West” may be interpreted in spirit of Oswald Spengler (1918) or Pat Buchanan (2002); that is, from the point of view of the theory of civilizations and the renunciation of moral imperatives.¹ However, this, of course, fails to account scientifically for the actual causes of the “moral degradation.” The weakening of the United States may be also regarded as the confirmation of various theories of cycles of political hegemony (Modelski 1987; Thompson 1988; Modelski and Thompson 1996; Arrighi 1994), according to which the hegemony period lasts about 100–200 years, whereas afterward an old hegemon tends to be replaced by a new one. Indeed, no country can remain a global hegemon infinitely. However, the point is that, as we will see below, the forthcoming change of the global hegemony pattern will not mean just a

“usual” replacement of the United States by a similar absolute world leader.² And if there is no single absolute leader, the world will be structured in a significantly different way (Grinin and Korotayev 2010, 2011). Thus, with the eclipse of the United States the cycles of political hegemony are likely to come to their end.

It is rather natural to consider the change of geopolitical landscape as a result of mistakes and arrogance that become typical for great powers at a certain phase. Jawaharlal Nehru notes in this respect that history of nations goes through three stages: success, the consequence of success—arrogance and injustice, and as a result of this—fall (2004 [1934]). Indeed, a very considerable number of mistakes (including rather evident ones) have been made. One may even have an impression that Western democracies tend to lose their very important quality—to make correct conclusions from their own mistakes. Some evidence in support of this statement appears to be suggested by a sort of maniac attempts to topple regimes in the Near East without a sufficient care for consequences, without taking into account experience of their involvement in Lebanon, Palestine, Somalia, Afghanistan, Iraq, and so on.

However, those very mistakes (as well as changes in behavioral patterns of elites and commoners) may be regarded as results of deeper processes. Hence, it is very important to see those processes that change the world (often contrary to the will of those who seem to be in the center of the events).

Is Globalization the Main Cause?

If we consider the situation in retrospect, the decline of the might of the United States and the West was inevitable. The crisis of 2008–2013 just revealed in a rather distinct way the trend that had become rather pronounced well before the crisis, the trend toward the weakening of the main Western economic centers and the inevitability of the loss of the absolute hegemony by the West. We are dealing here with a certain historical logic that, however, has not been completely comprehended yet: *the development of globalization after it had reached its certain phase became incompatible with the well-established model of the American and Western hegemony*. Thus, the very globalization (that was actively imposed by the United States; that is stigmatized by the antiglobalists of all the countries; that is often regarded as the main source of problems for the developing countries) made the trend toward the relative weakening of the rich countries and the relative strengthening of the poor countries inevitable. Consider this point in more detail.

HOW HAS GLOBALIZATION WEAKENED THE CORE AND STRENGTHENED THE PERIPHERY?

Law of Communicating Vessels of the World Economy

Up to the early 1970s the development of globalization was accompanied by the growth of the gap between the rich and poor countries (especially, if we compare their gross domestic product [GDP] per capita levels). However, in the recent decades the globalization began to contribute more and more to the closing of this

gap. Thus, it appears possible to speak about the “divergent globalization” (approximately up to the 1970s) and the “convergent globalization” (since the 1980s). It appears important to note at this point that a rather pronounced convergence between the first and the third world was already observed in the 1990s; however, this convergence can be hardly seen when “the West” is compared with “the Rest,” as in this case the convergence between the first and the third world was obscured by a catastrophic economic decline observed in the early 1990s in the second world. It does not appear appropriate to consider this issue in necessary detail in the bulk of this article; however, we have decided to dedicate it to an Appendix.

Hence, the very essence of the last globalization wave implies that the developing countries must grow faster than the developed.³ This is because globalization increases the transparency of economic borders and this brings into action what may be called the “law of communicating vessels.” As a result the development of the periphery (and, especially, the semiperiphery) accelerated, whereas the growth of the countries of the World System core slowed down. There is no doubt that this is one of the main results of the global development in the last two decades.

According to the World Bank, just 20 years ago the share of the most developed countries (= the first world = “the West”⁴) in the world GDP (calculated in the constant 2005 international purchasing power parity) was almost twice as high as the one of the rest of the world. It started declining in the 1990s, but these were the 2000s when this decline became precipitous, and by now the share of the Rest already exceeds the one of the West (Figure 1).

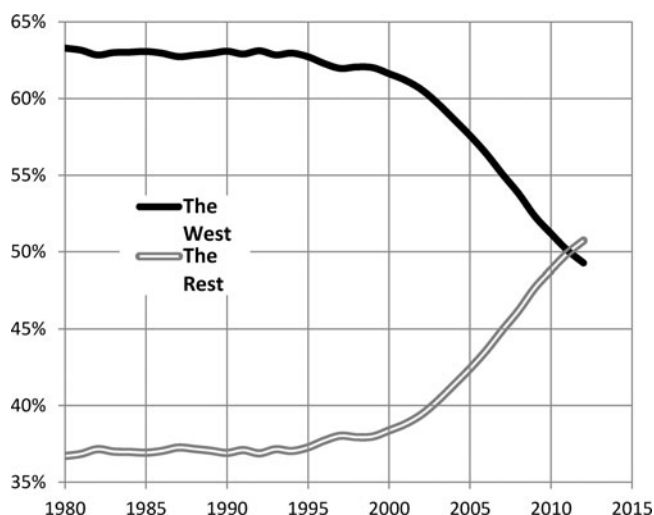


Figure 1. Dynamics of the share of the West and the rest of the world (“the Rest”) in the global GDP after 1980 (based on the World Bank data on the GDP calculated in 2005 purchasing power parity international dollars). *Data source:* World Bank 2014: NY.GDP.MKTP.PP.KD.

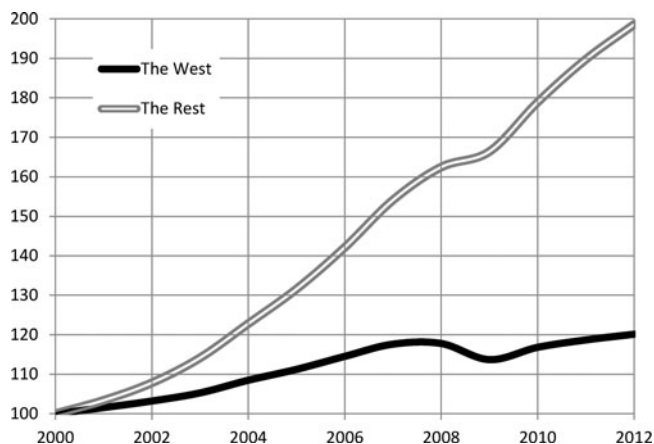


Figure 2. Relative dynamics of the GDP of the West and the rest of the world (based on the World Bank data on the GDP calculated in 2005 purchasing power parity international dollars), 2000–2012, 100 = the 2000 level.

This was a result of the fact that after 2000 the GDP growth rates in the countries of the West were five times lower than in the rest of the world (Figure 2).

Note that the results of such a comparison will be somehow different if we calculate GDP not in power purchasing parity international dollars, but rather in U.S. dollars (whereas the GDP of particular countries is calculated by the conversion of their GDP in local currency into U.S. dollars according to market exchange rates). Indeed, in this case we are getting a rather different picture (Figure 3).

As we see, in this case the initial gap between the West and the Rest appears to be much larger. What is more, the convergence in the 1990s and the early 2000s looks much less pronounced, whereas a really fast convergence only starts after 2003. However, for recent years both systems of measurement portray a rather similar picture of an extremely fast convergence, with the GDP growth rates of the World System core countries lagging very far behind the countries of the periphery⁵ (Figure 4).

Thus, although different data series portray rather different pictures of the convergence between the West and the Rest as regards their shares in the world GDP, they are very congruent regarding the point that in the recent years the convergence is going on at extremely fast rates indeed.

Note that an astonishingly similar picture of the world convergence pattern was detected by William Thompson when he tried to trace long-term dynamics of the Western share in the world manufacturing (Figure 5).

As we see, according to Thompson's calculations a really fast convergence between the West (\approx the World System core) and the Rest (\approx the World System periphery) only started (as regards the very important variable in question) after 2000; however, afterward it proceeded at precipitously high rates—thus in

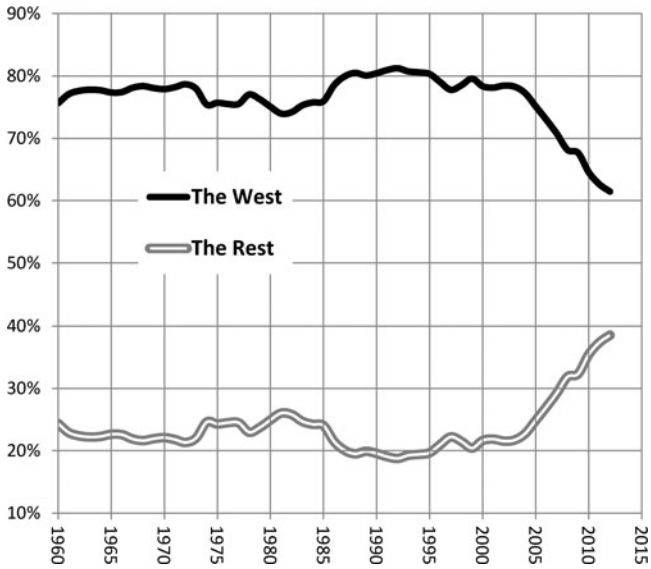


Figure 3. Dynamics of the share of the West and the rest of the world (“the Rest”) in the global GDP after 1980 (based on the World Bank data on the GDP converted into current US dollars according to current market exchange rates). *Data source: World Bank 2014: NY.GDP.MKTP.PP.CD.*

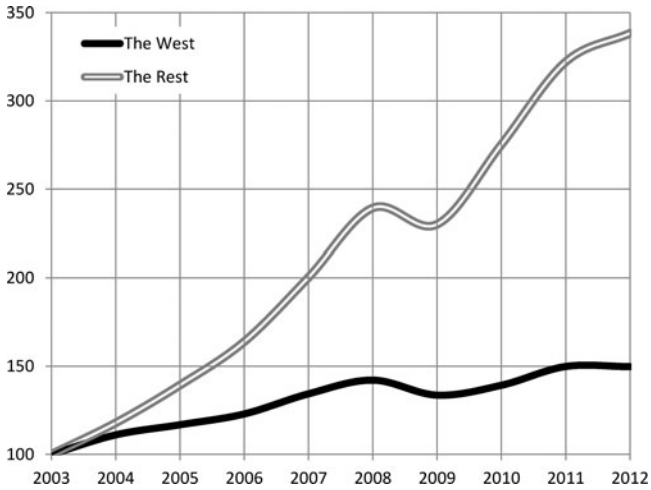


Figure 4. Relative dynamics of the GDP of the West and the rest of the world (based on the World Bank data on the GDP converted into current U.S. dollars according to current market exchange rates), 2003–2012, 100 = the 2003 level.

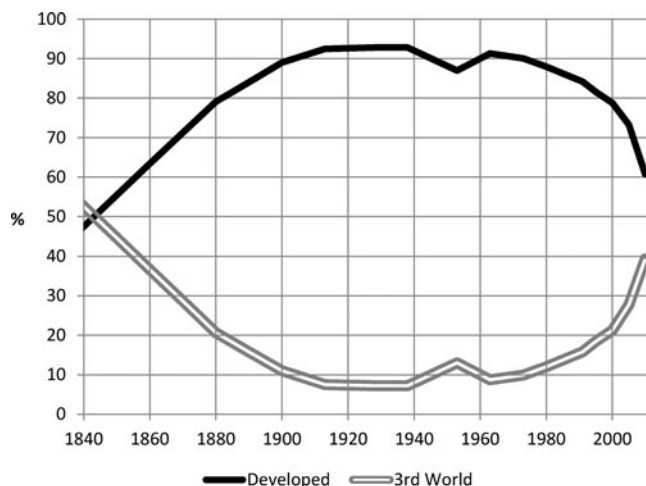


Figure 5. Long-term dynamics of the Western share in the world manufacturing, 1840–2010. *Source:* Thompson 2014.

2005–2010 (just in five years!) the gap between the West and the Rest decreased twice. With such an extremely high convergence rate the Rest may catch up with the West (as regards its share in world manufacturing) already by 2015–2020.⁶

Thus, the World System periphery has achieved very significant results as regards the closing the gap with the core with respect to its shares in the world GDP (in general) and world manufacturing (in particular).

As regards the convergence between the developed and developing countries with respect to per capita GDP the gap continues to be very pronounced, notwithstanding all the impressive successes achieved by the developing countries in recent years (Figure 6):⁷

As we could see in Figure 1, with respect to the GDP calculated in purchasing power parity international dollars, the gap between the World System core and periphery has already more or less disappeared. However, even if we calculate GDP in the same type of dollars, there is still a five-time gap between the developed and developing countries as regards their per capita GDP. On the other hand, note that the speed of the convergence with respect to this very important indicator was also extremely fast—just in 1999 the average per capita GDP in the developed states was more than eight times as high as in the developing countries. If this speed of the convergence continues, the developing countries will generally catch up with the developed countries (as regards their per capita GDP) already in 20 years.⁸

Law of Communicating Vessels of the World Economy and Awakening of Masses

Many economists of the 1950s and the 1960s did not have much hope that in the future there would be much chance to bring the countries of the global South from the obscurity of backwardness. They were right to consider as the main obstacle

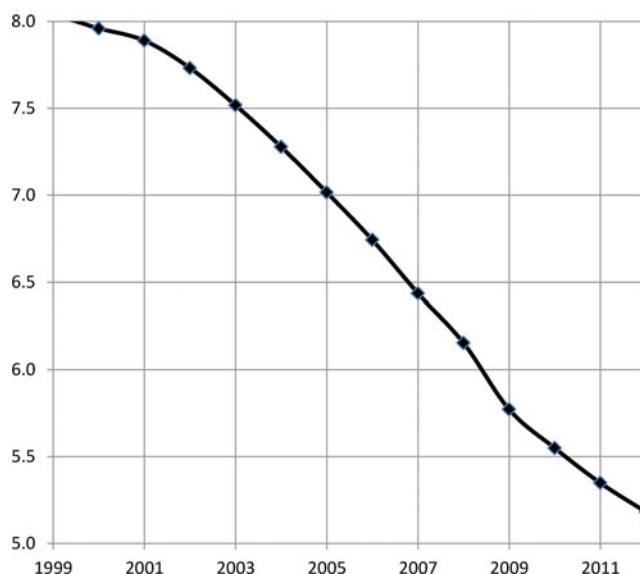


Figure 6. The dynamics of the gap in GDP per capita (by how many times) between the developed and developing countries, 1999–2012. The figures on the Y-axis scale denote by how many times the GDP per capita in the developed countries exceeded that in the developing countries for a given year. Thus, the value of 7 for 2005 means that in 2005 the GDP per capita was in the developed countries 7 times as high as in the developing countries. Calculations made on the basis of the data presented by World Bank (2014): NY.GDP.PCAP.PP.KD.

the absence of the aspirations to improve their lives among the population of those countries. Poverty did not bother people, they did not perceive it as an unbearable state that should be escaped as soon as possible (on this see, e.g., the book by Noble Prize winner Myrdal [1968]; the same opinion may be also found in the famous book of Braudel [1973]). Such a psychology may still be found among some inhabitants of the most underdeveloped areas (especially, in Tropical Africa).⁹

However, in many developing (mostly middle-income) countries the situation has changed, which is why the third world is transforming from sleeping and apathetic into rather dynamic indeed (Korotayev et al. 2011a, 2011b, 2012; Korotayev and Zinkina 2014; Grinin 2013). And one of the main changes may be seen just in the change of life priorities of hundreds million, who make more and more active attempts in order to escape from poverty and illiteracy into a new life.

Thus, the most difficult precondition for the breakthrough turns out to awaken this activity in the population of the poor countries (this requires very considerable efforts aimed at the initial modernization of education and healthcare, that is the initial accumulation of the human capital). However, when the need to enhance the conditions of life emerges at the mass scale, this puts into work a powerful motor. This may produce a qualitative result (although such a “Brownian motion” is almost always connected with various sorts of lawlessness, injustice and so

on). When it starts, the movement toward the change of people's own life to the better tends to generate social energy for many decades. And when we observe a synergy of efforts produced by the population and by the state, the success may be overwhelming. This is what happened in China, India, and many other developing countries.

In reach countries (notwithstanding all their achievements in culture and education) this source of development has already dried up. Motivation toward hard work does not only decrease among some groups of immigrants struggling for their (and their children's) economic status (and, by the way, in the United States this supports the economic dynamism to a considerable extent).

And taking into consideration the population aging, possibilities for fast development are further shrinking more and more. It appears important to emphasize that *among the causes of the weakening of the relative might of the West an important place belongs to the dramatic slow-down of the population growth rates in the West (whereas in some developed countries those growth rates have even become negative), which is accompanied by its very significant aging* (Goldstone 2010; Powell and Khan 2013). This leads to the decline of the working age populations and explosive growth of the number of pensioners.¹⁰ In the meantime it was globalization that increased dramatically the demand for the main resource of poor countries—their workforce. What is more, the value of this resource is likely to continue growing further in the forthcoming decades (although for many developing countries in South Asia and, especially, Sub-Saharan Africa, this will still be an extremely difficult task to find a productive employment for hundreds of millions of young working hands [Zinkina and Korotayev 2014]).

The openness of economic borders creates a situation when a sort of law of communicating vessels of the world economy begins to act; whereas the above described arrangement of labor incentives and labor resources determine to a considerable extent the work of this system of communicating vessels. In order to make the production cheaper, capitals and production capacities of the developed countries are transferred to the developing countries where one can find hundreds of millions of young women and men looking for a job. Together with this, the motor of the world economic growth is also transferred from the core to the periphery (which implies a significant reconfiguration of the World System). As a result, the role of the developing countries in the world economy (especially, as regards the generation of its growth) is increasing, whereas the gap between them and the developed countries is decreasing (although is still remains very significant).

Thus, by now the globalization of recent decades has worked mostly in favor of developing countries notwithstanding claims that it only increases the gap between the developed and developing countries (Stiglitz 2002). Notwithstanding many just observations made by the critics of globalization, we should maintain that it is Jagdish Bhagwati (2007) who turned out to be right with his vigorous defense of globalization.¹¹

And could it be the other way? It is not rare when a logic of a certain process remains unclear and contradictory for a long period of time; attention is attracted by those very features that disappear later, whereas the most important characteristics

remain some time blurred. It becomes clear only later that the process was bound to acquire those characteristics. This was what happened with globalization. Let us consider if the development of globalization had substantial chances to bring significantly different results.

For a rather long period of time (especially during the periods of colonialism and neocolonialism) the expansion and intensification of the economic links in the world proceeded (up to a considerable extent) through the transformation of peripheral economies into agrarian and raw material sources for the developed states.¹² That is why many development students (Immanuel Wallerstein [1974, 1980, 1987; 1988; 2003]) believed that the world-system core (\approx the West) could only exist through the exploitation of the periphery, through its imposition on developing countries such an economic specialization that would preserve the leadership of the developed countries. It was also rather comfortable ideologically to equate the new globalization wave with a sort of modernized neocolonialism, maintaining that it either conserves the global inequality, or will even increase the gap between the developed and developing countries. There seem to have been certain grounds for such beliefs. However, finally, the logic of the globalization process has turned out to be rather different. Why? The point is that globalization does not only increase the number of economic ties, it also extends enormously the world economic space. And this means a constant transformation of the international division of labor. Actually, this could have only happened in the following way—while advanced countries concentrated on the development of new sectors, the technologies of older generations must have been transferred to less developed countries. One should also take into account the exhaustion of labor resources in the developed countries, and the abundance of such resources in the third world. Thus, globalization objectively forced those countries that developed a postindustrial economy and that could hardly support all the economic sectors to move industrial production to weakly industrialized regions.¹³ As a result of such a diffusion (greatly facilitated by the opening of international borders for the movement of capitals) one can observe a transfer of a substantial part of the World System core industries to the World System periphery. On the other hand, many developing countries have applied a lot of efforts of their own to achieve their industrialization.

Causes of the Change of Economic Balance of Forces in the World

Now we summarize the points indicating that the convergence was a virtually inevitable result of the globalization process.

1. *Development of new technologies led to the situation when the technologies of older generations became cheaper and cheaper.* The transition of the Western economies to new technologies connected with the production of highly skilled services (in conditions of scarcity and high costs of their labor [as well as high ecological standards]) demanded the transfer of the old industries to the periphery. The transfer of those industries led to the rise of the peripheral countries (Grinin 2013).

2. *For the functioning of the transferred industries it was necessary to raise the level of the recipient countries in many respects.* Developing countries became production grounds (assemblage workshops, preliminary procession industries, etc.). However, such production grounds could only function in the presence of a necessary minimum of infrastructure, financial sector, a certain qualification of workers (implying the elimination of illiteracy and some development of secondary and higher education), and so on. The West pressed that the developing countries should develop all these.
3. *The transfer of industries launched a vigorous source of growth.* In a number of poor countries it set in motion two of their very important advantages: vast labor resources and their cheapness. As a result they did not only start producing cheap goods in great quantities—industrialization and modernization greatly accelerated in those countries. And those processes for decades (due to the rural–urban migrations) generate a rather fast economic growth.
4. *These were the unshakable globalization principles that led the West to its deindustrialization.* The very globalization principles (free trade as well as free movement of capitals) have made the process of the production transfer to those regions inevitable (Korotayev 2010).
5. *The West and Japan themselves gave modernization technologies to developing countries.* In order to preserve their leading positions, the Western countries actively taught the developing countries what they should do, and insisted on the acceleration of their modernization; what is more, they developed strategies of such a modernization; and, through the system of international development centers, they provided them with significant help in this regard. In many countries this coincided with desires and efforts of local elites; and in many cases this resulted in impressive successes of respective countries. The success of Japan (and later “Asian Tigers”) created an effective model of catch-up development based on the fast development of exporting sectors, and this model started diffusing (Grinin 2011).
6. *Cheap industrial products defeated the industry of the West.* The expansion of the importation of cheap manufactured products to Western countries made the process of the transfer of industries to the poor countries irrepressible. Western producers failed to compete with low prices and were not ready to pay more to support their industry.

Who has Found Themselves in the “Globalization Trap”?

Let us summarize now. The transfer of industries to the developing countries has created such conditions when they started growing faster than developed states. This is hardly surprising taking into consideration the point that for a few decades industrial capacities and capitals were leaving developed countries while entering the developing ones. In addition, this was supported by active policies of the developing countries’ elites who tended to actively attract investments and technologies to their countries, to eliminate barriers in their ways.

Compare, for example, the economic growth of Mexico and the United States. The transfer of industries from the latter to the former (which especially accelerated

after the establishment of the North American Free Trade Area [NAFTA] in 1994) has led to the following results: between 1986 and 2012 the Mexican GDP grew 9 times (from \$129.4 billion to \$1153.3 billion); the GDP of Brazil (which also actively imported capitals and technologies) grew comparably—eight and a half times, whereas the U.S. GDP only grew 3.4 times (from \$4,425 billion to \$14,991 billion).

In the meantime the Mexican and Brazilian economies are far from being the fastest growing (and in the 1980s and the 1990s their economic and financial systems experienced serious turbulences). In the same years Malaysia and Indonesia increased their GDP about 11 times. Since 1991 (i.e., since the country's economy had become open to the importation of foreign capitals) India increased its GDP 7 times just within 20 years (whereas between 1980 and 2012 it grew about 10 times). And, finally, China between 1986 and 2012 increased its GDP more than 27(!) times (from \$298 billion to \$8,227 billion).¹⁴ All those figures are very impressive indeed. For comparison, between 1986 and 2012 the GDP of the United Kingdom grew 4.3 times; whereas the GDP of France and Germany only grew 3.4 times (calculated on the basis of data provided in World Bank 2014 [NY.GDP.MKTP.CD]; Figure 7).

The developed countries could only preserve the gap through the prohibiting of the transfer of capitals, technologies, and industries, through policies of high tariff barriers; that is, by closing their markets from foreign goods. However, after decades when they tried to convince the developing world that free trade is sacred, after the establishment of the World Trade Organization (WTO), it appears impossible for developed countries to protect their markets with custom tariffs. What is more—customers in the developed countries prefer to buy foreign but cheaper goods (first these were Japanese goods; then these were Taiwanese, Chinese, and Mexican ones; now these are goods from Bangladesh, Vietnam, etc.).

Thus, we are dealing with a certain paradox of development. For a very long time the United States was a very active proponent of the ideology of free trade and

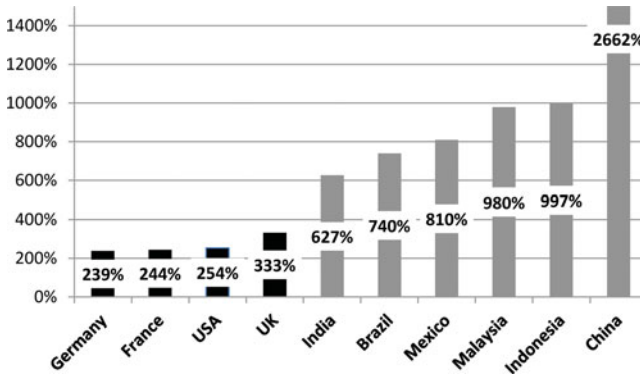


Figure 7. GDP growth in some developed and developing countries between 1986 and 2012. *Data source:* World Bank 2014: NY.GDP.MKTP.CD.

honest competition (e.g., it constantly pressed upon such partners as Japan that tried not to let certain goods into their markets); it initiated the creation of respective international organizations. That time it was beneficial for the United States. However, those firm rules prohibiting the creation of artificial barriers blocking cheap imports became the basis for the rationalization of technological process and the transfer of production from Europe and North America to Mexico, China, and other countries. Note that the behavior of the respective Western corporations was rather rational and logical; yet, as a result, the West transferred to the periphery together with the industries a substantial part of its might.

As a result of the desindustrialization of the West, the developing countries have generally profited, whereas the developed countries found themselves in the trap of low growth rates. The process of deindustrialization (and its consequences) is described rather well by Martin and Schumann (1997) who see in it a global “trap” for Europe and the United States. However, those authors pay most attention to the issue of job cuts and wealth distribution, whereas they do not notice the global change of the balance of power, because they are sure that globalization brings negative results to all the countries of the world.

These were just Western and Japanese corporations that “impregnated” Mexican, Chinese, Indian, and other developing economies. Policies of the Western countries in combination with the global demographic changes (exhausting of the demographic bonus combined with the population aging of the West and the demographic bonus of the East) amplified those processes. Of course, if the Western leaders of the late 1980s and 1990s could realize entirely all the consequences of deindustrialization, they might have done something to slow down this process;¹⁵ however, they could hardly prevent it entirely, taking into account the powerful influence of both consumers (\approx electorate) and the financial–industrial elites. On the other hand, policies of a number of developing countries turned out to be rather successful as regards the support of industrialization and the accelerating development of those countries.¹⁶ Yet, without an adequate inflow of capitals and technologies from the developed economies their success would have been rather limited. Such reforms only turn out to be successful when favorable conditions are available.

Hence, a decisive role in the weakening of the economic positions of the West in general, and the United States in particular (and, simultaneously, in the strengthening and rise of the countries of Asia and Latin America) was played precisely by globalization. We would forecast that the process of convergence will go very unevenly, in a wavelike manner, sometimes slowing down (up to temporary reversals), sometimes accelerating. According to many forecasts, in the forthcoming decades one will observe a very significant reduction of poverty in the developing countries (according to some calculations it will decrease twice by 2030 [NIC 2012, 8]), the most notorious forms of exploitation will be eliminated,¹⁷ the illiteracy will be reduced very substantially, there will be serious successes as regards gender equality, and so on. This will result in a substantial reduction of the gap between richer and poorer countries. We can also forecast in a rather confidential way the growth of the group of middle income countries (Korotayev *et al.* 2011a, 2011b, 2012; Korotayev and de Munck 2013). In some respects such

an equalization of incomes appears to be resembling the process of convergence as regards levels of life of different strata in various modern countries in the first two thirds of the twentieth century (especially in conjunction with a rather active processes of the middle class formation).

LEVELING OF DEGREES OF ECONOMIC DEVELOPMENT AS A PRECONDITION FOR A NEW TECHNOLOGICAL BREAKTHROUGH

Many researchers who study perspectives of global technological development in the forthcoming decades have noted that the potential of the information–computer technological system has been already been exhausted to a considerable extent, whereas the new technological breakthrough (that is likely to be based on the development of bio- and nanotechnologies) appears to be delayed. Some researchers interpret this as an onset of the so-called “technological pause” period (Korotayev and Khaltourina 2009). From our point of view such a delay is not coincidental.

Convergence of the Development Levels is Necessary for a New Technological Breakthrough

The point is that the largest technological shifts (*production revolutions*) emerge initially as economic sectors and then they diffuse throughout for rather long periods of time (Modelski and Thompson 1996; Grinin 2012; Grinin and Grinin 2013; Perez 2002, 2010, 2011, 2012). At the moment we observe the final phases of such a diffusion wave as regards information–computer technologies. As regards financial technologies, such a diffusion may continue for a rather long time. The analysis of earlier waves of innovation emergence and diffusion suggests that a new innovation wave does not start before a certain leveling of the technological level in a zone that is wider than the new innovation zone. For example, the cellular telephone could not emerge before the diffusion of the previous communication types (including the traditional telephone). In addition, with every new major innovation wave the zone that is necessary for the technological leveling expands (see Grinin 2012; Grinin and Grinin 2013 for more detail). At present, due to globalization, that zone expanded to the maximum possible size. Finally, the level of technological reception in the largest part of the world is not sufficient yet, which is why the main economic actors prefer to diffuse existing technologies rather than to create new ones. We suppose that it will take a rather long time before the new technological breakthrough starts; and during this time we will observe both processes of technological leveling and the incubation processes preparing the emergence of new technologies (see Grinin and Grinin 2013 for more detail). According to our estimates, it is likely to start in the 2030s and 2040s, as it will require not only technological, but also social, political, and other preconditions. In particular, from our point of view, the new major technological breakthrough cannot be achieved without further convergence of development levels of the countries of the world. We would like to emphasize that we are speaking precisely about a major technological breakthrough, actually about a production revolution that should finally transform all the spheres of production as well as the societal

structure (see Grinin and Grinin 2013 for more detail). It will be comparable to the revolution that started in the 1950s and that in the 1980s and 1990s transformed (with the information/communication technologies) all the production system, the financial system, as well as the everyday life. Limited technological changes (notwithstanding all their importance) cannot change the existing economic model in a radical way. In this respect the hopes that are pinned on the successes in the development of the shale gas and oil production technologies (as well as the “green energy”) appear to be clearly exaggerated.¹⁸

Serious Transformations are as Likely to be Observed within Developing Countries Themselves

On the one hand, in recent decades we observe a certain divergence between middle-income and low-income countries (Korotayev and Zinkina 2014). And this divergence may continue for some time, as not all the least-developed countries are ready for the take-off. This may be further aggravated by the point that these are the least developed countries where we observe the highest population growth rates (see Korotayev and Khalitourina 2006; Korotayev and Zinkina 2014; Zinkina and Korotayev 2014 for more detail). On the other hand, there are some grounds to maintain that in some time we will observe a certain equalization within the developing countries themselves. This equalization will manifest itself in the following: in the forthcoming decades more and more of the least developed countries (including the ones in Tropical Africa) will join the club of the fastest growing economies. Thus, the number of the countries belonging to the “bottom billion” is very likely to decrease in the forthcoming decades (and this will be only partly compensated by the extremely high population growth rates that are so typical for the least developed countries). The gap between low and middle income countries is likely to continue growing; but the number of middle income countries is likely to increase, whereas the number of the low income countries is likely to decrease in the forthcoming decades. Thus, there are grounds to expect a few more waves of the rise of peripheral countries (whereas the growth rates of the current leaders—China and India—will slow down¹⁹). One may note rather bright perspectives for the growth of a large group of developing countries, including Vietnam, Bangladesh, Turkey, Indonesia, Nigeria,²⁰ Malaysia, and so on (note that those countries are already actively diverging investments and export shares from China). We are very likely to observe the growth of the group of developing countries with per capita average annual income in the range not only over \$1,150, but also in the range between 3 and 15 thousand dollars.

Global Divergence and Convergence

Thus, in the two forthcoming decades the convergence processes are generally likely to prevail over the processes of divergence (although within certain groups of countries a rather substantial divergence may still be observed²¹). Yet, it is quite probable that later the situation will somehow change. According to our suppositions, a new phase of the production revolution (that will be connected with breakthroughs in healthcare and biotechnologies) may start in the 2030s and

the 2040s, whereas a wide impact on the economic structure will be produced by those new technologies 15–20 years later (Grinin and Grinin 2013). In connection with a new wave of the production revolution the divergence processes will be likely to accelerate again on the basis of the acceleration of scientific-technological progress. *Thus, convergence is necessary for the formations of preconditions for a technological breakthrough, whereas in the process of this breakthrough the divergence is likely to re-appear temporarily again.* Against such a background the Western countries (if they do not lose their technological leadership by that time) will have a chance to increase temporarily the gap separating them from the peripheral countries.²² Hence, what have been said above about the weakening of the West does not mean that the West cannot do anything in order to support its leadership. The presence of some potential in this respect appears to be indicated by partly successful attempts to “re-industrialize the West,” or the growing interest in the development of new technologies (such as robotics) on the part of major corporations (such as Google). In particular, in addition to the strengthening of the effort to develop technologies the Western leaders should attempt to consolidate their actions. For example, the unification of the European Union and the United States into a single free trade zone could be an important step in that direction.

THE WORLD WITHOUT AN ABSOLUTE LEADER

Will any Country be Able to Replace the United States?

The development of the aforementioned trends connected with the weakening of the United States and the West, the growth of the significance of many developing countries and the gradual convergence of the World System core and periphery mean that at the planetary scale we are dealing not just with major changes, but rather with a radical transformation of all the structure of the global economic and political order, and an overall rather complicated reconfiguration of the world.

Yet, how will this reconfiguration proceed? First of all note that although the U.S. positions will be weakening, no one in the new world will be able to become its absolute leader. The idea that the position of the United States will be occupied by someone else (the most frequently proposed candidate is, of course, China) is utterly wrong. Today the United States concentrates simultaneously *almost all the aspects of leadership (political, military, financial, monetary, economic, technological, ideological, and cultural)*, whereas there is no country in the world (and there is no group of countries) that in the foreseeable future will be able to monopolize so many aspects of world leadership (as we have already mentioned above, this was suggested by William R. Thompson already in 1988). In addition, neither China, nor India (or any other country) will be able to afford such a heavy burden due to the lack of appropriate economic possibilities as well as political risks (at least because of the problems with poverty of substantial parts of their respective populations and discontent with social problems, but also due to the lack of experience and necessary alliances, as well as ideological weakness [see Grinin and Korotayev 2010, 2011; Grinin 2011, 2013 for more detail]).

How Could the Future World Look?

One may expect that the forthcoming global system will have the following three characteristics: (1) *changing rules and flexibility of structures of the World System*, (2) *activization of the struggle for allies*, and (3) *reduction of the countries' sovereignty*. The absence of the strong absolute leader will lead to the growth of the World System flexibility as regards the search for new political foundations. The following point of view was expressed by us earlier in this respect:

The struggle for an “honorary” place within the globalization and coalitions, organization and functioning of the new world order will lead to the beginning of what we have called *the epoch of new coalitions*. . . . In the process of the search for the most stable, advantageous and adequate forms of supranational organization one may expect to observe the emergence of various and even fast changing intermediate forms when actors in global and regional political arenas will look for the most profitable and convenient blocks and agreements. However, finally some of those new alliances and coalitions may transform from temporal into permanent creating some fixed supranational forms. (Grinin and Korotayev 2010, 176)

Thus, in the forthcoming decades one will see the emergence of a number of countries and alliances that will play leading roles in different respects; against such a background the winners might be those countries that will conduct the most active policy aimed at the formation of new blocks as well as the joining of new blocks, those countries that will be able to get the maximum number of partners in various spheres. It may be said that a country's influence will grow through “getting points” by its participation in various alliances and blocks.²³ For the largest actors one is likely to observe a high degree of competition as regards attempts to influence the restructuring of the international system.

Consequently, we will leave in such a world, where one can observe a more and more active search for allies and alliances (although this might be accompanied by the growth of competition in many respects); this can result in the emergence of some institutional factors of the new world order that imply the need in a greater stability (Grinin 2009, 2012). Naturally, it appears impossible to predict concrete combinations of future alliances. However, it appears possible to offer a few ideas about this. For example, we believe that scenarios suggesting the global dominance of the alliance of India and China are not realistic. However, there are some more realistic scenarios—for example, the ones with the United States and the West maneuvering between the alliances with India, China, and other large developing countries and their blocks. As a matter of fact, in recent years we have been observing the growing activity of U.S. foreign policy aimed at the inhibition of the Chinese influence (through the attempts to strengthen contacts with India and other Asia-Pacific actors).

All the above described processes will also lead to a certain transformation of national sovereignty that will be generally weakened due to the explicit and implicit, forced and voluntary delegating of some parts of sovereign prerogatives

to various international, supranational, and global entities and arrangements (see Grinin 2008, 2012 for more detail).

The weakening of sovereignty may be accompanied by the growth of national self-consciousness and nationalist moods in some developing countries with intensifying industrialization (see Grinin 2012 for more detail). In the forthcoming decades the depth of economic links will increase, which will have a powerful influence on those developing countries (especially in Tropical Africa) whose population mostly does not feel those links yet in a substantial way. As a result, the struggle between traditionalism and globalization may intensify. In some areas conflicts and instability may grow, and whole regions may experience powerful social destabilization waves (as was observed in the case of the Arab Spring [Grinin and Korotayev 2012; Korotayev et al. 2011c]).

New Geopolitics and the End of the Epoch of Stable Political Blocks

For many decades one of the main factors of the emergence of political alliances was the threat of war, which dictated selection of certain allies. That is why political alliances were mostly military–political. In the contemporary world the risk of the large-scale war has diminished significantly, whereas the economic interdependence between countries has increased dramatically, and it will continue to grow in the forthcoming decades. This allows to maintain that the old style of geopolitics gradually (and often insensibly) gives way to a new style of geopolitics connected with the necessity to create optimum conditions for the economic development of a state or a group of states. Features of this new geopolitics look rather vague at present, but they should become much clearer in the forthcoming decades. Let us outline a few of them.²⁴

The epoch of firm alliances and inter-allied loyalty appears to be coming to an end (a characteristic example is Washington's refusal to support Pakistan and the U.S. alliance with India). The selection of allies, partners, and blocks will be more and more determined by rapidly changing interests and conjunctures.

States will not look for constant allies; they will rather be looking for temporary “fellow travelers” for particular occasions, trying to reach agreements simultaneously with many partners (this corresponds well to one of the principles of modern business—to have as many partners as possible). Even now many experts are concerned with the future of international system if it is only based on interests, not on certain rules (NIC 2012).

Economic interests will be more clearly expressed in foreign policy. Thus, economic interests of some countries may become constant, whereas political interests may be adjusted to them up to a considerable degree. Political and geopolitical principles and interests of some other states (especially larger ones) will never be dissolved in economic aspects. However, in this case different vectors of foreign policy may turn out to be pulled apart, that is, political and economic aspects of foreign policy will exist more detached from each other. And, consequently, policies will become more pragmatic than now.

The epoch when the creation of economic blocks was determined to a very considerable extent by some (civilization, ideological, military–political, etc.)

proximity evidently passes away. Today we see a growing tendency toward the situation when close economic links do not necessarily imply any political or ideological partnership, although they may impede outbreaks of open conflicts.

Consider this using China as an example. Its political influence is growing. In which way is this taking place? China has to join various alliances or to establish with them (e.g., with the Association of Southeast Asian Nations [ASEAN]) special relations, as it tries to play there an important role. It also tries to initiate and actively support various economic agreements (e.g., regarding free trade with Japan and Korea). China also tries to push the renminbi (RNB) as an international currency (note, e.g., recently signed agreements with Brazil and Australia), but to achieve this China must activate its agreements with numerous countries, simultaneously making concessions to them, and getting such concessions from them. However, notwithstanding all the active economic policy pursued by China, notwithstanding all the growth of trade with its neighbors, this did not eliminate the political (and territorial) contradictions with Japan, Taiwan, Vietnam, India, and so on. Let us mention another example. The U.S. "flirtation" with India implying a virtual permission for India to possess nuclear weapons do not imply that a sort of firm allied relations have been established between the two states.

Thus, the behavior in politics is becoming closer to business strategies where the principles are always rather fluid.

However, new principles of the world order may start emerging just on this fluid soil.

CONCLUSION: A WORLD NETWORK COMMUNITY?

In those historical periods when economic links between countries and regions were not as deep and indissoluble, the development of globalization needed a certain military and political hegemony that relied to a considerable extent on technological superiority of certain powers. At present the depth of economic relations has become unprecedented, which (as has already mentioned above) weakens the need in political and military hegemony in its present sense; this, of course, leads to more pragmatism in foreign policy.

The same causes will influence the process of a certain shift toward the formation of the global network community (from the contemporary hierarchical structure), within which (in addition to states and their blocks) an active role will be played by nongovernmental organizations and many other actors. This process may be also regarded as one of the aspects of the leveling of degrees of economic development (this is likely to contribute to the establishment of a new basis of global relations whose formation could facilitate the creation of conditions for the emergence of some effective global coordination center).

The movement toward the network society will contribute to the growth of the world middle class, a sort of world citizens (NIC 2012, 8–9), whose numbers, according to the Asian Development Bank, will grow with the rate of about 9% annually. And, generally, even according to conservative models, up to 2030 those numbers will grow twice—from 1 billion to 2 billion. We tend to agree that this is a very important megatrend (NIC 2012, 4). The idea that the middle class of different

countries will constitute potentially a sort of global citizenship (which gives some hope as regards the emergence of a certain solid basis of economic, cultural, and even political unity of the world) appears rather interesting and stimulating. In the nineteenth century intellectuals in different countries started constituting a certain unity first within Europe, and later all over the world, thus paving the way toward the development of panhuman ideas and values (which were finally proclaimed at the level of UN declarations). In a similar way the world middle class may create new possibilities for globalization. It may be that due to this it will get new (more mature) features, moving toward a political globalization of the world whose contours are not clear yet.

NOTES

1. "The de-Christinization of America is a great gamble, a roll of the dice, with our civilization as the stakes. America has thrown overboard the moral compass by which the republic steered for two hundred years, and now it sails by dead reckoning" (Buchanan 2002, 198).
2. Note that William R. Thompson was one of the first to arrive at this conclusion—while analyzing possible challengers to the United States's leading position in the 1980s he demonstrated that at that time the USSR was the only state that could compete with the United States militarily, whereas Japan was the only state that could compete with the United States economically—while there was no state that could take all the World System hegemony functions of the United States (Thompson 1988, 261–282).
3. This especially relevant for those developing countries that passed a certain threshold level of per capita GDP, which has been identified by Tsung-Wu Ho (2006) to be around \$1,150 (note that this is rather congruent with the "take-off" theory of W. W. Rostow 1960; see chapter 2, "The five stages of growth—A summary," 4–16). The growth of the convergence rate in the recent decades is directly connected with the fact that during those decades one could observe a very significant growth of the number of those developing countries that passed that threshold level. Indeed, as we have argued on a number of occasions these are medium developed countries that tend to grow faster than either the least developed countries or the most developed ones (Korotayev and Khaltourina 2009; Korotayev and Zinkina 2014). It is also very important to stress that at present the majority of the developing countries (with a total population of about 5 billion) belong to the category of the medium developed ("middle income") countries (World Bank 2014), whereas only the minority of the third world population (the so-called "bottom billion" [2007]) live now in the least developed countries. Note also that in the recent years the least developed countries tend to grow faster than the most developed ones, but still slower than the medium developed states (Korotayev and Zinkina 2014).
4. In this study this notion is operationalized as "High Income OECD Countries" according to the World Bank classification.
5. Note that here we quite consciously apply a simplified dual World System structuration scheme that only singles out the World System core and periphery and ignores the subdivision of the latter into the periphery *per se* and semiperiphery.
6. However, this may happen a few years later (for reasons note 8).
7. The main cause why the gap between the first and the third world is decreasing slower as regards per capita GDP (as compared with overall GDP) is rather evident: the population growth in the developing countries is still much higher than in the developed economies.
8. However, such a bright prospect of the developing countries fully converging to the developed ones within just 20 years is doubtful with a view to the prospect of the "Reindustrialization of the West," on the one hand, and the "middle income trap" awaiting the leading developing countries (like China or Brazil), on the other. As defined by Aiyar et al., the "middle-income trap" is "the phenomenon of hitherto rapidly growing economies stagnating at middle-income levels and failing to graduate into the ranks of high-income countries" (2013, 3; for a detailed description

- of the factors and mechanisms of the middle income trap see Kharas and Kohli 2011; see also The World Bank and the Development Research Center of the State Council of the People's Republic of China 2012, 12). Note that recently observed certain slowdown of the growth of the most dynamic major developing countries even provoked ideas of the "great slowdown." However, there are grounds to forecast the further continuation of the Convergence, although its pace may experience a significant temporary slowdown in the forthcoming years (including possible temporary reversals—similar to the one that was observed in the late 1990s).
9. Note that even in the 1990s some very important economists (like Jacques Attali who was the president of the European Bank of Reconstruction and Development at that time) still believed that the overwhelming supremacy of the global North over the global South would only increase in the forthcoming decades and would continue in the foreseeable future. Attali, for example, was sure that in the forthcoming decades many markets of the North would become closed for imports from the impoverished South. He expected the desperate popular masses of the World System periphery to continue observing in painful despair the efflorescence and richness of the World System core (Attali 1991).
 10. Note that the United States has certain advantages here as regards higher fertility and immigration rates, which are among the main factors making the U.S. economy more dynamic than the European economies.
 11. And we do not see sufficiently strong factors that can stop entirely the Great Convergence rather than just to slow it down (as has been mentioned above a certain slowdown is not entirely unlikely against the background of possible successes in the "reindustrialization of the West" and industrial application of robotics).
 12. However, even such a development was rather important for the modernization of the peripheral countries. Note also that in the nineteenth century ones of the most salient examples of transformation of whole colonies into agrarian and raw material sources for the developed states were represented by Australia, Canada and New Zealand. However, by 1913 the average level of life in Canada (estimated through the per capita GDP level, which, in 1913 in Canada, according to Maddison [2010], was equal to 4,447 international dollars [to be exact—1990 Geary–Khamis international purchasing power parity {PPP} dollars]) was considerably higher than the Western European average (\$3,687), whereas in Australia and New Zealand (\$5,157 and \$5,152, respectively) it was higher than in the most prosperous Western European countries of that time. Note that now Australia is still a major agrarian and raw material source, though in the present-day for China rather than Western Europe. In the meantime the average level of life/per capita GDP in Australia (\$34,396 [2005 PPP dollars]) is till now a few times higher than in the workshop of the present-day world, China.
 13. Such processes contributed to the economic development in the nineteenth century too, although the transfer of industrial production was not so wide-spread. However, in the nineteenth century one may note similar processes with respect to the agricultural production. In this century, as a result of explosive urbanization, the share of agriculture in the Western European GDP declined, whereas the demand for food increased dramatically. This led to the fast development of market-oriented agriculture (and economy in general) in many peripheral areas (Australia, Russia, parts of India, Argentine, the American West).
 14. All the calculations have been performed on the basis of the *World Development Indicators* database (World Bank 2014).
 15. Today the U.S. administration tries to take certain steps in this direction, and Obama openly expresses his joy as regards the return of some industries to the United States.
 16. Note that a certain possible slowdown in the growth of developing countries turns out to be rather compatible with our idea that a new technological breakthrough (see the next section as well as Grinin and Grinin 2013 for more detail) within the World System (that we expect to take place in the 2030s and 2040s) will request not only a certain decrease in the gap between the developing and developed countries (the economic convergence), but also a certain decrease of this gap in the sociopolitical and administrative dimensions (sociopolitical convergence), which may hinder the economic growth of respective developing countries, especially against the background of the World System reconfiguration that is likely to be generated by those processes (see Grinin and Korotayev 2012 for more detail).

17. However, in absolute figures the number of poor and illiterate people remains rather high. On the other hand, the fertility decline in the third world is bound to contribute to the reduction of those figures.
18. This may give a certain impulse to the American economy, reduce the balance of payment deficit of the American foreign trade and slow down the growth of the U.S. public debt. However, this may hardly change the situation in any radical way. In addition, the wider the shale gas production, the more serious the ecological problems that are connected with this production. The same may be said about the “green energy.” Although the amount of “green energy” is constantly growing (and in some countries in some years this growth rate can be as high as 50%), the general potential of this growth is rather limited. Its development is very important; however, in the near future it will not be able to replace traditional energy sources.
19. With respect to China a very important role is likely to be played here by demographic problems (Grinin 2011, 2013).
20. Although, of course, only if the Nigerian state and civil society manage to achieve a radical reduction of dangerously high fertility rates in this country (see Zinkina and Korotayev 2014 for more detail).
21. For example, in recent years we observe a considerable growth of the gap between the United States and the countries of Southern Europe (whereas in a few decades after the Second World War this gap tended to shrink in a very significant way).
22. On the other hand, a very sharp increase in innovation activities is observed in the recent decades in East Asia, which is manifested in the explosive growth of the number of patent grants (WIPO 2014). That is why one cannot exclude the possibility of East Asia becoming the global technological leader (or rather the dual East Asian–Western technological leadership).
23. This may be also done through the formation of new alliances (the emergence of the BRICs [Brazil, Russia, India, and China], and then the BRICS [addition of South Africa], is very symptomatic in this respect).
24. As a result both enmity and friendship may be forgotten very soon (one salient example is provided by Vietnam and the United States; they have forgotten their antagonism and are developing bilateral relations in a rather active way).

FUNDING

This research has been supported by the Russian Science Foundation (Project # 14-11-00634).

REFERENCES

- Aiyar S., R. Duval, D. Puy, Y. Wu, and L. Zhang. 2013. Growth slowdowns and the middle-income trap. IMF Working Paper WP/13/71, International Monetary Fund.
- Arrighi, G. 1994. *The long twentieth century: Money, power, and the origins of our times*. London: Verso.
- Attali, J. 1991. *Millennium: Winners and losers in the coming world order*. New York: Times Books.
- Bhagwati, J. 2007. *In defense of globalization*. New York: Oxford University Press.
- Braudel, F. 1973. *Capitalism and material life, 1400–1800*. New York: Harper and Row.
- Buchanan, P. 2002. *The death of the West: How dying populations and immigrant invasions imperil our country and civilization*. New York: St. Martin's Press.
- Collier, P. 2007. *The bottom billion*. Oxford: Oxford University Press.
- Colson, C., and J. Eckerd. 1991. *Why America doesn't work?* Dallas, TX: Word Publishing.

- Frank, A. G. 1998. *ReORIENT: Global economy in the Asian age*. Berkeley: University of California Press.
- Goldstone, J. A. 2010. The new population bomb. The four megatrends that will change the world. *Foreign Affairs* 89 (1): 31–43.
- Grinin, L. E. 2008. Globalization and sovereignty: Why do states abandon their sovereign prerogatives? *Age of Globalization* 1:22–32.
- . 2009. Which global transformations would the global crisis lead to? *Age of Globalization* 2:31–52.
- . 2011. The Chinese joker in the world pack. *Journal of Globalization Studies* 2 (2): 7–24.
- . 2012. *Macrohistory and globalization*. Volgograd: Uchitel.
- . 2013. The tiger and the dragon. Development models and perspectives of India and China. *Journal of Globalization Studies* 4 (1): 5–31.
- Grinin, L. E., and A. L. Grinin. 2013. Macroeolution of technology. In *Evolution: Development within big history, evolutionary and world-system paradigms*, eds. L. E. Grinin and A. V. Korotayev, 143–178. Volgograd: Uchitel Publishing House.
- Grinin L. E., and A. V. Korotayev. 2010. Will the global crisis lead to global transformations? 2. The coming epoch of new coalitions. *Journal of Globalization Studies* 1 (2): 166–183.
- . 2011. The coming epoch of new coalitions: Possible scenarios of the near future. *World Futures* 67 (8): 531–563.
- . 2012. Does “Arab Spring” mean the beginning of world system reconfiguration? *World Futures* 68 (7): 471–505.
- Ho, T.-W. 2006. Income thresholds and growth convergence: A panel data approach. *The Manchester School* 74 (2): 170–189.
- Kennedy, P. 1987. *The rise and fall of great powers 1500–2000*. New York: Random House.
- Kharas, H., and H. Kohli. 2011. What is the middle income trap, why do countries fall into it, and how can it be avoided. *Global Journal of Emerging Market Economies* 3:281–297.
- Kissinger, H. 2001. *Does America need a foreign policy?: Toward a diplomacy for the 21st century*. New York: Simon & Schuster.
- Korotayev, A. 2010. Is China the beneficiary of the “Washington Consensus”? *Russian Journal* 7 (49): 6–7.
- Korotayev, A., and D. Khalitourina. 2006. *Introduction to social macrodynamics: Secular cycles and millennial trends in Africa*. Moscow: KomKniga/URSS.
- . 2009. *Current trends of global development*. Moscow: Librokom/URSS.
- Korotayev, A., and V. de Munck. 2013. Advances in development reverse inequality trends. *Journal of Globalization Studies* 4 (1): 105–124.
- Korotayev, A., and J. Zinkina. 2014. On the structure of the present-day convergence. *Campus-Wide Information Systems* 31 (2): 41–57.
- Korotayev, A., J. Zinkina, J. Bogevolnov, and A. Malkov. 2011a. Global unconditional convergence among larger economies after 1998? *Journal of Globalization Studies* 2 (2): 25–62.
- . 2011b. Unconditional convergence among larger economies. In *Great powers, world order and international society: History and future*, ed. Debin Liu, 70–107. Changchun: The Institute of International Studies, Jilin University.
- . 2012. Global unconditional convergence among larger economies. In *Globalistics and globalization studies*, eds. L. Grinin, I. Ilyin, and A. Korotayev, 246–280. Moscow–Volgograd: Moscow University–Uchitel.

- Korotayev, A., J. Zinkina, S. Kobzeva, J. Bogevolnov, D. Khaltourina, A. Malkov, and S. Malkov. 2011c. A trap at the escape from the trap? Demographic-structural factors of political instability in modern Africa and West Asia. *Clodynamics: The Journal of Theoretical and Mathematical History* 2 (2): 276–303.
- Kupchan, Ch. A. 2002. *The end of the American era*. New York: Knopf.
- Maddison, A. 2010. World population, GDP and per capita GDP, A.D. 1–2008. www.ggd.net/maddison (accessed January 30, 2014).
- Martin, H.-P., and H. Schumann. 1997. *The global trap: Globalization and the assault on prosperity and democracy*. London & New York: Zed Books.
- Modelski, G. 1987. *Long cycles in world politics*. London: Macmillan.
- Modelski, G., and W. R. Thompson. 1996. *Leading sectors and world power: The co-evolution of global economics and politics*. Columbia: University of South Carolina Press.
- Myrdal, G. 1968. *Asian drama: An inquiry into the poverty of nations*. New York: Twentieth Century Fund.
- Nehru, J. 2004 [1934]. *Glimpses of world history*. New Delhi: Penguin.
- National Intelligence Council (NIC). 2012. *Global trends 2030: Alternative worlds*. Washington, DC: National Intelligence Council.
- Perez, C. 2002. *Technological revolutions and financial capital: The dynamics of bubbles and golden ages*. Cheltenham: Elgar.
- . 2010. Technological revolutions and techno-economic paradigms. *Cambridge Journal of Economics* 34 (1): 185–202 (Downloadable as Working paper TOC/TUT WP No. 20, WPs in Technology Governance and Economic Dynamics The Other Canon Foundation, Norway and Tallinn University of Technology, Estonia).
- . 2011. The advance of technology and major bubble collapses. *On capitalism: Perspectives from the Engelsberg Seminar 2010*, ed. A. Linklater, 103–114. Stockholm: Ax:on Foundation.
- Perez, C. 2012. Technological revolutions and the role of government in unleashing golden ages. In *Kondratieff waves. Dimensions and prospects at the dawn of the 21st century*, eds. L. E. Grinin, T. C. Devezas, and A. V. Korotayev, 211–218. Volgograd, Russia: Uchitel.
- Powell, J. L., and H. T. A. Khan. 2013. Ageing and globalization: A global analysis. *Journal of Globalization Studies* 4 (1): 150–159.
- Rostow, W. W. 1960. *The stages of economic growth: A non-communist manifesto*. Cambridge: Cambridge University Press.
- Spengler, O. 1918. *Der Untergang des Abendlandes—Umriss einer Morphologie der Weltgeschichte*. Wien: Verlag Braumüller.
- Stiglitz, J. 2002. *Globalization and its discontents*. New York, London: W. W. Norton & Co.
- Thompson, W. R. 1988. *On global war: Historical-structural approaches to world politics*. Columbia: University of South Carolina Press.
- Thompson, W. 2014. K-waves, technological clustering, and some of its implications. *Kondratieff Waves*. Vol. 2 (in press).
- Todd, E. 2003. *After the empire: The breakdown of the American order*. New York: Columbia University Press.
- Vogel, E. F. 1979. *Japan as number one: Lessons for America*. Cambridge: Harvard University Press.
- Wallerstein, I. 1974, 1980, 1988. *The modern world-system*. 3 vols. New York: Academic Press.

- . 1987. World-systems analysis. In *Social theory today*, ed. A. Giddens and J. Turner, 309–324. Cambridge, UK: Polity Press.
- . 2003. *The decline of American power. The U.S. in a chaotic world*. New York, London: New Press.
- World Bank. 2014. *World development indicators online*. Washington, DC: World Bank, Electronic version. [http:// data.worldbank.org/indicator](http://data.worldbank.org/indicator) (accessed March 15, 2014).
- World Bank and the Development Research Center of the State Council of the People's Republic of China. 2012. *China 2030. Building a modern, harmonious, and creative high-income society*. Washington, DC: International Bank for Reconstruction and Development.
- World Intellectual Property Organization (WIPO). 2014. Statistics on patents. Patent grants by Patent Office by resident and non-resident. http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/wipo_pat_grant_from_1883_table.xls (accessed January 21, 2014).
- Zinkina, J., and A. Korotayev. 2014. Explosive population growth in tropical Africa: Crucial omission in development forecasts (emerging risks and way out). *World Futures* 70 (4): 271–305.

APPENDIX: TAKING THE SECOND WORLD DYNAMICS INTO ACCOUNT

Note that Figures 1–5 may suggest that the convergence between the first and the third world only really started in the 2000s. We might have a similar impression if we consider dynamics of the gap between the West and the Rest as regards the GDP per capita (Figure A1).

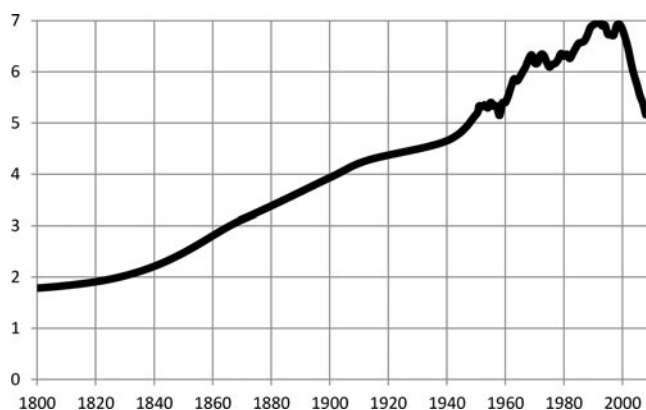


Figure A1. A1 The dynamics of the gap in GDP per capita (by how many times) between the West and the Rest, 1800–2008 гг. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

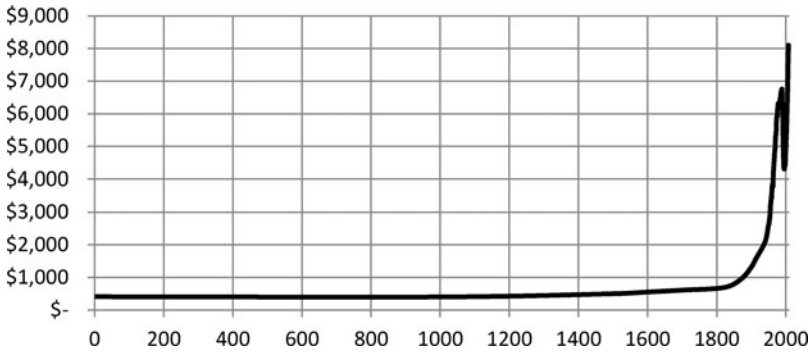


Figure A2. A2 The second world per capita GDP dynamics, 1–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

However, this impression is not quite correct. The fact is that at this point we should take into account the point that the rest is not equal to the third world, as in addition to the third world it includes the second world (i.e., the former “Communist Block”—the countries of the former USSR as well as the former Communist countries of the East Europe).

Thus, it appears necessary to consider separately the long-term economic development of the second world countries (Figures A2–A4).

As we see, in the second world the economic crisis of the 1990s was unusually deep and long with an average decline of the per capita GDP by more than a third (i.e., it was significantly stronger than the Great Depression in the United States), whereas on average it took the second world 16 years to return the per capita output to the pre-crisis level (for comparison the same task took the United States in the 1930s 11 years).

Consider now the long-term dynamics of the gap between the first and the second world as regards per capita GDP (Figures A5–A8).

The 2nd World per capita GDP dynamics, 1800–2008 CE

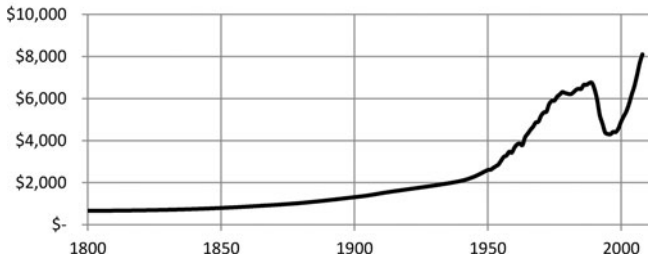


Figure A3. The second world per capita GDP dynamics, 1800–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

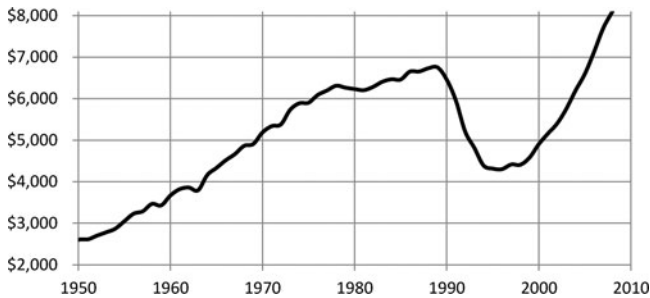


Figure A4. The second world per capita GDP dynamics, 1950–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

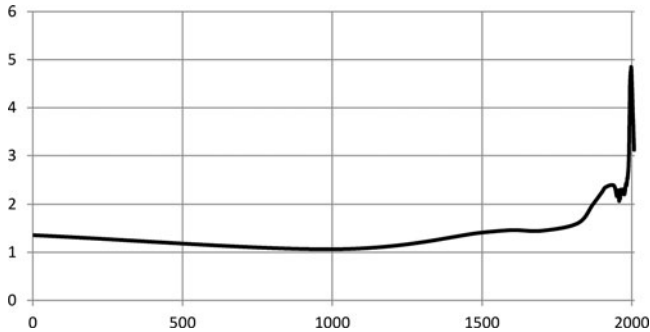


Figure A5. The dynamics of the gap in GDP per capita (by how many times) between the first and the second world, 1–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

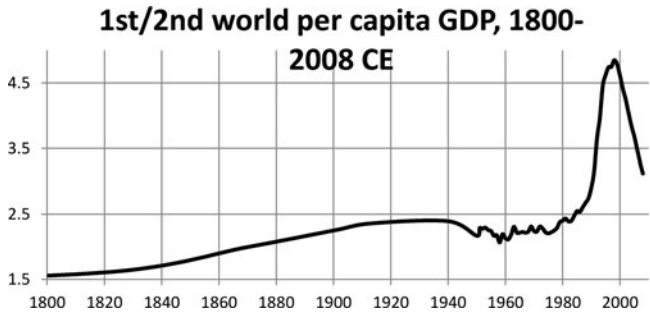


Figure A6. The dynamics of the gap in GDP per capita (by how many times) between the first and the second world, 1800–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

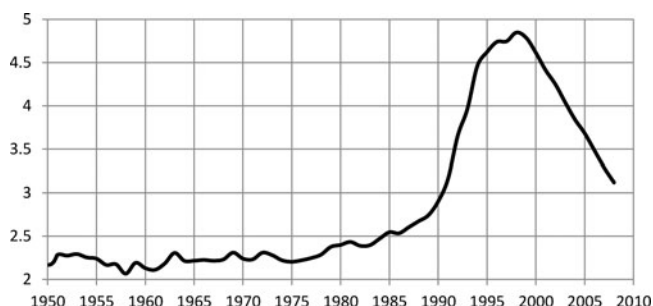


Figure A7. The dynamics of the gap in GDP per capita (by how many times) between the first and the second world, 1950–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

As we see, in the 1990s in the second world countries a catastrophic decline of the output was accompanied by an explosive growth of the gap between the first and the second world, which reached by the mid-1990s an unprecedented level. Note that while by the mid-2000s the second world managed to return its output to the pre-crisis level, it did not manage to return to this level the gap with the first world, and by 2008 it remained much higher than this had been observed at any point of time before 1991. The point is that in the 1990s the economic collapse in the second world was observed against the background of a generally rather fast economic growth of the first world countries, which is why by the moment when the second world restored its pre-crisis GDP per capita level, the first world economies had gone far ahead (Figure A9).

As a result in the 1990s the second world share in the world GDP contracted in a really significant way. As we remember, when we use the World Bank data on the GDP calculated in 2005 international dollars at purchasing power parities,

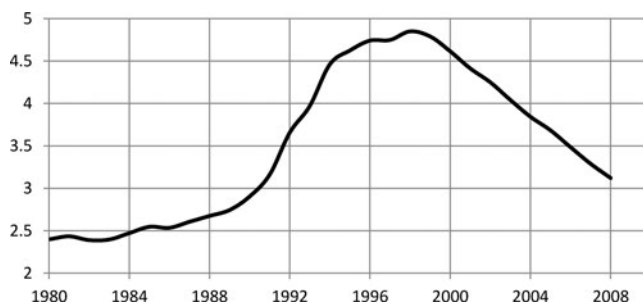


Figure A8. The dynamics of the gap in GDP per capita (by how many times) between the first and the second world, 1950–2008. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

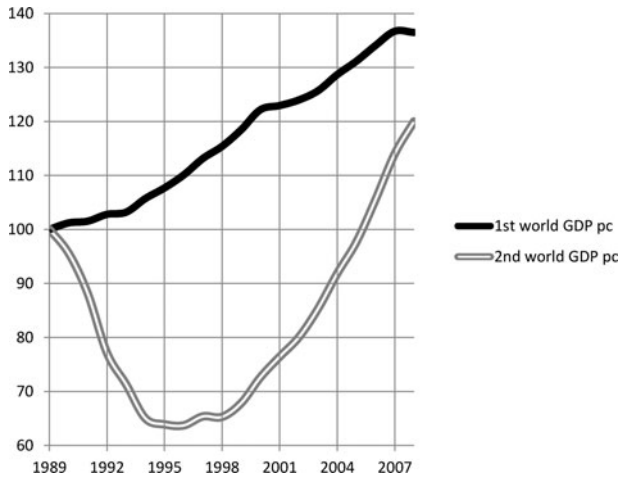


Figure A9. Relative dynamics of the GDP per capita in the first and the second world, 1989–2008, 100 = 1989 level. *Data source:* Maddison (2010). Note that Maddison provides GDP estimates in 1990 Geary–Khamis international dollars at purchasing power parity.

we have an impression that there was almost no convergence as regards the world GDP share in the 1990s (and that such a convergence only started in the 2000s). However, the picture changes very significantly as soon as we separate the third world from the second world (Figure A10).

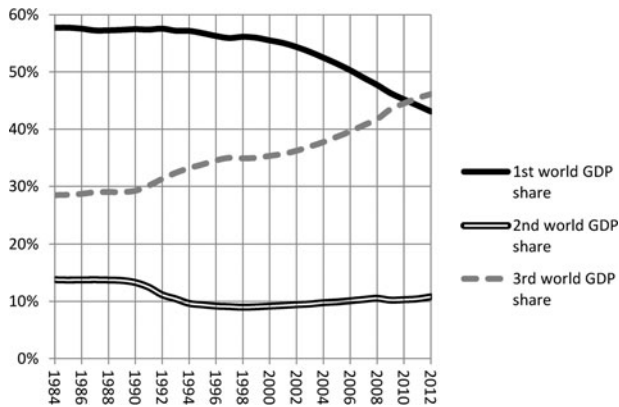


Figure A10. Dynamics of shares of the first, the second, and the third world in the global GDP, 1984–2008 (based on the World Bank data on the GDP calculated in 2005 purchasing power parity international dollars). *Data source:* World Bank 2014: NY.GDP.PCAP.PP.KD. The fact that the first world curve in this graph is not entirely identical with the one in Figure 1 is accounted for by the point that in two cases two different aggregation schemes were used.

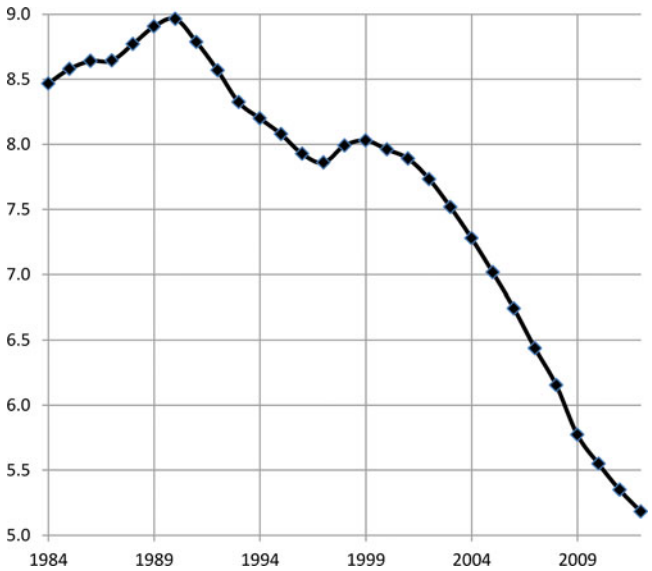


Figure A11. The dynamics of the gap in GDP per capita (by how many times) between the first and the third world, 1984–2012 (based on the World Bank data on the GDP calculated in 2005 purchasing power parity international dollars). *Data source:* World Bank 2014: NY.GDP.PCAP.PP.KD.

As we see, after the division of “the rest” into the second and the third world we see that a fairly fast convergence between the first and the third world (as regards their shares in the global GDP already started in the 1990s (with a certain hitch in the last years of this decade). However, these were precisely the early 1990s when a rather significant decline of the second world’s share in the global GDP took place. Thus, in the first half of the 1990s a rather substantial increase in the third world’s share of the global GDP was almost entirely compensated by the simultaneous decline of the second world’s share (and this is just what creates an illusion of the convergence absence in this period).

Respectively, after the division of “the rest” into the second and the third world, we can see that a rather noticeable convergence between the first and the third world started in the early 1990s (although with a certain hitch around the end of this decade; Figure A11).