Available online at www.sciencedirect.com

ScienceDirect

Russian Journal of Economics 1 (2015) 30–54

Russian Journal of Economics

www.rujec.org

A new growth model for the Russian economy ☆

Alexey Kudrin [a,b], Evsey Gurvich [c,*]

[a] *Gaidar Institute for Economic Policy, Moscow, Russia*
[b] *St. Petersburg State University, St. Petersburg, Russia*
[c] *Economic Expert Group, Moscow, Russia*

Abstract

The problems underlying the current slowdown of the Russian economy are of a persistent nature and cannot be resolved with simple measures such as a softer monetary or fiscal policy. The fundamental reason for these problems is the weak market environment dominated by public and quasi-public companies. A new growth model should be based upon strong incentive for the business, as well as the government regulation system, to improve efficiency. This article defines the main steps to be taken in building such a model.

JEL classification: E6, H11, O1, O4, P4.
Keywords: growth model, oil and gas revenues, soft budget constraints, incentives for growth.

1. Introduction

The Russian economy demonstrated impressive growth between the two financial crises of 1998 and 2009. Between 2000 and 2008, the GDP grew by 83%, productivity grew by 70%, and expenses for accumulating fixed capital doubled in real terms. Whereas in 1999, per capita GDP by purchasing power parity (PPP) was $9,300 (only 25% above the global average), by 2008, this indicator had increased to $21,600 (78% above the global average). Russia's share in the world economy (at the current exchange rate) grew fourfold over the same period, from 0.6% to 2.7%. The welfare of the population increased considerably: real wages increased by 3.4 times, and real pensions increased by 2.8 times.

This exceptionally successful (at least by formal indicators) period of development in the Russian economy that started after the 1998 crisis ended with the next crisis. Whereas in the pre-crisis period from 2000 to 2008, average annual GDP growth was 6.9%, after the crisis (2009–2013) it slowed down to 1.0%. Of course, the growth rate dropped across the globe; however, the slowdown was not as sharp, even in oil producing countries (Table 1). Russia's absolute performance dropped, as did its relative position: from the leaders group

☆ The updated English version of the article published in Russian in *Voprosy Ekonomiki*, 2014, No. 12, pp. 4–36.
* Corresponding author, *E-mail address*: egurvich@eeg.ru.
Peer review under responsibility of Voprosy Ekonomiki.

http://dx.doi.org/110.1016/j.ruje.2015.05.002

Table 1
Average annual pre-crisis and post-crisis growth rates (%).

Country/group of countries	2000–2008	2009–2013
World	4.3	3.2
Developing countries and emerging markets	6.5	5.3
China	10.4	8.9
Russia	**6.9**	**1.0**
India	6.7	7.0
UAE	6.2	2.2
Venezuela	4.4	1.2
South Africa	4.2	1.9
Brazil	3.7	2.7

Source: calculations based on IMF data (IMF, 2014).

(mid-second decile growth rate worldwide), Russia dropped into the outsiders group (top-eighth decile).

The slowdown was unexpected for the Russian government and for analysts. In 2012, the official forecast for GDP growth for 2013–2015 was 13%. Currently, it is –1%.

Other objective signs of deterioration in Russia's economic outlook can be observed as well. Fixed capital investment growth rates dropped dramatically from 13% pre-crisis to 1% post-crisis. The net private capital inflow that existed before the crisis has been replaced by a persistent capital outflow ($285 billion left the country between 2009 and 2013).

The government took measures to boost growth, although it has not provided a clear answer as to the reasons for the slowdown. In our opinion, without finding an answer, it will be impossible to overcome the stagnation of the Russian economy that borders on recession. There is no universal cure, just as there is no panacea for medical diseases. Moreover, measures that are expedient in some situations may have a negative impact in others. In this paper, we attempt to identify the reasons for the slowdown of the Russian economy and ways not only to improve the situation but also to achieve a complete turnaround.

2. Growth of the Russian economy in 2000–2013

What drove growth in the Russian economy before the crisis, and why did the old drivers lose their effect after it? Table 2 presents growth rates of specific components of GDP utilization. First, it should be noted that the growth rate in both investment and consumer domestic demand during the pre-crisis period outstripped that of the GDP. Physical exports generally grew at approximately the same rate as the GDP. In terms of growth drivers, our economy differed dramatically, for example, from China and other fast-growing countries in Southeast Asia where exports are the main growth driver.

Table 2
Average growth rates of final demand components in constant prices (%).

	Change over the period		Average growth rate	
	2000–2008	2009–2013	2000–2008	2009–2013
GDP	82.5	5.3	6.9	1.0
Domestic demand	134.7	7.8	9.9	1.5
final consumption	102.6	16.0	8.2	3.0
including households	145.3	20.9	10.5	3.9
gross investment	343.8	–12.6	18.0	–2.7
including fixed capital	199.9	5.1	13.0	1.0
exports	93.6	8.0	7.6	1.6
imports	433.4	18.8	20.4	3.5

Source: calculations based on Rosstat data.

A detailed analysis reveals that for the Russian economy, export revenues were also one of the growth drivers, although this result was more of a fluke due to the increasing prices of oil, gas and other raw materials on the global market, rather than an increase in exports. To evaluate how much the Russian economy gained from higher hydrocarbon prices, we have calculated the windfall (or surplus) export revenues resulting from more expensive oil and gas for each year compared to 1999 (all prices converted into constant dollars).

The base year 1999, when Urals oil cost $17.2/bbl, is typical of the 1990s. The average price (in 1999 dollars) was $19.6/bbl during that period. Due to increased hydrocarbon prices, Russia received additional income equivalent to between 5% and 15% of GDP (9.4% of GDP annually, on average) from 2000 to 2008. After the crisis, from 2010 to 2013, surplus revenues fluctuated between 12.5% and 14.5% of GDP, while before the crisis they had grown continuously (except 2001 and 2002) at an average annual rate of 4% of GDP. From 2012 to 2013, nominal surplus revenues leveled out and growth stopped (Fig. 1).

The surplus oil and gas revenues totaled $2.1 trillion (in 2013 US dollars) from 2000 to 2013. The nine years before the crisis accounted for $0.9 trillion, while $1.2 trillion occurred during the five years after. Meanwhile, the total windfalls over the entire period was 7.5 times the 1999 GDP (this comparison is just an illustration).

More expensive exports accelerated economic growth mainly due to greater demand in several channels. As a result of reforms in taxation of oil and gas sectors implemented in 2002, part of the natural rent arising from this sector (70% on average) began to be withdrawn in the federal budget (Gurvich, 2010). Combined with hydrocarbon price growth, it raised oil and gas revenues (understood as withholdings of the natural rent through resource payments and export duties) to the budget by 40 times from 2000 to 2008, or by eight times in real terms.[1] This helped the government substantially reduce taxes in the non-primary materials sector without harming the federal budget. Its total revenues nearly doubled in real terms over the period. Following the revenues, all types of government expenditures also grew. Thus, by 2008, public investments nearly tripled in real terms. The growing expenditures and wages in the public sector created additional consumer demand, while the increasing volume of government procurement boosted demand for industrial products.

Fig. 1. Estimated oil and gas windfalls.

Source: authors' calculations.

[1] To recalculate in constant prices, a domestic demand deflator has been used because, in our opinion, this indicator is the most representative of domestic price trends.

Table 3
Real wage growth index by industry (%, 2000 = 100%).

Industry	2008/2000	2012/2000
Agriculture	315	386
Mining	205	229
Manufacturing	249	279
Construction	258	265
Transportation and communication	236	263
Public administration and military security	289	355
Education	335	413
Healthcare	359	417

Source: calculations based on Rosstat data.

The portion of surplus revenues remaining with producers after taxes was spent to raise wages throughout the economy, in addition to the oil, gas and metal sectors (Table 3). As a result, the growth in wages far exceeded productivity growth (measured as output volume per hour worked).

More expensive exports contributed to increased business profits, i.e., the main source of their investments. However, the positive influence of more expensive export products on investments was not limited by increased profits. The rapid growth in production created expectations of a future demand for products and thus spurred investment demand (following the "accelerator model"). This effect was the most significant for foreign investors: the GDP grew by 8.5(!) times in dollar terms over the period from 2000 to 2008 (27% annual average). As a result, the net outflow of private capital gradually diminished and became a net inflow starting in 2006. On the whole, according to estimates by E. Gurvich and I. Prilepsky (2013), an oil price increase of 1% in real terms led to an increase in domestic demand of 0.22%.

The surplus oil revenues received by the federal budget between 2000 and 2008 were partly saved to prevent the economy from overheating and inflating, as well as to ensure a margin of safety should oil prices fall. The retained surplus revenues were spent to repay the government debt (it was reduced from $161 billion in early 2000 to $41 billion in late 2008) and to build up public oil and gas funds.

Actually, the government pursued a counter-cyclical policy, dampening the impact of external fluctuations on the Russian economy. This policy is known to help considerably reduce the negative impact of macroeconomic volatility on growth (Fatas, Mihov, 2009), which is especially important for oil-producing countries (Kudrin, 2006; 2013; Davis et al., 2003). This was proven during the crisis, when a significant portion of the Reserve Fund was spent to mitigate the consequences of plummeting oil prices. An analysis of the life-cycles of Russian companies showed: macroeconomic volatility that was higher compared with comparable countries hindered the diversification of the Russian economy, making survival more difficult for young companies (Gonzalez et al., 2013).

Meanwhile, saving petrodollars cannot be deemed a "deduction" from the potential growth in domestic demand. Repaying foreign debt at the expense of oil revenues and establishing the Stabilization Fund (later the Reserve Fund and National Welfare Fund) significantly reduced macroeconomic risks and ensured higher sovereign and corporate credit ratings and lower borrowing costs for all classes of Russian borrowers, thereby providing additional growth incentives.

From 2000 to 2013, savings in the form of early repayment of foreign debt and net savings (less expenses for creating public corporations, economic support in 2009, etc.) in oil and gas funds made up a total of $215 billion (in 2013 US dollars). Thus, *approximately 10% of total surplus oil and gas revenues from the economy and 15% of surplus oil and gas revenues from the federal budget were allocated for savings. If these funds had been spent entirely, general government expenses would have exceeded actual expenses by 3.5%.*

One can hardly agree that it was this insignificant surplus that the government lacked for diversifying the economy, ensuring innovative growth and achieving a strong competitive position (especially considering that from 2000 to 2013, government expenditures more than doubled in real terms). If all of the surplus revenues had been spent, we would have witnessed even poorer performance sooner due to a sharply increased sensitivity in the Russian economy to foreign market fluctuations, higher macroeconomic risks and interest rates.

Other mechanisms also contributed to accelerated growth by increasing the availability of financial resources. First, low base interest rates in the U.S. and EU, as well as growing credit leverage, led to greater capital flows from developed to developing countries (Fig. 2). In just eight years (2000–2007), the net capital inflow to developing countries and emerging markets grew by nearly 20 times!

Second, the foreign exchange policy of the Bank of Russia, against the backdrop of constantly increasing oil prices, led to expectations of a stable nominal ruble rate. As a result, international borrowings converted into rubles looked extremely attractive. In addition, the expansion of the domestic market, thanks to production growth and a strengthening ruble, increased the attractiveness of the Russian economy for foreign investors. As a result, the massive capital outflow (11% of GDP in 1999) was replaced by a significant capital inflow (7% of GDP in 2007).

Of course, other factors also made hefty contributions. Thus, in 2006, the Russian government and the Bank of Russia lifted nearly all restrictions on capital transactions (thus lowering visible risks for foreign investors).

A wide margin of macroeconomic safety was also created: the federal budget and current account experienced a stable surplus; substantial international and fiscal reserves were accumulated; and foreign debt was reduced considerably (although these achievements were also made possible due to high oil prices).

In general, when foreign capital inflow into Russia reached its peak in 2007, additional investment resources exceeded $100 billion (compared with 1999) due to this factor. An estimate by the Economic Expert Group (EEG) showed that an increase of $1/bbl in oil prices led to an increase in capital inflow into the country of $1 billion.

Such a dramatic turnaround in private capital flows spurred an explosive growth in lending. Fig. 3 shows a growth in accumulated loans issued to legal entities and individuals of 11.3 times in real terms from 2000 to 2008 (or from 10% to 41% of GDP). Another reason for this growth is that some areas of the financial sector had been developed almost from scratch. Thus, the real amount of loans to individuals grew by 46 times during the pre-crisis period (an annual average of 53%!).

Fig. 4 shows the movement of additional resources that flowed into the Russian economy via the two channels described. Although their nature and conditions of receipt differ sub-

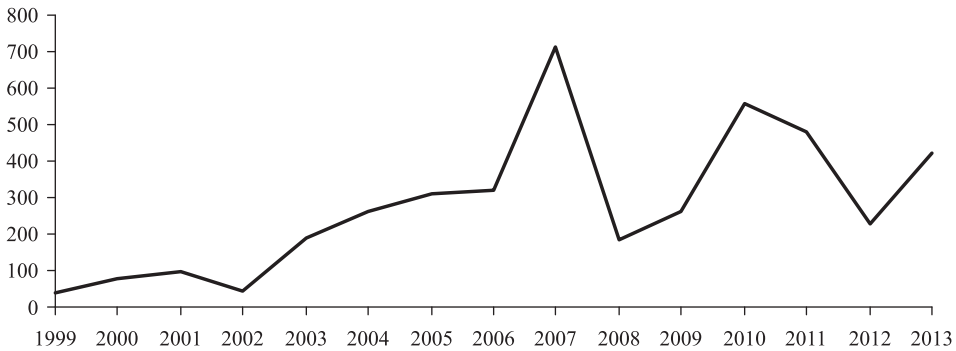

Fig. 2. Net capital inflow to developing countries and emerging markets (USD billion).

Source: IMF, 2014.

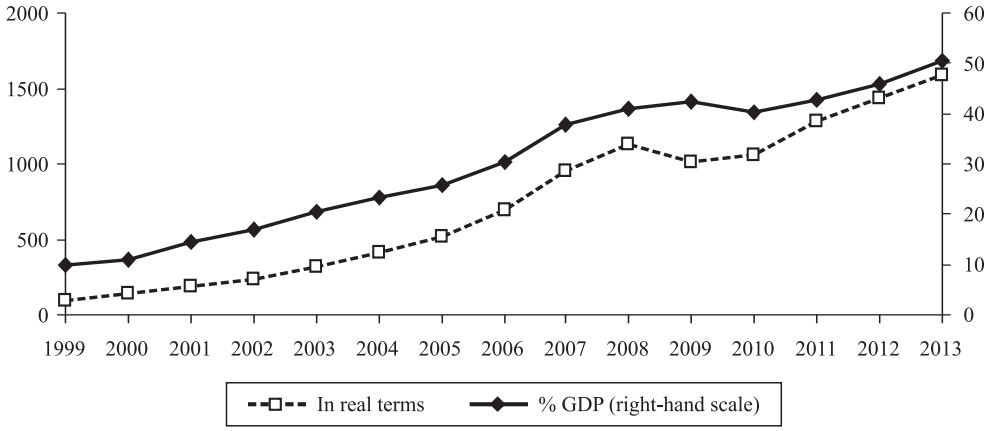

Fig. 3. Amount of loans issued (%, January 1, 2000 = 100%).

Source: authors' calculations based on the Bank of Russia data.

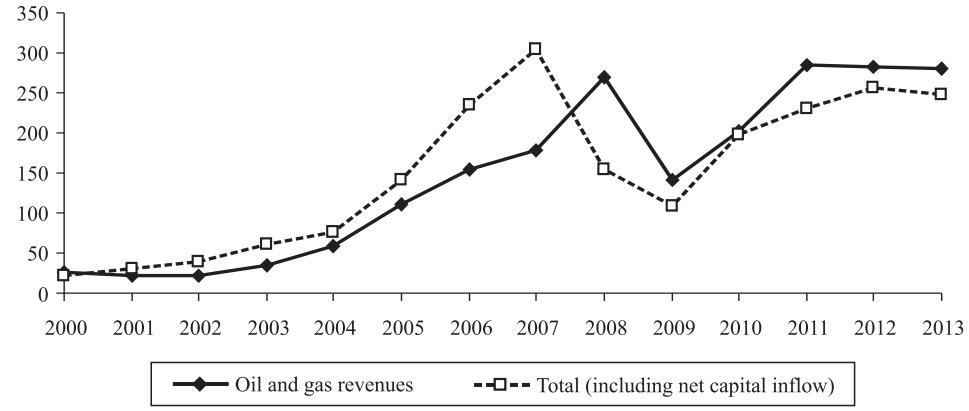

Fig. 4. Additional resources in the Russian economy (2013 USD billion).

Source: authors' calculations.

stantially, from the viewpoint of current growth factors, they can be added subject to certain conditions. After reaching its peak (over $300 billion) in 2007, this indicator declined somewhat and leveled out at approximately $250 billion a year.

Another mechanism of economic influence from oil prices should be added, namely, the influence on investor expectations. This channel is discussed more rarely, probably because it is more difficult to measure directly. One of the quantitative assessment methods of the expectation effect is, in our opinion, the analysis of the GDP expenditure element "changes in inventories".[2] This indicator helps assess producer expectations regarding future demand for their products.

Before the crisis, average growth rates in gross investment surpassed growth in fixed investment by five percentage points, while after the crisis the same indicator was nearly four percentage points lower. This means inventories initially grew much faster than production on average and later grew much slower. During the pre-crisis period, this component of final demand increased the average GDP growth rate by 1.1 percentage points and lowered it by 0.8 percentage points after the crisis. In other words, the economy slowed down by nearly

[2] The difference between gross accumulation and fixed capital accumulation.

two percentage points during the transition from optimistic expectations, when producers increased their inventories, to pessimistic expectations, when inventories were reduced. The significance of inventories manifested itself during the 2009 crisis, when a record 7.8% decline in production was almost entirely caused by their reduction (otherwise, the slowdown would have been only 0.5%).

A number of studies present quantitative assessments of how oil prices affect growth indicators for the Russian economy. The results are relatively close among most of them: the elasticity of physical GDP volume by oil prices was 0.15 (Kuboniwa, 2012), 0.2 (Rautava, 2013) and 0.24–0.25 (Ito, 2008; Korhonen and Ledyaeva, 2010). According to an estimate by P. Suni, the increase in oil prices from 2001 to 2006 increased the annual GDP growth rate by approximately 2.5 percentage points, which corresponds to an elasticity ratio of 0.2 (Suni, 2007).

By applying the above estimates to pre-crisis oil price growth data, we can place the corresponding increment to Russia's GDP growth at 3.0–3.5% per year. Thus, out of the 6.9% average growth rate during this period, roughly half was caused by favorable (and continuously improving) external conditions. "Intrinsic" growth accounts for the remaining 3.5–4.0% compared with the 4.3% growth rate of the global economy. Calculations by EEG provide a somewhat lower assessment of the oil market's contribution to growth (approximately 2% per year), but they highly value its contribution to wage growth: the hypothetical total increase in real wages, keeping oil prices constant and capital inflow stable from 2000 to 2008, was only 50%, i.e., five times lower than the actual increase (244%).

The connection between surplus oil and gas revenues and economic growth is shown in Fig. 5. It became especially close in 2009. However, before the crisis, the correlation between surplus revenue growth and the GDP growth rate was 0.57 — from 2009 to 2013 it jumped to 0.93(!).

Thus, *the main growth driver in the Russian economy before the crisis was the massive inflow of external resources into the country. This allows us to conventionally characterize the economic mechanism functioning at that time as an "imported growth model."* Of course, not all of the production growth was determined by external resources. It was partly caused by dynamic growth in the overall global economy (and a respective expansion of foreign demand on the Russian production). For the most part, however, it was likely due to market forces after the transition period and after the financial crisis of 1998 ended.

However, after the 2009 crisis, other factors actually ceased to have an effect, possibly because of new and unfavorable conditions, including uncertainty in the macroeconomic environment, exchange rate volatility in particular (Rautava, 2013) and inconsistency in

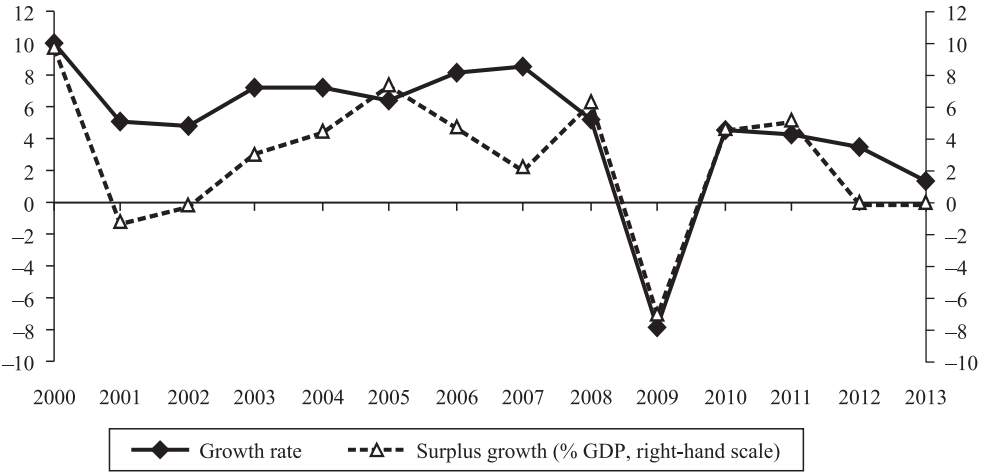

Fig. 5. GDP growth rate and surplus oil and gas revenues (%).

Sources: Rosstat; authors' calculations.

government actions in a number of issues (with the most vivid example being the numerous unpredictable changes in decisions over the funded pension system). The World Bank argues that this led to a "crisis of confidence" on the part of investors (World Bank, 2014b). In the end, *growth became almost entirely determined by changes in oil and gas revenues*.

3. Potential and prospects for the existing growth model

To evaluate the potential of the current economic growth model, two questions need to be answered. First, are there any drivers for its development, suggesting a reduction in resource dependence? Second, is there any hope that certain conditions will be created in the near future to make the imported growth model work again? To answer the first question, we will conduct an additional analysis of government and corporate behavior on the one hand, and of the results achieved on the other.

As the foreign inflow of revenues and capital became the main driver of economic growth, economic policy gradually focused on the allocation of these resources. In the early 2000s, reforms were primarily directed at solving basic institutional issues (the new Budget Code, Tax Code, Labor Code, and Land Code were enacted and reforms were carried out in the electricity sector) and creating favorable business conditions (a red tape cutting program was implemented, and the tax burden was decreased on the non-primary materials sector). Starting mid-2000s the prevailing trend was increasing government involvement in the economy, and the main administrative tool was the allocation of financial resources. At that stage, growth was supported mainly by creating public corporations and various development institutions.

That period saw the birth of the Investment Fund for Public-Private Financing of Major Business Projects, the Agency for Home Mortgage Lending, and Russian Venture Company as a component of the national innovation system. Additionally, the Russian Development Bank (VEB) expanded its functions and scale of business. Concurrently, several public corporations were established, some of which included companies that had previously operated (quite successfully in some cases) based on market principles. Moreover, the United Aircraft Construction Company and the United Shipbuilding Company were consolidated. Other decisions were made at the same time, e.g., to delimit the authorities of different budget levels or benefit monetization, but they no longer defined the main course of the government's policy.

To illustrate the change in this economic policy vector, we can compare two pension reforms carried out in the 2000s.

The 2002 reform involved breakthrough institutional changes. A funded pillar of the pension system was created. The insurance pillar of retirement pensions was based on the internationally acknowledged NDC principle that allowed the pension size to be associated with the total pension contribution by an employee throughout one's entire career. The reform carried out in 2010 almost completely came down to increasing the size of pensions: base pensions were adjusted by 30%, and pension entitlements for employment during the Soviet era (until 1991) were increased. No actual attempt was made to improve the efficiency of the pension system or create appropriate incentives.

The intention to support business operations was practically limited to allocating financial resources in a certain form. Tax exemptions became very common. In 2012, their total value was equivalent to 2.9% of the GDP.[3] This figure, reflecting direct benefits, should be supplemented with many implied subsidies. Thus, decreased export duties on petroleum products basically mean a decreased tax burden on oil processing. However, more often than not, such a policy has led to the opposite result, allowing subsidy recipients to successfully survive without modernization (Gurvich, 2010). As a result, a lag in Russian oil processing had built

[3] Main lines of Russian Federation tax policy for 2015 and for the planning period of 2016 and 2017. http://www.minfin.ru/common/upload/library/2014/07/main/0NBP_2015-2017.pdf.

up for a long time: according to the Institute of Energy Strategy, the average oil processing depth was 73% from 2007 to 2010, compared with 92% in OPEC countries.

The rapid expansion of domestic demand affected corporate strategies. They became oriented mainly around increasing production, while efficiency improvements were regarded as a secondary objective. Table 4 demonstrates: in terms of the share of businesses that believe the expansion of production capacity is a result of innovative activity, Russia is comparable to other transition economies. At the same time, the share of companies that consider decreased labor costs to be an important result was insignificant. It is also worth mentioning that in foreign countries, the financial crisis forced companies to boost their cost reduction activities, whereas Russian companies made almost no changes to their strategies. There are practically no signs of restored interest by producers in innovations. The proportion of companies that implemented technology innovations in production was 10.6% in 2000, 9.6% in 2008, and 9.9% in 2012 (HSE, 2014).

Let us now attempt to generally estimate the efficiency of the pre-crisis growth model. Its obvious weakness is that production depends heavily on external factors: a renewed inflow of financial resources boosts growth, while a corresponding reduction leads to decline (as in 2009).

However, what was the efficiency in applying the huge additional financial resources Russia received during the 2000s? Did they help not only raise living standards and expand production, but also create a sturdy foundation for further economic growth, i.e., improve its competitiveness?

As one of the criteria for answering these questions, we can use the trend of Russia's share in the global non-primary materials markets (Table 5). Calculations show that our country's share of the high-tech market increased insignificantly from 2002 to 2008 (remaining very low). Russia's position on non-fuel markets is slightly firmer now due to higher prices for metals, which are our second-largest export item, but was left almost unchanged for "machinery and equipment." Thus, a sharp increase in the Russian economy's global share was not based on a significant improvement in competitiveness. However, it should be noted that our country's share of global markets has not diminished, despite much higher dollar wages.

Let us take a more detailed look at the trend in production of tradable products. Fig. 6 shows that the overall production growth was mainly attributable to the non-tradable sec-

Table 4
Share of companies estimating certain results of innovative activity as primary (%).

Year	Russia	Bulgaria	Poland	Czech Republic
Enhanced production capacity				
2008	21.1	21.7	25.7	26.1
2012	24.1	27.1	31.8	24.2
Labor cost reduction				
2008	4.5	15.9	13.8	18.2
2012	5.5	25.9	21.8	25.0

Source: HSE, 2014.

Table 5
Share of Russian production in global markets (%).

Branch	2001	2008	2013
Non-fuel	0.88	1.21	1.02
Machinery and equipment	0.28	0.30	0.33
For reference: Russia's share of the global economy	0.94	2.67	2.81

Source: authors' calculation based on data from the Russian Federal Customs Service and the International Trade Center.

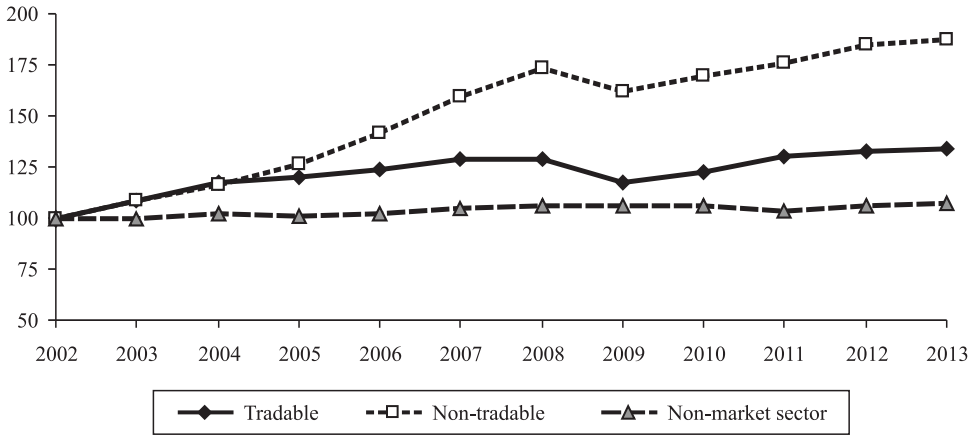

Fig. 6. Index of physical production volume by sector (%, 2002 = 100%).

Source: authors' calculations based on Rosstat data.

tor. The average growth rate in output from tradable industries was 4.2% from 2003 to 2008[4] (somewhat slower than 4.8% for the overall global economy), while the non-tradable sector grew very quickly, at 9.6% per year. Finance (3.5-fold growth), construction and commerce (93% and 91% growth, respectively) were the record breakers here. The faster expansion of production in non-tradable sectors reflected the dynamic growth of domestic demand. However, in areas involving competition from foreign producers, we lagged behind the global economy. It is worth noting that investments were also allocated mainly for industries oriented toward non-tradable products and services or for the primary materials sector (Table 6).

The surpassing growth of the non-tradable sector is a sign of the "Dutch disease." However, a number of studies revealed only partial symptoms in the Russian economy, with no evident manifestation of the disease (e.g., Oomes and Kalcheva, 2007; Dobrynskaya and Turkisch, 2010). Thus, rising oil prices had a positive effect on production output in manufacturing industries, i.e., the main symptom of the Dutch disease was not in place (Kuboniwa, 2012).

At the same time, we may presume that Russia failed to avoid the more general effect of the "resource curse," which predicts a negative influence of resource abundance on long-term economic growth due to the deterioration of government institutions. Thus, resource dependence and the lengthy experience of living under socialism hindered the creation of market institutions in transition economies and negatively affected economic growth indicators (Beck and Laeven, 2006). Another study proves that the greater the proportion of extrac-

Table 6
Structure of fixed capital investments by type of economic activity (%).

Industry	1999	2008	2012
Mining	14.5	13.4	14.3
Manufacturing	18.1	14.8	13.2
Transportation and communication	18.6	23.0	27.5
Real estate transactions	16.6	18.4	15.4
Other	32.2	30.4	29.6

Source: calculations based on Rosstat data.

[4] Comparable sets of indicators have only been calculated by Rosstat since 2002.

tion industries in the economy of Russia's regions, the lower the quality of the administration (De Rosa and Ioott, 2012).

We can now summarize the results. The huge surplus revenues the country received due to favorable conditions in the primary materials markets considerably accelerated production growth, ensured a record-breaking increase in household income (together with wages in all branches, including the public sectors, pensions, etc.), and enhanced macroeconomic stability. At the same time, *one cannot say that the substantial resources allocated for economic modernization (in the form of government investments, expenses for creating developmental institutions, various subsidies, etc.) yielded any tangible results, as Russia's international competitiveness has not improved. This puts in question the ability of the "resource-based approach" to create conditions for long-term economic growth.*

The period from 2009 to 2013 confirms this conclusion. In 2011, oil prices increased, again breaking historic records, and stayed at that level. Capital flows into developing countries and emerging markets fluctuated around a figure below the record level of 2007, but higher than all previous years. Thus, conditions had not deteriorated for the Russian economy. Nevertheless, even their stabilization was enough for the capital inflow to be replaced by a stable capital outflow, for the growth in fixed capital investments to gradually decline and stop altogether in 2013, and for GDP growth to slow down to 1.3%, a 15-year low (excluding the 2009 crisis).

Now to the second question: is there any hope for a return of the external financial resources that will restart the old growth model? To answer this question, we need to look at the functional external and internal conditions of the Russian economy in the near future.

Oil prices. After reaching a historic high in 2011, the price of oil has been continuously declining. Most forecasts assume that oil prices will continue falling on the global market in the near future. Thus, the IMF predicts in its October 2014 forecast that during the next six years, oil prices will drop more than 20% in constant dollars (IMF, 2014) (Fig. 7). Even more pessimistic is the forecast by the International Energy Agency (IEA, 2014), which predicts the oil price will fall below $80/bbl in constant dollars by 2019. This downward trend is caused by enhanced production of shale oil in the U.S. and a high probability that Iran, Libya and Iraq will reappear in the market along with a simultaneous decline in demand in developing, as well as developed, countries. The dive in oil quotes in October-November 2014 proves that hydrocarbon prices may begin to fall faster.

An econometric analysis leads to the conclusion that the long-term trend for oil prices is described as a slowly growing trend on which massive cyclic fluctuations are superimposed (Jacks, 2013; Shafiee and Topal, 2010). As seen in Fig. 7, the duration of these fluctuations

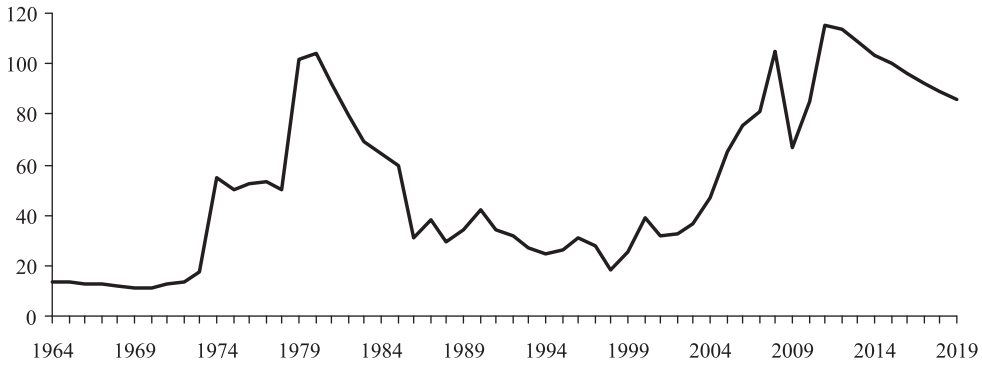

Fig. 7. Reported and projected oil prices (2013 USD/bbl).

Note: Arabian Light prices are specified for 1965–1983, Brent for 1984–2013, and estimates based on the IMF price trend forecast (published in 2014) for future years.
Source: authors' calculations based on BP (BP, 2014) and IMF data (IMF, 2014).

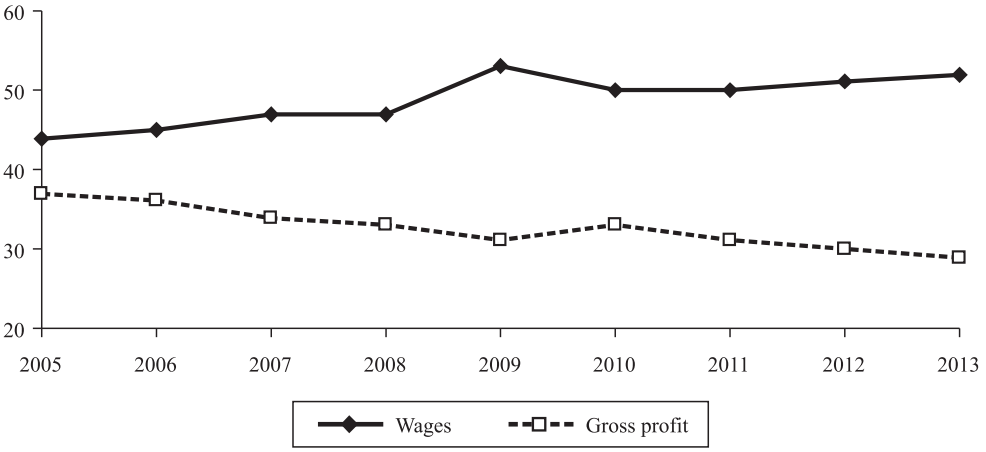

Fig. 8. The share of wages and gross profit in GDP (%).

Source: Rosstat.

(period between two peaks) was approximately 30 years in past few decades. These conclusions and the cited forecasts suggest that we have passed another price peak and are now in a declining phase. Judging by past experience, this phase may last approximately 15 years.

Oil production volumes. As predicted by the Russian government, oil prices will remain at the same level[5] over the next 15 years. As part of its sanctions, the U.S. imposed restrictions on supplying Russia with equipment for recovering tight oil. Combined with decreasing hydrocarbon prices across the globe, this will damage the prospects for oil production and will probably lead to its significant decline.

Capital flows. Fig. 2 shows that from 2009 to 2013, capital flows into developing countries and emerging markets fluctuated by approximately $400 billion. However, as the U.S. is winding up the quantitative easing program and interest rates are gradually rising in leading countries, capital will go there. This is partially reflected in forecasts by the World Bank that predicted a reduction of net capital inflow into emerging markets (World Bank, 2014a).

Demographic forecast. According to Rosstat, the working age population will decline continuously throughout the coming years.[6] In the medium forecast, this group will shrink by 7% within 15 years. Given this, the government expects an 8% reduction in the workforce by 2030. This trend may impose a heavy limitation on growth for the Russian economy.

Wage growth. The Russian economy has experienced a number of detrimental adjustments in primary income distribution over the past few years. From 2006 to 2013, the labor payment share increased by 8.0 percentage points, while the share of gross profit fell by 7.3 percentage points (Fig. 8). This means that each year the aggregate supply curve has been shifting to the left, the investment attractiveness of the Russian economy has been falling, and corporate investment resources have been reduced, which is especially important in the event of limited access to financial resources.

Natural monopoly tariffs. From 2008 to 2013, domestic gas prices for industrial consumers grew by 2.6 times, i.e., the growth exceeded the consumer price index by almost 250%.

Considering that gas accounts for nearly 70% of the fuel used for electricity generation, this means higher prices for heat and electricity. Railway freight tariffs also grew slightly more than consumer prices. Having frozen the tariffs of natural monopolies in 2014, the government intends to gradually increase them beginning next year. Combined with faster wage growth, this makes supporting the competitiveness of Russian producers quite problematic.

[5] http://economy.gov.ru/minec/activity/sections/macro/prognoz/doc20131108_5.

[6] http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/demography/#.

Lending. Lending growth limits are nearly exhausted in certain domains (primarily retail). In the coming years, the Russian economy will hardly find itself in an ideal situation with an "imported growth model." On the contrary, the economy will have to face a difficult environment that is far from favorable. The new issues arising in connection with developments in Crimea, East Ukraine and the ensuing sanctions will become another formidable factor further aggravating the situation. They will limit capital inflow into Russia and slow down the overall investment trends, which will slow advanced technology imports and economic growth.

Declining oil prices and the capital outflow signify that Russia has entered a long period of reduction in the inflow of external resources. Under these conditions, all of the above mechanisms that had contributed to the economy's growth will slow it down instead. Considering that the stabilization of oil prices has led to stagnation, their decrease (if the old growth model is left in place) may result in a protracted recession.

The objective factors named above are supplemented by a significant deterioration in expectations by economic agents, which is hampering production enhancement and, consequently, investment expansion. In turn, reduced economic activity is detrimental to expectations. In the end, the expectations become "self-fulfilling," which may explain the capital outflow in the post-crisis period: capital simply becomes unnecessary under uncertainty in the country's development.

The potential of the current growth model for the Russian economy is reflected in long-term growth forecasts. According to OECD estimates, average growth rates in the Russian economy will be 2.8% until 2030 and will fall to 1.2% between 2030 and 2060 (OECD, 2014). According to calculations by Gurvich and Prilepsky (2013), long-term average growth rates for the Russian economy will be 2.2%. Following the next revision of the mid-term trends in the Russian economy and the oil price trend, both of the above growth estimates should be reduced significantly. According to the October 2014 IMF forecast, the average growth rate of the Russian economy over the next six years will be 1.3% (IMF, 2014). In any event, Russian economic dynamics will lag noticeably behind the global economy (OECD predicts 3.7% and 2.3% growth globally in the first and second period, respectively), while Russia's share of the global economy will rapidly fall.

The scenario of a low growth rate and cheaper hydrocarbons is creating serious problems for the Russian economy. First, it will lead to stagnation — if not a decline — in real household income. Second, difficulties will arise in the public sector. Many programs were adopted based on fast GDP growth, and the majority of outlays are not automatically adjusted if the economy faces a downturn. Countries that found themselves in this type of situation during the crisis (e.g., Greece) faced the problem where costs cannot be cut in proportion to falling revenues, while borrowing becomes impossible because of the growing deficit. As a result, all those countries had to go through an economically and socially painful period when the government's obligations were dramatically reduced. The situation became even more difficult due to the haste with which the change occurred.

An analysis demonstrated that the problems in the Russian economy are of a persistent and long-term nature. *If oil prices do not grow rapidly again (and this scenario seems nearly impossible), the existing model will not be able to ensure economic growth.* Nothing promises that the economy will be able to overcome stagnation without a new growth model.

The government realizes the gravity of the situation. The "Main Lines of Russian Government Activity through 2018"[7] specifies that without an active economic policy, economic growth will slow down to 2–3% per year, which will not allow the country's economic and social development to be in balance. Thus, building a new growth model for the Russian economy that is capable of functioning even against deteriorating external conditions becomes an absolute imperative.

[7] http://government.ru/info/761/.

4. The outline of the new economic growth model

Let us consider possible ways to restore the growth of the Russian economy based on the "growth diagnostics" principle developed by D. Rodrik and used in a number of countries (Rodrik, 2010). He proposed an algorithm in which the first step is to identify key obstacles to growth and then select measures to be implemented in the existing political environment using existing administrative resources, etc., that are capable of removing or at least softening the most basic restrictions.

Diagnostics should begin with identifying the main reason for unsatisfactory growth: either the economy has insufficient access to financial resources, or economic activity in the country does not provide sufficient profitability (taking into account direct and indirect costs and risks). This selection practically determines all of the options for restoring economic growth. If we deem the main cause to be insufficient financial resources, then economic policy should offer additional sources of financial resources or ways to make up for their deficit (e.g., by temporarily compensating the insufficient private capital with government investments). This approach can be called "resource-based." In fact, it follows the shape of the trend before the crisis, when economic policy was focused mainly on managing financial resources.

Notwithstanding the popularity of the opinion that "the economy lacks money," this first hypothesis is not supported by objective economic data. In fact, the savings rate within the Russian economy is high by international standards (27% of GDP over the past three years) and has continuously exceeded the investment rate (24% of GDP on average). A significant portion of private national savings is invested abroad (despite the low, almost zero, interest rates in developed countries). Over the past three years, average net private capital outflow has been 3.3% of GDP per year, while Russian gross capital outflow have been 7.5% of GDP. Even if we imagine that up to one-half of foreign investment inflow actually represents a repatriation of previously exported Russian capital, the financial resources available for investment in the Russian economy exceed 30% of GDP. If these resources were fully utilized, Russia would find itself back among the world's growth leaders.

What are the most important risks and how can they be mitigated? Among the cited reasons for Russia's poor investment attractiveness, one of the most common is the low quality of the institutional environment (weak property rights protection, imperfect court system, high administrative barriers, corruption). While we do recognize the importance of these factors, in our opinion, *the main problem of the Russian economy is even deeper and is rooted in weak market mechanisms*. A mature market system consists of agents (companies, banks, employees) having strong incentives and competing according to established rules. Unfortunately, none of these conditions actually occur in the Russian economy.

The banking and non-financial sectors are both dominated by public, quasi-public (public corporations), or mixed (partially state-owned) companies. As a rule, these companies are guided by a substantially distorted motivation, that is, they are less interested in earning a profit, and their commercial activity is often combined with the actual function of a "government agent." They are less liable for their performance results, as losses can be covered by the state (we have observed increasingly more examples of this lately).

A survey of 79,000 companies conducted by the World Bank between 2003 and 2008 confirmed that state-owned and municipal entities demonstrate much poorer performance than private entities (Bogetic and Olusi, 2013).

Quasi-public companies may demonstrate even less market-focused behavior than fully state-owned enterprises (Vahabi, 2012). One can assume that this is also true in Russia, where public corporations are non-commercial, even from a legal standpoint. Moreover, as many studies suggest (e.g., Sharafutdinova and Kisunko, 2014), close informal ties between the state and business are characteristic of this country, which both directly and indirectly puts companies affiliated with the state in a privileged position. Of course, there are exceptions

to this general tendency. Thus, some researchers have found that Russian state-owned banks are more efficient than private ones (Karas et al., 2008), although the reasons behind this are perhaps the indirect advantages of affiliation with the state, which guarantees the high reliability of those banks in the eyes of their customers.

The role of market forces (or their absence) can be illustrated by the example of the Soviet economy. A number of studies have shown that its extremely low efficiency was primarily caused by the weak incentive system typical of a nationalized economy (see Easterly and Fischer, 1994; Brixiová and Bulíř, 2002). Moreover, according to the estimates in the first paper, the Soviet economy demonstrated the poorest dynamics of factor productivity in the world from 1960 to 1989.

The objective to enhance market mechanisms goes far beyond improving the investment climate. For example, the underdeveloped market environment leads to an inaccurate evaluation of business performance, does not encourage the best producers or filter out the worst ones, and does not encourage businesses to search for new, improved strategies. As a result, economic resources are not allocated to the best-performing industries, demand for innovations is non-existent, and the need to support domestic producers increases the burden on the budget, thus making the economy lag further behind in its development.

The most important sign of a non-market environment is a greatly diminished dependence of companies on their economic results. J. Kornai coined the term "soft budget constraints" (SBCs) to denote such a situation, showing that SBCs are an inevitable feature of an economy managed by the state, resulting in an excessive, unproductive use of all resources (Kornai, 1990). The factors leading to SBCs is the willingness of the state to put up with the inefficient performance of "own" companies, compensating them with financial support (through direct subsidies, tax benefits, preferential loans, etc.), comfortable regulation of prices and tariffs, preference in placing government orders, and deposits, etc. It is the SBC mechanism (first of all, the opportunity to obtain loans at non-market terms) that reduces the incentive for state-owned companies to improve their performance (Bartel and Harrison, 1999). The weak link in such a system is state-owned monopolies, which have no competition and operate under SBCs.

The distorted motivation of public and quasi-public companies not only determines their own actions but also affects all market players. Suppliers of the state or state-owned companies lose incentives to cut costs because they can include them in their prices comparatively easily (due to government inefficiency in public procurement, regulation of natural monopoly prices, etc.). Consequently, producers of similar products feel no pressure either, which is translated all the way down the supply chain. As a result, this phenomenon is common across the economy, and the competitive performance of producers deteriorates.

The standard tools of economic policy may not work in a non-market environment. For example, strong competition is one of the main incentives for companies to improve performance (Ospina and Schiffbauer, 2010). However, such a result is only observed with relatively "advanced" Russian companies; "lagging" companies may experience slow development in a competitive environment (Aghion and Bessonova, 2006). According to Y. Bessonova, the positive impact of competition on production performance is being held back in the Russian economy by the co-existence of companies with high and low productivity due to institutional exit barriers for the least efficient companies (Bessonova, 2010). Thus, increasing productivity requires not only lowering the market entry barriers that hinder competition but also facilitating the movement of productive factors from less efficient branches to more efficient ones, i.e., in effect activating the "creative destruction" process (by Schumpeter).

In other words, creating the necessary motivation requires a dramatic increase in positive incentives and greater responsibility among all financial and non-financial companies in the market for their operational results. This requires improving the market environment: weak property protection, low competition, excessive government regulation, as well as soft

budget constraints all increase the chances that efficient companies will leave the market and inefficient ones will survive (Hallward-Driemeier, 2009).

Another very important consequence of high risks for all players in the Russian economy is the shift toward solutions with short returns. With regard to households, this situation is illustrated by a study published in 2010 (Wang et al., 2010).

The test respondents in 45 countries (including developed and developing countries, as well as emerging markets) were asked to choose between receiving $3,400 in the current month or $3,800 in the next month. The results showed that in Russia, only 39% of respondents preferred to wait a month and receive $400 more. Russia came in the last decile in terms of "patience," with only four countries being less patient and 40 being more patient. The latter included countries comparable to Russia, such as Mexico (58% of "patient" respondents), Argentina and Turkey (63% each), and the Czech Republic (80%).

For a business, the sign of a "short horizon" is the above-mentioned preference given by business strategies to the objective of increasing output over cutting costs. Satisfying existing demand by simply increasing output produces an immediate effect, while the effects from modernizing production take much more time. The shift of the government's preferences toward current objectives has been especially visible in the pension policy lately, with growing allocations for current pension payments and reducing allocations for future pensions. However, the focus on immediate results is becoming ever more noticeable in other industries as well. This must be caused, on the one hand, by the continuing critical dependence of the Russian economy on unpredictable fluctuations in international markets and, on the other hand, by frequent changes in formal and informal "rules of the game," which accelerate as excessive government regulation grows.

"Short-sighted" preferences seriously hamper reforms, as their positive effects are not usually observed right away. It is this "short-sightedness" rather than errors in monetary policy that limits the availability of "long" money in the economy and, accordingly, the implementation of private projects with long payback periods. The most significant consequence of this contracting planning horizon is that it leads the government and businesses to turn away from development strategies to "fixing profit" strategies — this policy is rational at the current moment, but it has no prospects. One of the government's vital tasks is to restore the disrupted balance between long-term and short-term goals.

The various measures recently announced, developed or implemented by the government can be divided into three groups. The first group consists of the widely discussed measures for fiscal and/or monetary stimulation of the economy (such as reducing the Bank of Russia base rate). The second comprises measures to increase budget expenditures (this implies the weakening of the budget rule) or to provide additional funding for investment projects at the expense of the National Welfare Fund or the Bank of Russia (providing refinancing for loans issued for investment projects), etc. Finally, the third group includes measures to improve the economic environment (including the business environment). We will try to evaluate whether the measures proposed help make the Russian economy more market-focused and reduce the risks impeding its growth.

Stimulus measures are a standard tool of counter-cyclical policy and are justified in a short recession (as in 1998 or 2008–2009). However, if we have entered a protracted bout of low oil prices, then the ensuing massive decline in domestic demand cannot be mended with monetary or budgetary incentives. Thus, in October and November of 2014, under falling oil prices, even increasing the Bank of Russia base rate did not succeed in stopping the transfusion of money into the foreign exchange market. The net capital outflow was estimated at $28 billion in October, which is greater than the total outflow predicted by the RF Central Bank for 2014. The process could only be slowed after providing liquidity to the banks. It is clear that a softer monetary policy would have only led to further capital outflow instead of growth in domestic demand. We believe that a proposal to use incentives is an example of standard recommendations that will not work in the current non-standard situation.

In the second group, the *measures that involve increasing budget expenditures and funding additional large-scale projects* are aimed at replacing external resources with other sources, and they mainly suggest giving away these resources to public companies. This means that attempts are being made to preserve the old model instead of creating a new one. Moreover, heavy constraints arise when implementing these types of measures. First, their funding sources are now represented by the savings accumulated in the National Welfare Fund during the period of stable improvement in the oil markets. In other words, the sources are the quite limited remains of external surplus revenues. Therefore, this can only result in a short-term revitalization of production until the reserves are exhausted. Second, as demonstrated by the analysis of international experience, implementing infrastructure projects positively influences economic growth primarily while such projects are underway. Afterward, one cannot expect any noticeable acceleration in growth (Warner, 2014). Third, public investments only accelerate growth under strict public control of their efficiency (we will have to invest great effort in this area), while low-quality and excessive prices offset their positive effects (Morozumi and Veiga, 2014). During the final 10-15 years of the USSR, notwithstanding the very high accumulation rate (27–30% GDP) and the implementation of mega-projects (e.g., the Baikal-Amur Railway), the growth rate of the Russian economy consistently slowed down (Ponomarenko, 2002).

On the whole, one may come to the conclusion that major projects may extend the life of the "resource-based" model. However, taking into account that reforms are, as a rule, carried out when acutely needed, the actual result of the second group of measures would be to delay the creation of a new growth model, i.e., the loss of precious time.

An example of *measures to improve the investment climate and business environment* is the "road maps" included in the National Entrepreneurial Initiative (NEI) involving the removal of key limitations on business activities. One of them involves reducing the number of administrative procedures necessary to obtain a construction permit from 51 in 2012 to 11 in 2018 and their duration from 423 days to 56 days. Successful implementation of these measures may make the Russian economy substantially more attractive to investors. However, solving these tasks is very difficult because the results will be determined not only by changes in the regulatory framework but also by the practical actions of authorities at all levels across the country. Therefore, a modernized regulatory framework must be accompanied by strong improvements in the public administration system. Otherwise, these reforms may share the same fate as the updated Customs Code adopted in 2003. During its development, as with the road maps today, ambitious quantitative goals were set for facilitating customs clearance for imports and exports. Nevertheless, Russia ranked 155th out of 178 countries by this indicator in the World Bank's 2008 Doing Business rating (World Bank, 2007).

To summarize, we can say that the measures discussed or implemented today are not consistent with the scale of the problems facing the Russian economy. A new growth model should be based upon strong incentives for companies, as well as the public administration system, to improve efficiency. The activity of the latter must be oriented as much as possible toward creating favorable conditions for economic growth and minimizing all types of economic and institutional risks.

The complexity of the basic conditions in which this objective is to be achieved can be illustrated with a number of examples.

4.1. Public administration

1. The greater the number of employees in the public administration sector in Russian regions, the poorer their economic performance (Libman, 2012). We believe such a paradoxical connection is caused by growth in the regulatory burden as bureaucracy grows.

2. An analysis of factors determining the probability that a governor was reappointed in a region between 2005 and 2010 showed no dependence on the economic results of that region (Reisinger and Moraski, 2013). At the same time, A. Yakovlev (2015) notes that

in China, the promotion of regional administrators is determined primarily by the results achieved in the territories under their administration, which probably made the outstanding performance of the country possible.

3. According to RF Presidential Decree No. 1199, dated August 21, 2012, the unemployment rate serves as one of the criteria to evaluate the efficiency of executive authorities. Theoretically, unemployment can be reduced by creating favorable business development conditions. However, a simpler method is often used, i.e., informal limitations are imposed on employee dismissal. As a result, many modernization projects become unprofitable or are made impossible.

4. One of the vital incentives for regional and municipal authorities to create favorable business conditions is the interest in expanding the tax base to increase their own budget revenues. However, this incentive ceases to have an effect if transfers from the center are reduced when tax collection increases. An econometric analysis of the distribution of transfers between municipalities does not allow the hypothesis about such compensation to be rejected (Alexeev and Kurlyandskaya, 2003). To solve this problem, an effective mechanism of distributing federal transfers between regions was developed for the objective calculation of transfers to level out fiscal capacity. However, its specific weight has been decreasing lately compared with other "informal" mechanisms that may reduce incentives for the regions.

4.2. Business

1. Russia is ranked 120th out of 144 countries surveyed in terms of protection of property rights (WEF, 2014). It is clear that the simplicity of taking over another person's property reduces the incentives for investment, as successful growth increases the chance of losing the business or entails the need to "pay off."

2. In terms of the regulatory burden on businesses, Russia was ranked 111th out of 144 (WEF, 2014).

3. A joint investigation by the World Bank and Higher School of Economics shows that in each industry within the Russian economy, the labor performance gap between the top quintile of companies and the bottom quintile is a factor of between 10 and 20 (Golikova et al., 2007). Companies-outsiders account for an insignificant portion of the output but a substantial share of material resources and employers. This confirms the prevalence of soft budget constraints in the Russian economy. The utilization of a large number of tools that help all companies survive may be figuratively called "industrial paternalism."

4. In terms of innovative activity, Russia lags behind not only the most developed countries but all of the emerging markets (Table 7).[8] This points to very weak incentives for Russian companies to improve their business performance.

Table 7
Indicators of innovative activity, 2012.

Country	Specific weight of companies pursuing technological innovations	Total level of innovative activity
Russia	9.1	10.3
Brazil	41.2	76.0
Poland	16.2	28.1
Turkey	35.2	51.4
South Africa	65.4	73.9

Source: HSE, 2014.

[8] Russia has worse indicators of innovative activity, not only compared with countries from Table 7, but with all of the nearly 50 developed countries and emerging markets for which assessments are contained in the above-mentioned source.

The fundamental nature of the tasks that need to be resolved to build a new economic growth model (growth incentive model — GIM) requires not just individual incentive measures but profound changes in economic policy and the public administration system, implementing strong incentives to increase efficiency. It is impossible in a single article to provide detailed proposals on all of the issues that arise along the way. We can only outline the general directions. The following key tasks must be resolved to build a GIM.

It should be noted that for each direction, specific proposals have been developed that, if implemented, could bring about dramatic progress.[9] Moreover, serious measures have been defined for many key issues that, in a number of cases, should have been undertaken one-and-a-half to two years ago.[10] However, the analysis shows that these steps either have not been taken or have been implemented only as a formality. New measures are hardly needed right now. It is more important to understand why previous reforms are not being realized and what measures need to be taken for them to start functioning. Table 8 lists the most important tasks to be resolved to build a growth incentive model and the measures already proposed (right-hand column).

Of course, the measures listed in the right-hand column of Table 8 should not be considered adequate to achieve the goals; they only provide a direction for economic policy to follow. It should be noted that most tasks have been recognized as priorities, and approaches have been outlined. Unfortunately, most of these measures are not being implemented, unlike those involving additional government expenditures and investments. However, without improving the quality of public administration, the implementation of state-funded projects will at best yield limited effects in terms of scale and duration.

As an example, we can cite the law enforcement reform concept developed by the Institute for the Rule of Law (2013) for the Civil Initiatives Committee.

A diagnostic analysis conducted by the Institute revealed the following systematic reasons behind the persistently declining quality of law enforcement:

- excessive centralization of law enforcement agencies;
- prevailing vertical hierarchical coordination;
- multiple parallel governance verticals;
- the persisting "tick-sheet" evaluation system caused by centralized governance;
- a lack of external supervision and communication with local communities and civil authorities.

The law enforcement agency reform concept includes three main directions:

a) streamlining law enforcement agency management;
b) eliminating non-core functions, thus reducing staffing;
c) reforming the system for evaluating and supervising law enforcement agencies.

As a key step in this reform, a three-level police force is proposed at the federal, regional and municipal levels, with distinct authorities, duties and accountabilities at each level. In general, the concept proposes a system of interrelated measures to focus officers on solving identified issues while preserving all necessary law enforcement functions and performance.

An example of a task requiring a set of complementary measures is changing the stable tendency to reducing gross profit as a share of GDP. This is an especially challenging task considering the workforce reduction, which places additional pressure on labor compensation. First, excessive employment must be eliminated wherever it is present; second, if possible, the labor supply must be increased; and third, wages should not be allowed to grow faster than labor productivity. An analysis shows where there are reserves for resolving these

[9] Proposals by Kudrin (2012) and Gurvich (2013), as well as Mau and Kuzminov (2013), were used in developing the measures below.

[10] RF Presidential Decree No. 596 "On Long-Term Government Economic Policy," dated May 7, 2012; RF Presidential Decree No. 601 "On Main Lines of Modernizing the Public Administration System," dated May 7, 2012.

Table 8
Tasks and measures required to build a growth incentive model.

Task	Measures required
Dramatically reduce the non-market sector, including public and quasi-public companies that are mainly guided by non-market incentives	1. Before December 1, 2012, ensure development and implementation of non-core asset divestment plans by companies in which the Russian Federation has at least a 50% stake (RF Presidential Decree No. 596). 2. Before March 1, 2013, analyze the efficiency of companies "consolidated" by the government (RF Presidential Decree No. 596). 3. Implement a privatization program (budget revenues contemplated by the Federal Budget Law were RUB 728 billion in 2012-2013; actual revenues were RUB 86 billion). 4. Before 2016, complete the exit of the state from companies in the non-primary materials sector that are not affiliated with natural monopolies or the defense complex (RF Presidential Decree No. 596). 5. Restrict the acquisition of shares and stakes in business entities by companies in which the state has a major stake (RF Presidential Decree No. 596). 6. Reduce political or non-commercial instructions from the government to public companies.
Motivate the executives of agencies and regions to support economic growth	Before September 1, 2012, submit an RF Presidential Decree draft on implementing a system to evaluate the efficiency of executives at federal executive authorities (FEAs) and the subjects of the Russian Federation based on qualitative and quantitative indicators of the investment climate (RF Presidential Decree No. 596).
Create feedback in the evaluation of regional and local authorities	1. Before September 1, 2012, move a bill in the State Duma on extending the list of elected municipal positions (RF Presidential Decree No. 601). 2. Before January 1, 2013, amend Russian law to incorporate criteria and procedures (including via telecommunication networks and information technologies) for the population to evaluate the efficiency of executives for regional FEAs, their organizational units, and local authorities (RF Presidential Decree No. 601).
Redistribute a portion of the authorities and budget resources to the regions, enhance local administrations	Substantially reduce federal influence on the activities of subnational authorities: • increase financial autonomy at each level of authority; • restore conditions for local administration; • augment the role of competition as an economic growth incentive. (Mau and Kuzminov, 2013. Ch. 23)
Eliminate the disincentive of inter-budget transfer distribution mechanisms	1. Increase the share of objectively calculated subsidies to level off fiscal capacity. 2. Gradually switch to objective methods of transfer distribution to municipalities.
Enhance property protection	1. Before October 1, 2012, submit proposals to implement the principle of independence and objectivity in court decisions (RF Presidential Order No. 596). 2. Before December 1, 2012, amend Russian Federation law to rule out the possibility of resolving business disputes through criminal prosecution (RF Presidential Order No. 596).
Reduce administrative control over business activities	1. Before January 1, 2013, replace excessive and/or inefficient administrative mechanisms of government supervision in certain industries with alternative market mechanisms, including liability insurance (RF Presidential Order No. 601). 2. Introduce the presumption of innocence principle for businesses; switch from supervision on the part of executive authorities to damage reimbursement solutions within civil law (Mau and Kuzminov, 2013. Ch. 18).
Evaluate the efficiency of development institutions and reform them if necessary	Their activities have been broken into many scattered projects lately, in some cases not directly related to innovations (Presidential Address to the Federal Assembly, 2013).

(continued on next page)

Table 8 (continued)

Task	Measures required
Enhance competition in domestic markets	1. Increase the actual weight of the Federal Anti-monopoly Service, focusing it on eliminating market-entry barriers and countering the monopolistic activities of large companies. 2. Continue reforming natural monopolies.
Dismantle the existing system of "soft budget constraints" ("industrial paternalism")	Discontinue government support for inefficient companies, eliminate barriers for insolvent companies to exit the market.
Abandon paternalistic social policies	In particular, improve the targeting of social aid, which should be provided based on the population's needs (Budgetary Presidential Address for 2014–2016*).
Utilize state economic reserve funds	1. Beginning in 2013, introduce mandatory technology and price audits for all large-scale investment projects with public involvement (RF Presidential Decree No. 596). 2. Before June 1, 2012, prepare a report on the implementation of measures for the mandatory public review of procurement orders for state and municipal needs for amounts exceeding RUB 1 billion (RF Presidential Decree No. 596).
Enhance competition in the government procurement sector	Before December 1, 2012, create mechanisms to attract foreign organizations possessing advanced technology to participate in road construction tenders (RF Presidential Decree No. 596).
Implement further reforms in public sectors	Education, healthcare, law enforcement, and other reforms.
Increase the overall effectiveness of public expenditures	Among the main reserves for optimizing federal budget expenditures, the following were noted in the Presidential Budgetary Address for 2014–2016[a]: • ensuring long-term balance in the pension system with a gradual reduction of subsidies from the federal budget to the Pension Fund of the Russian Federation; • streamlining government procurement; • streamlining federal institutions and the number of public-sector employees. These changes should be implemented following careful preparation as part of the reforms to improve public sector efficiency.

[a] Budgetary Presidential Address on Budget Policy in 2014-2016. http://www.kremlin.ru/acts/18332.

issues: a) the number of employees in the public sector is clearly excessive (Russia surpasses developed countries and emerging markets in the number of public employees per 1,000 population); b) in recent years, wages have been rapidly increasing in a number of publicly funded industries, which later spread to the entire economy; and c) Russia has nearly the youngest retirement age among comparable countries. In view of the above, the following measures may be proposed:

- abandon wage increases in the public sector, which are unrelated to growth in its performance;
- streamline the number of public sector employees;
- switch from fighting unemployment (the impact of which will hardly be significant) to fighting for competitiveness;
- increase mobility and expand workforce re-training;
- improve regulatory mechanisms for immigration to attract employees needed by the labor market;
- gradually increase the retirement age.

It is necessary to restore investor confidence in the macroeconomic stability of the Russian economy as well as in the institutional change policy. Both involve solving long-term pen-

sion system issues. Their acuteness is determined, first, by the fact that the long-discussed changes in the pension system to become effective in 2015 do not solve the aging population problem, and second, by the fact that the funded system has been frozen for two years, further aggravating the long-term imbalance. Investors understand clearly that without robust measures to eliminate these problems, pension-related issues will have to be solved by raising taxes, which would further reduce incentives to invest in the Russian economy. Many specific approaches to conducting effective pension reform have been proposed (see Mau and Kuzminov, 2013; Kudrin and Gurvich, 2012; Gurvich, 2011).

Building up confidence in the government's actions will extend the decision making horizon for businesses and households. However, the authorities will need to avoid inconsistent actions when measures are canceled or revised shortly after they are announced.

It is especially important to restore investor confidence in the prospects for improving the business environment in Russia. As a general principle, a long-term moratorium on deteriorating the business environment may be introduced. In the event of urgent necessity, changes could be adopted that would have indirect negative consequences on the business environment, although this should be offset by other measures that ensure significant benefits for businesses.

It is important to support previously formed trends, particularly the borrowing of advanced technology. This approach has been recognized as the most effective for increasing productivity in the countries at the same stage of development as Russia. It should be understood that no country is capable of creating all technical innovations from scratch. Thus, the total research and development expenditures in the 10 leading countries exceed Russia's expenditures by more than 30 times (calculated based on purchasing power parity).

As noted above, to build a new growth model, we need to substantially alter the course of action for executive authorities and businesses. However, at the initial stage, the main role will be played by the authorities, who will be required to:

- create a new system of incentives as part of the public administration system;
- begin forming a real market environment for businesses;
- showcase by personal example the approaches that may be used to reduce costs and increase operational efficiency.

The resolution of tasks from Table 8 will enable a large step toward building a new growth model that is independent of foreign resources. Stronger incentives create demand among companies for innovations (which may partially be satisfied at the expense of importing modern equipment and partially by domestic R&D efforts). Increasing the efficiency of public expenditure will provide an opportunity to fulfill the government's obligations without increasing the tax burden. At the same time, reducing production costs will increase profits as well as labor compensation by raising demand and creating opportunities for further technological modernization. The potential to accelerate Russia's economic growth will be very high if this plan is implemented.

Direct losses caused by an inefficient anti-monopoly policy are at least 2.5% of GDP (RANEPA, 2012). Significant gains are connected with the redistribution of resources to more efficient producers by removing soft budget constraints. Streamlining resource distribution may have increased China's total factor productivity by 30%–50% and India's by 40%–60% (Hsieh and Klenow, 2009). We believe potential gains would be at least equal for Russia. The potential for additional growth of the Russian GDP from successfully implementing structural reforms (regulation of commodity markets, the labor market, labor taxes and the pension system) is estimated at 6% over five years and 13% over 10 years (Bouis and Duval, 2011). The economic potential for the federal budget is immense. For example, the valuation of losses in public procurement reaches RUB 1 trillion per year. Meanwhile, a significant effect may only be achieved from the robust implementation of a large-scale program of coordinated and complementary reforms rather than separate measures. In particular, it is impossible to achieve positive effects from reforms without adequate property protection

(Christiansen et al., 2009). The worst course of action is to discontinue all production support while maintaining excessive government regulation and other pressure on businesses.

The proposed approach to building a new growth model is far from easy, requires strong political will, and involves unpopular reforms. Nevertheless, we are confident that there are no viable alternatives to this course.

5. Conclusion

Summarizing the results.

1. Russia has shaped an economic growth model based on transforming oil and gas surplus revenues (which exceeded RUB 2 trillion from 2000 to 2013) into domestic demand. The model enabled rapid production growth, a record increase in wages across all industries and social transfers, and increasing macroeconomic stability. However, business strategies turned out to be focused on expanding production, while improving efficiency failed to become a priority.

2. In the near future, we can hardly hope for a return of the ideal conditions under which the imported growth model was shaped. Consequently, there is little chance for the Russian economy to stop stagnating without creating a new growth model.

3. The problems of the Russian economy are of a persistent nature and cannot be resolved with individual measures, such as softer monetary or fiscal policies. The reasons for these problems are the weaknesses in the market environment caused by the domination of public and quasi-public companies with distorted incentives (compared with the usual market logic) and "informal" relations with the state.

4. The measures discussed or implemented today are not consistent with the scale of problems facing the Russian economy. For the most part, they suggest somehow expanding domestic demand, which will allow the effects of the old growth model to be extended only for a short period of time but will not help create a new growth model.

5. A new growth model should be based upon strong incentives for both the business and government regulation systems to improve efficiency. The government's regulatory burden must be radically reduced, and property rights must be protected. It is essential to ensure strict and equal market accountability for the performance results of all companies, regardless of their affiliation, abandoning the industrial paternalism principle.

6. A number of the steps required to build a new growth model are mentioned in presidential decrees and other regulatory documents. Unfortunately, most of them are not being followed or are only partially followed, unlike the frequently passed resolutions on allocating funds for governmental projects.

7. The potential to accelerate growth in the Russian economy will be very high if the plan above is implemented. However, it will require a whole set of robust reforms, rather than separate, scattered measures.

References

Aghion, P., & Bessonova, E. (2006). On entry and growth: Theory and evidence. *Revue de l'OFCE, 2006/3* (97 bis).

Alexeev, M., & Kurlyandskaya, G. (2003). Fiscal federalism and incentives in a Russian region. *Journal of Comparative Economics, 31* (1), 20–33.

Bartel, A., & Harrison, A. (1999). Ownership versus environment: Why are public sector firms inefficient. *NBER Working Paper, 7043.*

Beck, T., & Laeven, L. (2006). Institution building and growth in transition economies. *Journal of Economic Growth, 11* (2), 157–186.

Bessonova, E. V. (2010). The impact of internal competition and foreign investments on the efficiency of Russian industrial enterprises. *Prikladnaya Ekonometrika, 1*, 106–127 (In Russian).

Bogetic, Z., & Olusi, O. (2013). Drivers of firm-level productivity in Russia's manufacturing sector. *World Bank Working Paper, WPS6572.*

Bouis, R., & Duval, R. (2011). Raising potential growth after the crisis: A quantitative assessment of the potential gains from various structural reforms in the OECD area and beyond. *OECD Economics Department Working Paper, 835.*

BP (2014). *BP statistical review of world energy 2014*. June. London: BP.

Brixiová, Z., & Bulíř, A. (2002). Growth slowdown under central planning: A model of poor incentives. *William Davidson Working Paper, 448.*

Christiansen, L., Schindler, M., & Tressel, T. (2009). Growth and structural reforms: A new assessment. *IMF Working Paper, WP/09/284.*

Davis, J., Ossowski, R., & Fedelino, A. (Eds.) (2003). Fiscal policy formulation and implementation in oil-producing countries. Washington, DC: IMF.

De Rosa, D., & Ioott, M. (2012). Are natural resources cursed? An investigation of the dynamic effects of resource dependence on institutional quality. *World Bank Policy Research Working Paper, 6151.*

Dobrynskaya, V., & Turkisch, E. (2010). Economic diversification and dutch disease in Russia. *Post-Communist Economies, 22* (3), 283–302.

Easterly, W., & Fischer, S. (1994). The Soviet economic decline: Historical and republican data. *World Bank Policy Research Working Paper, 1284.*

Fatas, A., & Mihov, I. (2009). Macroeconomic policy: Does it matter for growth? The role of volatility. *Commission on Growth and Development Working Paper, 48.*

Gonzalez, A., Iacovone, L., & Subhash, H. (2013). Russian volatility obstacle to firm survival and diversification. *World Bank Policy Research Working Paper, 6605.*

Golikova, V., et al. (2007). *Russian industry at the crossroads*. Moscow: HSE Publ. (In Russian).

Gurvich, E. (2010). Natural rent in the Russian oil and gas sector. *Voprosy Ekonomiki, 11*, 4–24 (In Russian).

Gurvich, E. (2011). Roadmap for the new pension reform. *Voprosy Ekonomiki, 4*, 4–31 (In Russian).

Gurvich, E. (2013). Long-term development prospects for the Russia's economy. *Ekonomicheskaya Politika, 3*, 7–32 (In Russian).

Gurvich, E., & Prilepskiy, I. (2013). How to secure external sustainability of the Russian economy. *Voprosy Ekonomiki, 9*, 4–39 (In Russian).

Hallward-Driemeier, M. (2009). Who survives? The impact of corruption, competition and property rights across firms. *World Bank Policy Research Working Paper, 5084.*

HSE (2014). *Indicators of innovative activity, 2014: Statistics digest*. Moscow: National Research University Higher School of Economics.

Hsieh, C.-T., & Klenow, P. (2009). Misallocation and manufacturing TFP in China and India. *Quarterly Journal of Economics, 124* (4), 1403–1448.

IEA (2014). *Medium-term oil market report*. Paris: International Energy Agency.

IMF (2014). *World economic outlook*. October. Washington, DC: IMF.

Institute for the Rule of Law (2013). *Law enforcement activity in Russia: structure, functioning, ways of reforming*. St. Petersburg (In Russian).

Ito, K. (2008). Oil price and macroeconomy in Russia. *Economics Bulletin, 17* (17), 1–9.

Jacks, D. (2013). From boom to bust: A typology of real commodity prices in the long run. *NBER Working Paper, 18874*.

Karas, A., Schoors, K., & Weill, L. (2008). Are private banks more efficient than public banks? Evidence from Russia. *BOFIT Discussion Papers, 3.*

Korhonen, I., & Ledyaeva, S. (2010). Trade linkages and macroeconomic effects of the price of oil. *Energy Economics, 32* (4), 848–856.

Kornai, J. (1990). Economics of Shortage. Moscow: Nauka (In Russian).

Kuboniwa, M. (2012). Diagnosing the 'Russian disease': Growth and structure of the Russian economy. *Japan Comparative Economic Studies, 54* (1), 121–148.

Kudrin, A. (2006). Stabilization fund: Foreign and Russian experience. *Voprosy Ekonomiki, 2*, 28–45 (In Russian).

Kudrin, A. (2012). What we expect from a new government. *Ekonomicheskaya Politika, 2*, 59–72 (In Russian).

Kudrin, A. (2013). The influence of oil and gas exports on Russia's monetary policy. *Voprosy Ekonomiki, 3*, 4–19 (In Russian).

Kudrin, A., & Gurvich, E. (2012). Population aging and risks of budget crisis. *Voprosy Ekonomiki, 3*, 52–79 (In Russian).

Libman, A. (2012). Democracy, size of bureaucracy, and economic growth: Evidence from Russian regions. *Empirical Economics, 43* (3), 1321–1352.

Mau, V. A., & Kuzminov, Ya. I. (Eds.) (2013). *Strategy-2020: A new model of growth — A new social policy. Vol. 1–2*. Moscow: Delo (In Russian).

Morozumi, A., & Veiga, F. (2014). Public spending and growth: The role of institutions. *NIPE Working Paper, 11/ 2014*.

OECD (2014). *Economic Outlook No 95: Long-term Baseline Projections*. May. Paris: OECD.

Oomes, N., & Kalcheva, K. (2007). Diagnosing Dutch disease: Does Russia have the symptoms? *IMF Working Paper, WP/07/102.*

Ospina, S., & Schiffbauer, M. (2010). Competition and firm productivity: Evidence from firm-level data. *IMF Working Paper, WP/10/67.*

Ponomarenko, A. N. (2002). *Russia's national accounts in retrospect, 1961–1990*. Moscow: Finansy i Statistika (In Russian).

RANEPA (2012). The Consequences of weak competition: Quantitative evaluation and policy implications (Think tank report). *Ekonomicheskaya Politika, 6*, 5–53 (In Russian).

Rautava, J. (2013). Oil prices, excess uncertainty and trend growth. A forecasting model for Russia's economy. *Focus on European Economic Integration, Q4/13*, 77–87.

Reisinger W., & Moraski, B. (2013). Deference or governance? A survival analysis of Russia's governors under presidential control. In W. Reisinger (Ed.), *Russia's regions and comparative subnational politics* (pp. 40–62). London: Routledge.

Rodrik, D. (2010). Diagnostics before prescription. *Journal of Economic Perspectives, 24* (3), 33–44.

Shafiee, S., & Topal, E. (2010). A long-term view of worldwide fossil fuel prices. *Applied Energy, 87* (3), 988–1000.

Sharafutdinova, G., & Kisunko, G. (2014). Governors and governing institutions. A comparative study of state–business relations in Russia's regions. *World Bank Policy Research Working Paper, 7038.*

Suni, P. (2007). *Oil prices and the Russian economy: Some simulation studies with NiGEM*. Helsinki: Research Institute of the Finnish Economy.

Vahabi, M. (2012). Soft budget constraint and the parastatal sector. *MPRA Paper, 37926.*

Wang, M., Rieger, M., & Hens, T. (2010). How time preferences differ: Evidence from 45 countries. *Swiss Finance Institute Research Paper, 09-47.*

Warner, A. (2014). Public investment as an engine of growth. *IMF Working Paper, WP/14/148.*

World Bank (2007). *Doing business 2008*. Washington, DC: World Bank.

World Bank (2014a). *Global economic prospects*. Washington, DC: World Bank.

World Bank (2014b). *Russia economic report No 31*. Washington, DC: World Bank.

WEF (2014). *The global competitiveness report 2014–2015*. Geneva: World Economic Forum.

Yakovlev, A. (2015). Incentives in the system of public administration and economic growth: The experience of USSR, China and Russia. *Obshchestvo i Ekonomika, 1* (forthcoming) (In Russian).