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Russia in the System of Global Economic Relations

Leonid Grigoryev

Abstract: The socio-economic history of Russia demonstrates that its ‘place’ in global economic relations has been subject to complex cyclical processes. The country entered the 20th century with a high growth rate and burgeoning industrialisation that included significant foreign capital. Historically exports primarily included raw materials such as grain and timber while imports consisted largely of machinery and consumer goods. The fast industrialisation and society changes involved large numbers of people in manufacturing, finally bringing success in many areas, especially education, nuclear and space studies, weaponry and health care. However, during the 20th century the general trend toward modernisation was interrupted by World War I, the Civil War, purges of the 1930s and World War II, which caused enormous loss to both the working population as a whole and, in particular, to its most creative members: the entrepreneurs and the intelligentsia. The collapse of the Soviet Union caused a further loss of industrial potential, a surge in emigration and the need to restructure socio-economic institutions and launch a new wave of modernisation. At each such critical juncture, the country relied heavily on export of raw materials, struggled to restore human capital and defence capabilities, and was forced to import technologies and consumer goods, now and again as a century ago, while each time on a different level.

Some of the primary factors that determine a country’s *place* in the world economy include its population, the size of its territory and borders, its neighbours, whether it has an outlet to the sea, and the presence of mineral and other resources, both natural and those built up over centuries such as physical infrastructure and productive assets. Without going into an elaborate discussion, we will assume that the level of GDP reflects the overall development of the economy, and that the performance of science and high-tech industries (intended for export) indicates the quality of that development. Accordingly, natural resources represent the potential of the country and the nature of its export/import activity as involvement in the international division of labour. However, most important is human capital, which is measured in two dimensions: the overall capacity of the working population and its creative potential—as embodied by its intelligentsia, entrepreneurs and managers.

Modern institutional economic theory (buttressed by a growing number of Nobel Prizes in that field) adds other key parameters of growth and development: the quality of legal institutions, morals and economic life. They determine not only the nature of growth and the use of resources, but also how each country manages the transition from one stage of development to the next (primary industrialisation ... its conclusion, an average level of development, post-industrial society ...). The last 100 years

Leonid Grigoryev is a tenured professor at the National Research University Higher School of Economics. He is also the Chief Advisor to the Head of the Analytical Center for the Government of the Russian Federation.

have been difficult for Russia, having suffered enormous losses and not finding itself in as desirable a ‘position’ [‘place’] in the world economic system as it would have had with a political history—both foreign and domestic—that was more merciful toward the population and the economy. Although it did manage to modernise production, improve the economy and develop education, sciences and arts, however, post every major social or military upheaval, the economy reverted to an over-dependence on commodities exports and suffered huge losses to human capital.

The country, however, after every shock, set out to modernise, relying on a slowly recovering labour force and the country’s vast natural resources. The main challenge remains the need to create stable and sustainable economic, state and public institutions capable not only of supporting the growth of key or per capita indicators over several successive stages of their development, but also of providing the foundation on which the economy can grow to higher levels of functional efficiency. The per capita GDP (at purchasing power parities—ppp) in Russia in 2014 was \$23,000—apparently still in the ‘trap of average level of development’. The obvious task is to break out of this trap and reach an average level above \$30,000—closer to the average for the European Union (without the UK). That objective has not been easy since the recession of 2015 (ignited by the external shock of the fall in oil prices) led to a decline of real GDP by 3.7 per cent in 2015 and probably another drop by 1 per cent in 2016. Nevertheless the Russian economy does not have a heavy debt burden, unemployment or inflation, and so is capable to return to the growth path by 2017. With a 3–4 per cent average growth rate and a stable population size, it’s feasible to expect GDP per capita close to 30,000 (ppp)—about 35–40 per cent cumulative growth for the whole period to 2030.

At which point in time do we consider Russia?

Most countries—including the largest—have a certain place in the world economy. Each has its own territory, natural resources, level and pace of development and economic structure. These parameters vary by country, but in many countries the economy has changed along with general world trends over the last 150–200 years—or at least over the last 75. Such countries have more or less straightforward demographics in terms of ethnic composition and human capital (notwithstanding the usual variations). Global turmoil in the 20th and 21st centuries brought great changes: colonies gained their freedom; the socialist camp was formed and later disintegrated; Asia began to rise; the outlook for Africa improved; and the European Union was formed and expanded until Brexit. Any broad statement concerning this process would be open to debate: how accurately does it reflect the dynamics of change in the countries considered, while maintaining their national identity and place in the world economy? It is important to know not only where a country has been, might have been or is now, but more importantly, where it will be in a decade or a generation from now.

One point is probably undisputed: no other country has undergone more transformations or assumed more territorial configurations, ideologies or economic systems than Russia. Even Germany, after its enormous upheaval, eventually returned to the historical position of a prosperous industrial country, as it was before World War I—now without the Kaiser. Therefore, it seems that the question of Russia’s place in the global economic picture is essentially the search for its point of equilibrium in the world—and that largely depends on the period of history, the condition of the country

and the political configuration of the world. Unfortunately, any discussion on this topic requires first acknowledging that in recent history, the Russian economy has too often been hostage to domestic ideologies, wars and external convulsions—that is, to politics. It is enough to imagine a continuation of the moderate bourgeois transformation (that is ‘without the Revolution of 1917’) that developed in Russia in the early 20th century to get a picture of Russia today like some sort of Eurasian rival of the United States. Of course, this implies that Russia’s political elite would have adapted to the externalities of the time, achieving Nicolas II’s Prime Minister Pyotr Stolypin’s dream of ‘20 years of internal and external peace’ and avoiding participation in World War I, as former Minister of the Interior Pyotr Durnovo had advised in February 1914.

Pre-revolutionary Russia had all of the prerequisites to become a developed country, but which were later at a loss; probably it would have been a leading agrarian and industrial country. Perhaps it would have been like Canada, except for the huge Russian land border and the fact that it was not the dominion of a British empire, but an empire by itself. Indeed: it would have had oil in Baku, exported grain, received foreign capital for industry and the transit potential of the Trans-Siberian Railway would have been greater than at present. North America started out with less—although it did have Anglo-Saxon law and open spaces without remnants of feudalism (like Russian ‘boyars’). It had only immigrants and a lot of open space and opportunities. Also, last but not least in North America there were almost no close neighbours with whom to make war, with the exception of Mexico (‘minus California’).

World War I, the Revolution and the subsequent Civil War dealt a serious blow to the very human capital that had been growing for the half-century since the liberation of the serfs in 1861—during the transition from an inept feudal (serf-based) to a feudal-bureaucratic state. The latter hampered the development of civil society, democracy and, in effect, the most creative segments of society—the bourgeoisie and intelligentsia—and drove them to join the opposition to the regime. The socio-economic regime was followed by a revolution and civil war that further depleted the country’s human capital, while also destroying its physical infrastructure, industry and agriculture throughout its territory—and not only in the areas where its military was fighting on the Austro-Bulgarian-German-Turkish front. The political elites were decimated by the revolution. The creative class suffered the most significant losses, with some dying at the fronts, others dying then or later from repression and some simply emigrating. The loss of agricultural labourers and ordinary workers was enormous. It was the first and, unfortunately, not the last ‘low point’ the country would reach during the 20th century.

After 16–18 years of war, de-kulakisation, drought and a variety of social experiments, the country effectively lacked any definite place in the world economy. Andrei Markevich and Mark Harrison managed to work up some fairly reliable data for the period of 1913–1928.¹ They found that during those 15 years the country’s population (not counting Poland, Finland and the Baltic states) rose by approximately 10.2 per cent, to 154 million, thanks to the 8 years of peace that followed the end of hostilities. Depending on the assessment used, net national product ranged from 94.4 per cent to 106.5 per cent of the initial level or from 85.7 per cent to 96.6 per cent per capita.

Under the new Soviet regime, the country had to start all over again by building up a new intelligentsia (while drawing on the existing one, of course), rebuilding infrastructure and accelerating industrialisation. The authorities made great strides and involved an entirely new segment of the population in accomplishing society’s goals, but they did so at an unthinkable high cost to both human life and human capital. The

new industrialisation of the 1930s began with a disastrous collectivisation—that included repressions during a devastating drought. That undermined livestock breeding and grain farming in the country's most productive regions: the North Caucasus, Volga region, Central Black Earth Economic Region and, of course, Ukraine. In other words, 20 years of growth and a huge percentage of the country's human capital were lost.

Several factors drove the country's development in the 1930s, including:

- The presence of natural and human resources (despite the losses): a capable workforce in cities and numerous villages and the fact that a great many people believed that they should labour selflessly to build a brighter future for the country and for humanity;
- The talents and tenacity of Russian people of all ethnicities for whom the Revolution had opened the door to self-realisation;
- The dogged, often cruel and counter-productive persistence of the ruling political elite that wanted to secure its hold on power while proving to the country and the world that the communist experiment could succeed.

In addition to this, there was the active acquisition of technologies from the West, which was suffering from the Great Depression at the time. The acute threat of Nazism arose at this point, and it turned out that industrialisation was not only a question of 'one particular country' (as they said at that time) building a socialist system, but of ensuring the country's very survival. That danger was behind photographs showing the Soviet and German leaders of the time shaking hands in the late 1930s 'for display'.

The forced modernisation imposed by the Five Year Plans should be viewed as a national attempt at survival, while the methods used as reflecting the character of the regime. Repressions of the 1930s deprived millions of people of a normal life, and many more of lives itself—including countless managers, engineers, military personnel and other educated people. By 1941, against a backdrop of very low levels of consumption, the country reached a level of industrialisation that was unusually high for that time as well as a high degree of militarisation. Prior to World War II and the dire hardships it brought, the country was importing manufacturing technology, building its own weaponry, exporting oil and raw materials and making payment in gold (and valuable paintings).

Huge Soviet losses during World War II are a matter of public record, and no attempt will be made here to describe them. Of course, the major loss of human life was the most important, before the destruction of infrastructure and industrial assets.² War statistics normally cite figures regarding the loss of housing, factories, bridges and the like. However, the example of Germany and Japan indicates that everything made from 'stone or steel' can be rebuilt within a single generation. But there is no way to restore those who were killed, their descendants, the labour they would have performed, the inventions and discoveries they would have made and the works of art they would have created. During those years—that saw feats of great heroism by any standards—socio-economic development was, of course, a sort of side effect of World War II hardship, defence needs and politics.

The Soviet Union established a position (actually three seats with Belorussia and Ukraine) in the United Nations, but the Marshall Plan 'passed it by' and Moscow decided not to take part in the Bretton Woods institutions, where it would have been in the minority. The country faced a very difficult economic situation, it was the third

occurrence of relative economic decline in the same century. And fast on its heels came the Cold War along with sanctions that, in various forms, continued until the end of the socialist period. In all fairness, the Swedish and Polish kings were the first to impose sanctions on Russia at the end of the 15th century, prohibiting the export of products then considered 'strategic' via commercial cities of Livonia: copper, lead, iron, wire and nitrate.³

As is typical for planned economies, the large-scale, centralised industrialisation of the Soviet Union was not efficient. Low consumption and the need to import grain and continually pump capital into the economy continued to characterise economic policy to varying degrees (such as Aleksei Kosygin's reforms) for a full period of 45 years (1945–1990). Rising oil prices provided a boost to the national economy in the mid-1970s, enabling leaders to make some improvement to the general standard of living by importing additional consumer goods from Comecon countries. It was at this point in Soviet history that leaders missed that big chance to transform the economy with the help of 'the oil money'. Instead, the political elite drew the country into the war in Afghanistan that ultimately had a major impact on relations with the rest of the world, accelerated the weakening of the economy and state and deepened external conflicts. The inability of the planned economy to carry out a needed transformation in the 1980s led to a budget crisis that was exacerbated by falling oil prices and the government's campaign against alcohol consumption, which unbalanced the budget.

For decades, the large socialist camp could rely on raw materials from the Soviet Union while also benefiting from the technological capabilities of East Germany and Czechoslovakia—thereby creating a sort of closed or self-sufficient collective economy. And so, rather than respond to the need to transform society, streamline development and bring their technological base up to speed with the quickening pace of the scientific and technological revolution taking place in the world, those countries again attempted to achieve a technical modernisation by concentrating resources, without implementing much of social evolution.⁴

Many authors have already described in detail the growing crisis in the Soviet Union in the late 1980s and early 1990s.⁵ For the purposes of this paper, it is important to emphasise that the collapse of the socialist bloc and, of course, the Soviet Union, radically changed Russia's position in world economic relations. It had been part of a complex international bloc with 500 million inhabitants who were provided with the full range of resources and most technologies that were, if not always the most modern, in most cases still quite acceptable.

The collapse of that system meant that Russia was left with only its own resources and that it was once again 'isolated' or alone in the world. True, Russia's well-developed economy, manufacturing base and human capital all held great potential, but they did not work well in practice. Radical reforms were badly needed. The two per cent drop in Soviet GDP in 1990 marked the final point at which gradual reforms ought to have begun. However, the political elite could not cope with the task of adapting institutions to diminishing resources, or with the inefficiency of the system itself. And they faced this challenge even as geopolitical rivals were applying pressure on the country. It was perhaps predictable that any attempt to change the system for the political elite would come at a high price, although not as high as it turned out to be in reality. That transformation was far from 'optimal', and the debate over that period will continue long into the future.

Russia's place in the world economy shifted because of those changes—that is, in direct relation to the rise, or more often the fall, of its volume of production, standard

of living and ability to take advantage of scientific and technical progress. Post-crisis GDP in Russia fell by 43 per cent from 1989 to 1999. Since that moment, it was up to the strength of its new market-based institutions to determine the extent to which the economy could recover. Russia's new place in the world economy depended, and still depends, on the success of reforms and the quality of its institutions. Russia's current 'place' is the result of 100 years of lost opportunities and severe losses. Its future place in the world is a function of its labour, capital, resources, management, technologies, institutions and cultural code, and the way in which its institutions will use all productive factors in the coming decades.

What to measure and how

While the media and politicians are content to use GDP, including GDP per capita, as the measure of a country's 'place' in the world economy, more information is necessary to obtain the true picture of that country's development. Of even greater importance are the complexity of manufactured goods, the nature of exports, the size of investment, the state of science and education and even the scale of military spending. These are the factors to develop and increase a country's human, industrial and administrative capital. GDP as a measure is based on certain assumptions (and differing approaches). It is a peculiarity of global statistics that similar trends may have different numerical values. Figure 1 shows Russia's position in the world according to GDP per capita since 1885 (as calculated by Angus Maddison), showing that rapid growth of production in the Soviet Union was not very significant—if one takes into account quality of life indicators. What's more, the success achieved by Japan and European countries appears modest when compared to the enormous growth of the US economy—and expanding population of USA—over that period.

The transformational crisis and the collapse of the Soviet Union and Comecon destroyed the entire system of the division of labour and placed the industries and enterprises of Russia and all former Soviet countries in direct competition with their stronger and more experienced Western, and to some extent, Eastern rivals. The fall of Russia's GDP varied across sectors and regions; the same declines in output and

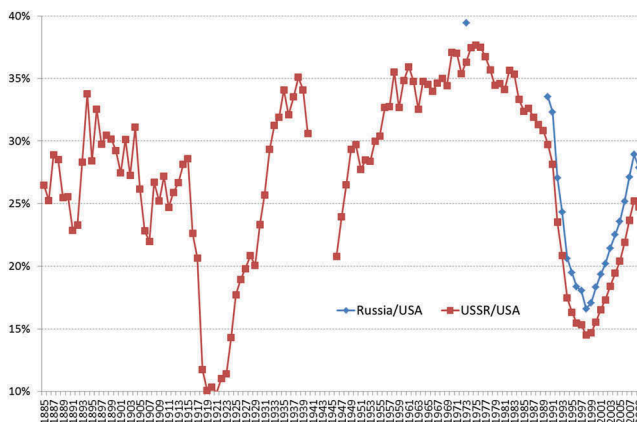


Figure 1. Ratio of GDP per capita of the USSR/Russia to the USA 1885–2010. Source: Maddison Project.

employment were also uneven. The depth of the crisis was severe, the decline fast and simultaneous with the country opening to the global economy. It made it impossible to adapt to changes and triggered soaring inflation and unemployment. This explains also why fuel exports far outstripped those of high-technology (see [Table 1](#)).

The process and results of transformation

The intense modernisation of the 1930s eventually led to the formation of today's physical assets and human capital, although the latter had to rebound after heavy losses during subsequent World Wars. The emphasis throughout the Soviet period on providing a strong general education and the focus on engineering and developing the technical sciences created a shift in the structure of human capital: engineers—mostly in the defence industry—dominated, followed by Soviet and Party officials, teachers and doctors. A liberal arts education for students who had no ideological freedom required a focus on the 'classics', and the further lack of political freedom meant that students had plenty of time for self-education. Literary magazines had print runs numbering in the millions. The rigid ideological control over the humanities—especially over socio-political sciences—coupled with an undeveloped civil society. That led to an unusual situation toward the end of the Soviet period in which people knew classics very well but relatively little about the world around them. The great majority of the citizens of that vast country did not know how markets operated or what civil society, political pluralism and democratic institutions were. In all likelihood, this information deficit was another factor in determining the country's 'place' over the last 25 years. It was extremely difficult to make a rapid transition from the state system in politics and economy to an entirely different one, which almost nobody remembered (unlike the citizens of Central and Eastern Europe) after more than 70 years of a 'real socialism' that continued right up until 1990.

It is clear how the economic system of the large socialist camp functioned while it was firmly bound together by political 'bolts'. At the start of reforms in 1989–1991, it was far from clear what place Russia would occupy after its transformation. However, there was an unspoken expectation that the existing political and ideological system would become a democracy, and the economy an efficient market. A middle-income central planning economy was supposed to become a middle-income free market efficient economy. No one discussed, much less foresaw, just how difficult it would be to change the country's economic system and to combine liberalisation and the opening of new markets with ensuring the survival of inefficient Soviet industries. Poland set a very attractive example by relatively quickly emerging from the crisis and adapting to new market institutions. Russian reformers 'wanted to believe' that they could do the same, although Poland had already had private farms and retail trade that could assume the role of market mechanisms without great difficulty. Adding to this contrast, it is worth noting that Poland never carried out voucher privatisation (invented in Poland). Instead, state-owned enterprises were subjected to serious competition without establishing strong governance.

Russia's transitional crisis lasted 10 years, from 1990 to 1999, and was very severe—shrinking GDP by 43 per cent. By comparison, in the countries of Central and Eastern Europe the crisis lasted only 5 years on average and reduced GDP by only 25 per cent. The Russian domestic market for many goods such as machine-made products and consumer goods dried up and was quickly filled with imported products. The dwindling of the market and increased foreign competition affected numerous

Table 1. Indicators of capital investment, civil and defence spending, as well as personnel in occupations requiring special training.

Indicator	Year	Brazil	China	France	Germany	India	Japan	Russian Federation	Saudi Arabia	United Kingdom	United States
Consumer durables, bl. dollars, in current prices	2000	53	65	91	156	15	222	12	12	137	866
Consumer durables, bl. dollars, in current prices	2014	140	482	150	256	65	232	132	33	213	1,201
Investments in fixed assets, bl. dollars, in current prices	2000	120	409	293	448	108	1,193	44	33	299	2,369
Investments in fixed assets, bl. dollars, in current prices	2014	463	4,584	614	776	588	1,069	383	181	504	3,186
Government spending on defence, bl. dollars, in current prices (SIPRI)	2000	11	22	34	28	14	46	9	20	35	302
Government spending on defence, bl. dollars, in current prices (SIPRI)	2014	32	216	62	46	50	46	84	81	60	610
Armed forces personnel, in thousands of people (IISS)	2000	673	3,910	389	221	2,372	249	1,427	217	213	1,455
Armed forces personnel, in thousands of people (IISS)	2013	713	2,993	318	182	2,750	260	1,260	252	159	1,433
Spending on R&D, bl. dollars, in current prices	2000	7	11	28	47	4	142	3		27	269
Spending on R&D, bl. dollars, in current prices	2014	29	223	63	110	16	154	21	0.6	49	505
Spending on R&D—per cent of total GDP	2000	1.0	0.9	2.1	2.4	0.7	3.0	1.1		1.7	2.6
Spending on R&D—per cent of total GDP	2014	1.2	2.1	2.2	2.8	0.8	3.3	1.1	0.1	1.6	2.9
Government spending on education, bl. dollars, in current prices	2000			76	79	3		7		76	
Government spending on education, bl. dollars, in current prices	2014		455	155	168	18	116	71		152	
Higher education students, per 1,000 residents	2000	16	6	34	25	9	31	43	19	34	47
Higher education students, per 1,000 residents	2014	37	26	36	38	23	30	49	47	37	63

Source: Euromonitor Passport; SIPRI (Stockholm International Peace Research Institute) Military Expenditure Database, 2015; *Military Balance*, IISS.

branches of science. In the midst of this severe crisis, they found it easier to hire Western companies or purchase existing technologies than to rebuild and secure funding for their own scientific institutes and create their own technologies. Thus, the structure of the economy suffered a sudden, double blow as Russia lost stable relations with other Comecon states and a number of its industries effectively went bankrupt. The initial delay in implementing reforms, followed by their hasty, even chaotic application shrank the economy considerably and also reduced its overall capacity.

The few sectors of complex production that survived this period of broken supply chains, widespread inefficiency and pressure from foreign competitors were mainly nuclear energy, space research (after suffering enormously), some branches of medicine, metallurgy, the chemicals industry and energy. In addition, of course, Russia continues to produce state-of-the-art sophisticated weapons, preserving the defence-related segment of the economy.

It proved especially difficult to transform ownership rights so as to provide for the sustainable accumulation of wealth and assets. In fact, this problem remains unresolved to this day.⁶ Throughout this transitional period, Russians have been exporting their capital rather than reinvesting it. This represents an enormous loss of investible funds of money over the long term. It is important to note in this regard that major Russian companies were very weak in the 1990s, a contributing factor to current problems. Most developed countries have resources for protecting their own interests. Transnational companies pay dividends and tax revenues to their home countries. Many Russian companies have found it difficult to establish themselves in the global economy. Western sanctions—and especially ‘sectoral sanctions’—have imposed restrictions and exacerbated that struggle. As a result, the Russian economy ‘occupies less space’ in the world because its major companies are not represented in the global economy to the same extent as those of developed countries. This is apparently more important than ‘soft power’—at least in the world economy.

Russian society has developed very unevenly over the past 25 years, affecting the country’s position in the world.⁷ Of course, the end of Soviet-era restrictions opened up opportunities for innovation in business and the social sciences. However, funding shortages—especially during the crisis of the 1990s—caused serious cuts to the fundamental and applied sciences, adversely affecting career opportunities in those fields. A significant number of young people decided to instead set their sights on business, but many others, while remaining in the sciences, opted to leave the country. Some of those Russian scientists even became Nobel Prize winners after taking their promising ideas and talents to foreign universities in the 1990s, unable to develop them at home due to the lack of equipment and funds. That ‘brain drain’ of approximately two million well-educated people is another major loss that Russia suffered during the post-reform decades. It reduced Russia’s ‘place’ in the world by millions who became part of the Western middle class—although they generally participate only minimally in the public and political life of their adopted countries. While this might extend the influence of Russian culture in the world, it is actually a major loss of highly productive citizens that significantly limits the country’s prospects.

Table 1 shows the scale of investment, purchase of durable goods and spending on defence and R&D. These disparate indicators share two features, such as they are complex goods that developed countries can produce and export; and mostly major companies, state agencies, research organisations or high-tech small and medium

enterprises (SME) make such expenditures. Although independent-minded young people are generally not considering a military career, for low social strata service in the armed forces helps to obtain advanced education and skills. After military service they may go on to become businesspeople and engineers, with training in handling sophisticated weaponry.

Russia is placed between India and Brazil for the size of its average expenditures for R&D. Thanks to oil and gas revenues, Russia has spent slightly more in recent years on durable goods and the military. Russia spends no less on students and soldiers than the leading countries do. However, it lags far behind even its BRICS neighbours on investment, and this jeopardises Russia's future growth and its global position for overall performance. In the field of research Russia produces talented young people, educates them and then watches as some of them leave to apply their abilities abroad. The country is showing a serious imbalance between the size of the student population and the number of science-related jobs available to graduates. In effect, it is the set of factors that is being analysed around the world to determine whether Russia can maintain its position in research in the world over the long term. Of course, the country's human capital is regenerating through a long and difficult non-linear process, and its success depends on sufficient attention and effective policies from the authorities.

The current situation

The situation with Russia and its economy in 2014–2016 might be unusual for other countries, but it is rather 'typical' for Russian history. During the decade of high oil prices in 2005–2014, Russia experienced two distinct periods of growth and two separate crises. The rise in prices in the mid-2000s was the direct result of the high growth rate of the world economy and insufficient previous global investments in energy. In fact, almost every major country experienced that boom in 2002–2007, especially China and India. The energy supply could barely keep pace with demand, since the oil prices averaged only \$20 per barrel (in nominal terms) from 1986 to 2002. Those prices led to advances in production and transportation technologies and a growing middle class buying large/increasing numbers of such energy-intensive goods as automobiles and air conditioners. It was therefore inevitable that prices for commodities, and energy in particular, would rise.

Russia used part of those oil revenues to increase pensions, part left the country as export of capital and some part was used as private investment for such purchases as apartments, and so on. But it is also clear that a certain share of oil income was spent on defence and some for personal consumption. The country experienced a boom in consumer durable goods, especially automobiles—now numbering 74 for every 100 families—and a significant expansion in housing construction. The number of computers now exceeds the number of households, and Internet connectivity reached in 2014 the level of 72 per cent, higher than many other countries.⁸ Interestingly, Russians are both highly educated and well-informed, while the socio-economic institutions are often criticised. That is not surprising given the large number of college-age students connected to information and social networks, but it also indicates the ability of the population to make a rational assessment of the situation, formulate long-term plans and understand world events. This underscores the uniqueness of Russia's 'place' in the world: it has a large number of Internet users, a high level of human capital, but very limited production of complex machinery.

Table 2. Military spending by country for 1990, 2000, 2010 and 2014 (in billions of dollars [2011] and as a percentage of GDP).

	In billions of dollars (adj. to 2011)				As per cent of GDP			
	1990	2000	2010	2014	1990	2000	2010	2014
USA	527	394	720	578	5.3	2.9	4.7	3.5
France	70	62	66	63	3.4	2.5	2.4	2.2
Japan	48	60	59	59	0.8	1.0	1.0	1.0
Great Britain	59	48	63	55	3.8	2.4	2.5	2.2
Germany	73	51	50	47	2.7	1.5	1.4	1.2
Italy	37	43	39	31	2.1	2.0	1.8	1.5
Canada	21	16	21	18	2.0	1.1	1.2	1.0
Turkey	13	21	17	18	3.5	3.7	2.4	2.2
Israel	14	14	16	15	14.7	7.1	6.3	5.2
China	20	37	136	191	2.5	1.9	2.1	2.1
Russia*	291*	31	66	92	12.3*	3.6	3.8	4.5
Saudi Arabia	25	28	48	74	14.0	10.6	8.6	10.4
India	19	28	49	50	3.2	3.1	2.7	2.4
Brazil	19	25	38	37	2.4	1.8	1.6	1.4

*In 1990, for the Soviet Union.

Source: SIPRI Military Expenditure Database, 2015.

Table 2 shows how Russia's military expenditures compare to those of other countries actively building up their militaries. Of course, the internal debates in Russia are focused on the low investment in human capital against the backdrop of increases in military spending. Here it is important to note the importance the space-nuclear-defence industry complex plays in the national economy. This involves significant outlays that the political elite in all countries determine according to their assessment of external threats. The decline in spending by 2014 resulted from

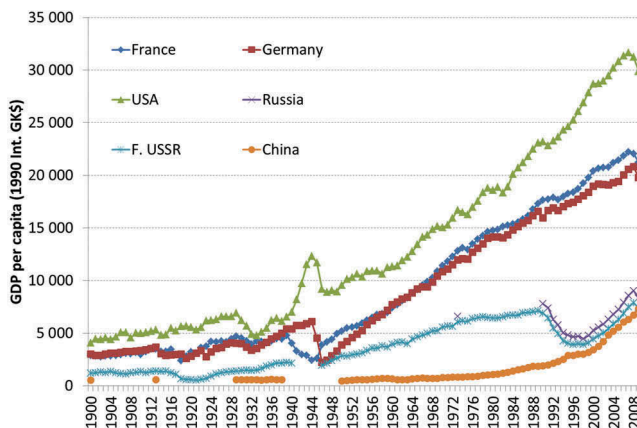


Figure 2. GDP per capita (ppp), selected countries, 1990–2010. GK\$: international US dollars. Source: World Bank (WDI).

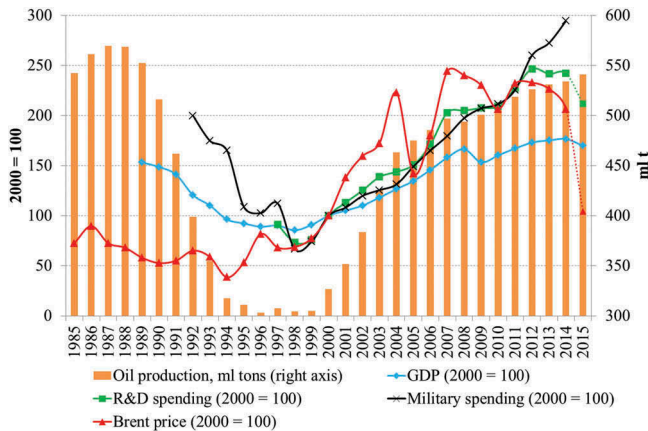


Figure 3. GDP, R&D spending, military spending, oil production and Brent prices.
Source: Russian State Statistics Service, World Bank, Euromonitor Passport, SIPRI Military Expenditure Database (2015), *BP Statistical Review of World Energy* (June 2015).

astronomical price hikes in 2011, totalling \$371 billion according to SIPRI. However, ever since the early 19th century when Russian artillery stood on a par with that of France, Russia has kept a strong focus on engineering in this field, thereby maintaining the level of technical education and the development of basic and applied sciences. Russia has managed to maintain only a few large industrial complexes capable of providing for domestic needs as well as revenues from export. The highly sophisticated industrial complex just mentioned accounted for \$14.5 billion in arms exports in 2015. The other major industries include timber, grain (that the Soviet Union had to import), semi-finished raw materials and the extraction and export of hydrocarbons. However, the raw materials sectors also suffered major losses that did not tie domestic production to imports in seed farming, advanced technologies and hydrocarbon extraction.

Figure 3 shows how the economic dynamics of the last 30 years are tied to fluctuations in oil prices. The economic crisis of 2014–2016 once again reduces prospects for Russia's long-term growth and, in a sense, fixes its resultant 'place' in the world economy long into the future. Modernisation, increasingly complex production and the creation of highly skilled jobs require large investments and more dynamic growth. If, as expected, GDP continues to grow by only two per cent annually—without deep changes in economic institutions—Russia will find it difficult to alter its 'place' after the current crisis. Already, personal consumption, investment and state spending have dropped by 8–9 per cent and only the growth in net exports has limited the decline in GDP to 3.7 per cent. It is expected to decline by an additional one per cent in 2016. The current crisis has three main factors. Strengthening the weak investment process has the greatest potential to improve Russia's 'place' in the world. This problem is primarily the result of unstable ownership rights, a weak financial sector and corruption. In fact, the decline in investment began in 2013—before the drop in GDP and oil prices.

The drop in oil prices from \$110 to \$40 per barrel, and the resulting loss of 25 per cent of Russia's hard currency export revenues was the main factor behind the shrinking GDP. That naturally led to a decline in imports of consumer and capital goods, as well as

a dramatic reduction in budget revenues. The federal budget for 2015 was initially calculated based on a price of \$100 per barrel. Any country experiencing such an external price shock would need a year or two to adapt to the loss in revenue—in this case, the huge loss of petrodollars.⁹ The vulnerability of the Russian economy—its major companies and national budget—to fluctuations in the global price of hydrocarbons (that, since 1990, rose from \$8 per barrel to \$147 before dropping back to \$28) speaks not only of the volatility of such prices and the risks inherent in economic development. Also the problem persists that Russia's economy and its place in the world remain directly tied to its role as an energy exporter. Russia produces approximately 10 per cent of the world's energy, about half of which it exports as energy products, and about one per cent as energy-intensive products of the processing industry.¹⁰ This is the clearest manifestation of the international division of labour that tends to keep countries locked into particular economic roles in the global economy. In the case of Russia, the risk inherent in oil price fluctuations is great, but the profits thus far had been very big.

Russia must hurry, as probably about 30–40 years remain before technological advances and declining global specific consumption of energy make the large-scale export of hydrocarbons much less profitable.¹¹ In fact, the country must undergo a systemic transformation and build a new institutional foundation in order to foster growth. The government must establish a well-balanced relationship with the business community ('decriminalise' its activities), reduce corruption etc.¹² To improve the investment climate and to make it more predictable in the foreseeable future, it is necessary to reassess macroeconomic and budgetary policy, the system of interaction between companies, the tax system and regional budgets.¹³ Domestic debates are continuing and former Minister of Finance Alexei Kudrin is charged with the economic programme for the next presidency from 2018–2024, while the Ministry of Economy is expected to produce in conjunction its programme until 2030.

In conclusion, we must return to geography and Russia's current 'place' in the global economy. It is similar in many respects to what Russia has already experienced for a very long time. The sheer size of Russia's landmass is its greatest asset: from Vladivostok to Novosibirsk, from Smolensk to St Petersburg, travellers require no visa and the railway serves as an effective means of connecting distant locations. Today, as throughout its history, Russia enjoys only limited access to the ocean. A New Silk Road or south way to the Indian Ocean may help the development of Russia and the whole Eurasian continent's connectivity.

However, the country's great natural resource wealth enables it to solve many problems itself. There is no sense of 'claustrophobia' in Russia, and opportunity to travel from the taiga in the East to museums in the Moscow part of the country creates a unique sense of 'wide open spaces'. That is important both in life and in the national character as the Russian historian Vasily Klyuchevsky first described in his writing more than a century ago. The country has restored its military might to a level that appears to elicit feelings of paranoia among some of the world's political elite, and some once again are working to 'contain' Russia. This is the motivation behind sanctions, which are aimed at limiting the country's technological progress at home and cutting off Russian businesses from the global financial system. Raw materials continue to dominate Russian exports, although fluctuations in oil prices cause no more economic damage today than fluctuations in the price of bread or fur did a century ago. Russia has largely restored its human capital—but only if one also counts the two million Russian intellectuals now living abroad. However, it will be difficult

to keep pace with global technological progress and to stem the outflow of human capital—which is ‘of a higher quality than the jobs available at home’—without gearing up for more production machinery or developing social innovation and civil society. A simple rise in certain indicators gives no guarantee that Russia and Russians will have a better ‘place’ in the future. A solution to the problem of modernisation remains elusive and is being intensively discussed, with Duma elections in September 2016 and presidential elections in March 2018.

The country is experiencing the cyclical problem of needing to upgrade its non-energy industrial base between the rises in energy incomes. The government is trying simultaneously to stimulate growth (more breathing room for SME), support some key enterprises, press on bureaucrats to reduce corruption and introduce some elements of industrial policies (countersanctions in agriculture as an example). Also it is trying to ensure macroeconomic stability inside the mainstream frame (deficit within three per cent of GDP, lowering inflation etc.). So far we see nothing of John Maynard Keynes’s recipes. Of course, Russia has the brainpower and resources to solve national problems. And it will do so when hopefully the ruling political and business elite (and the general population) manage to reach a consensus or better compromise on economic institutions so as to satisfy the interests of all. Current and expected low (about \$45–60) oil prices, stable policies towards business and better management of the economy must lead to a reasonable long-term growth with development of housing and roads, agriculture and services. We may foresee a more effective attempt to break the vicious resource and spending circle. In the meanwhile, Russia will remain an extremely complex dual economy with revenues from selling energy resources used to finance the high-tech sector, defence and education for another decade.

Disclosure statement

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Notes

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