Budget Policy and Economic Growth *

by

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Abstract

This article examines the relationship between government budgetary policy and the pursuit of accelerated economic growth. The authors review the academic debate over long-term economic growth and associated short-term fluctuations and conclude that Russian budgetary intended to smooth fluctuations in economic activity are of limited effect and that there are no opportunities for increasing public expenditure in the medium and long-term. For these reasons, the structure of expenditures must be changed and budgetary institutions must be transformed with a view to creating the preconditions for economic growth in the long-term.

Keywords: economic growth, budgetary policy, government expenditure

JEL: O23, O4, H5.

Budget Policy and Economic Growth

Attitudes towards growth rates must change. The dynamic of growth rates should be the outcome of an effective system of economic levers and stimuli, of the implementation by those responsible for the management of the economy of a sensible investment policy and of an intelligent choice of developmental priorities. All attempts at administrative regulation of growth rates and at forcing rates of growth regardless of real gains in efficiency are pointless and can only distort understanding of the processes at work in the economy. (Egor Gaidar, 1987)

The slowing down of economic growth in Russia at the end of 2012 made for a re-opening of a debate over the relationship between budgetary policy and economic development. The discussion sought to identify those measures that would stimulate growth and offset the negative impact of conjunctural (short –term) factors and also agree the conditions that were necessary for sustainable economic growth in the long-term. According to the calculations of *Rosstat*, GDP in Russia during the III and IV quarters of 2012 increased by 3% and 2.1% respectively,[1] which is 2 percentage points lower than the indicators for 2011. During the recent months of 2013, official forecasts for rates of growth of GDP produced by the Ministry for Economic Development turned out to be 2.5 percentage points higher than growth achieved, and the forecasts had to be corrected. It was against this background that a broadly based discussion ensued as to what budgetary instruments were appropriate for the maintenance and stimulus of economic growth.

Framework of the debate

When they speak of economic growth, economists, as a rule, have in mind, essentially, growth in real GDP. However, broader definitions, involving the *growth of population incomes* or of the country as a whole and that take into account *social*

[1] Relative to the same periods of the previous year.

welfare[2] are coming to the fore. The *lowering of levels of poverty, reduction of social polarization and attainment of social justice* are circumstances that are inextricably bound up with problems of economic growth; yet these circumstances are frequently ignored in the debate over how economic growth might be attained. For example, the development of the system of social support, measures for anticipating or cushioning the impact of negative shocks on the welfare of individuals (who are, as a rule, risk-averse), must also be understood as being integral to the growth of *social welfare*.[3] Neither fiscal and budgetary policy, nor monetary and credit policy alone can achieve such diverse objectives as macroeconomic stability, the abolition of "market failures", the redistribution of income and the stimulation of economic development. These objectives are frequently at variance, and means have to be found of reconciling them. However, in the current debate in Russia discussion is mainly focussed upon percentage points in the growth of real GDP.

In the analysis of economic growth, it is usual to distinguish two different dimensions: the long-term and the short-term.[4] Long-term growth is understood as being the development of the economy along a trajectory of "equilibrium". The long-term (structural) component of growth reveals the volume of goods and services that the economy is capable of producing. This, in turn, is determined by fundamental factors, namely the quantity of available labour and capital and total factor productivity.Growth fluctuates in the long-term only to an insignificant degree, according to changes in the volumes of factors brought into production and according to the effectiveness of these factors.

Short-term fluctuations reflect deviations from the "equilibrium" trajectory and represent the conjunctural component of growth. This component is determined by the volume of goods and services that economic agents intend to consume and

[2] Arrow et al., 2010; Stiglitz et al., 2010; World Bank, 2010.
[3] World Bank, 2013.
[4] Durlauf et al., 2006; Rodrik, 2006; Mokyr, 2006; Kazakova, Sinelnikov-Murylev, 2009.

produce. Short-term changes come about through fluctuations in the national and world economy and in the case of Russia alongside these cyclical fluctuations, conjunctural shocks and the state of the world market for energy resources and raw materials are of considerable importance. [5]

In the period 1999-2008, the structural component of GDP growth rates in Russia, by our estimates, was approximately 3-4% per annum. The structural component, determined by the business cycle, up until 2008 varied between 0% and 2% and the component determined by oil prices from 0% to 3% percentage points. During the crisis period 2008-2009, the business cycle component broadly defined, including the external economic shock of the global crisis, became negative, falling to around -12%. However, thanks to structural growth (3.5%) and high energy and raw materials prices (the contribution of this component was approximately 1%), the decline in Russian GDP, taking into account the structural component, was not particularly significant (-7.8%). During the period 2010-2013 the cyclical component, including the world economic conjuncture, became negative and constituted around -2%. As a result, the growth of Russian GDP, which is at present close to structural growth rates (3.4%) is to a significant degree determined by a highly favourable conjuncture in the world market for energy and raw materials, which offsets the negative impact of cyclical factors (around 2%).[6]

The long and short-term perspectives can be analysed in terms of the possibilities for change in the volumes and level of utilization of factors of economic growth. The short-term, as a rule, is understood as being the period in which the utilization of growth factors (labour and capital) can be changed; and the long-term is understood as the period during which the volumes of factors introduced into the economy can change and technologies be implemented.

[5] See Kazakova, 2009.
[6] See Kazakova, Sinelnikov-Murylev, 2009.

The ongoing discussion focuses primarily upon the short-term component of growth over a timescale of 1-3 years: analysis of the current causes of a deceleration of growth (the causes are frequently identified as being an "unfavourable" external economic conjuncture and an ill-conceived macroeconomic policy) leads on to proposals for a range of anti-crisis measures.[7] It is generally assumed that thinking in a longer term perspective of 5-10 years from now, which is essential if positive conditions for sustainable long-term development are to be created, is unrealistic, given the particularities of the political process in Russia, and therefore not worthwhile, given that the benefits of structural reforms, most of which would be unpopular, would be realized only after a number of years. [8]

Short-term economic fluctuations

The theory of economic cycles has evolved over a period of almost two hundred years and yet not a single economic crisis has ever been foreseen. Even the more advanced theories have only succeeded in producing an *a posteriori* explanation of the cyclical behaviour of economies.[9] The three most popular schools of macroeconomic analysis - neo-Keynesianism, neo-classical theory and the theory of the real business cycle have put forward different interpretations:

- cyclical fluctuations in output are to be explained by fluctuations in volumes of investment that influence output through the intermediary of multipliers and accelerators. [10] The expectations of economic agents are of considerable importance;[11]

-a cycle is generated as a consequence of stimuli produced by changes in the money supply; [12]

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[7] For example, see Glaziev, 2013.

[8] The majority of proposals Contained in the Strategy-2020 document presented in 2011 to the President and Government of the Russian Federation were not implemented by the executive and legislative branches of government.

[9] For a review of theories of cycles, see Institute for the Economy of the Transition Period, 2009.

[10] See Keynes, 1936 and Samuelson, 1939; Hicks, 1950; Klein, 1950.

[11] Akerlof, Shiller, 2010.

-cyclical fluctuations are produced by unexpected shocks in the real sector of the economy (for example, shocks in total factor productivity). [13]

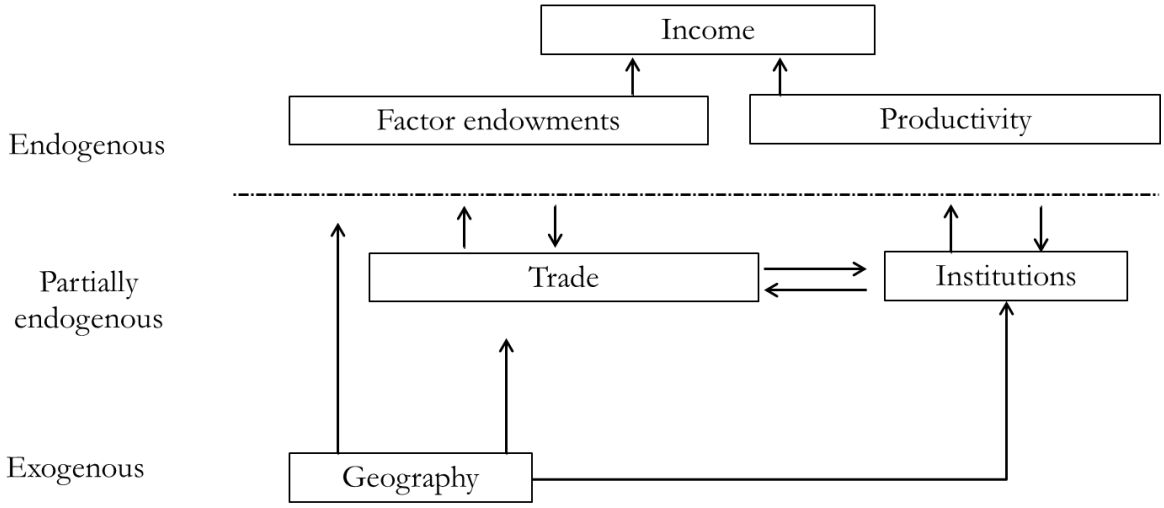
In other words, short-term economic fluctuations, the cyclical behaviour of economies relative to their *trend*, have been understood as being accidental events; and the causes of these fluctuations and the circumstances in which they occur have been explained in different ways. Each theory offers a specific package of measures for enabling the economy to emerge from recession and return to the trend, which is to say the long-term trajectory of economic development - an expansionist budgetary policy, an increase in state investments, an increase in the money supply, a lowering of interest rates, etc.

Long-term economic growth

According to Rodrik (Rodrik, 2003) long-term, economic growth may be amply illustrated with the use of a standard production function (see Graph 1). Here output depends upon factors of production (physical and human capital) and upon technology employed (total factor productivity).

[12] Lucas, Sargent, 1978; Sargent, Wallace, 1975; 1981.
[13] Kydland, Prescott, 1982; King et al., 1988.

Factors of economic growth



Source: Rodrik, 2003.

Graph 1

The ultimate determinants of long-term growth are endowment in factors of production and technology employed – endogenous, in the first instance, in relation to the geographical location, level of institutional development or degree of integration into the international economy. The advantages of countries derive from their geographical location (endowment in natural resources, climate, proximity to sea routes, etc.) [14] External economic integration determines the advantages and costs of exchange of goods, services, capital and labour.[15] The level of institutional development refers to the quality of the formal and informal socio-political framework within which economic agents interact, the rules and the extent of state intervention in the economy, which create the necessary conditions for effective development. [16]

[14] Rodrik, 2003.

[15] Firstly, integration into the world economy encourages, through participation in international trade, adoption of the best production technologies and this reduces the gap in the level of development between countries. Secondly, international specialization makes it possible to avoid the negative influence of diminishing returns from scale (see Helpman, 2004).

[16] World Bank, 2013; IMF, 1995.

Institutional structures, above all property rights, rights and obligations that are reinforced by a system of contract are a fundamental determinant of long-term economic growth. [17] Furthermore, there are aspects of institutional development that can impede or accelerate growth. For example, it can be confidently asserted that inequality within a country can retard its economic growth, though the ways in which this comes about require further study. E. Helpman (Helpman, 2004) has identified three contradictory ways in which inequality can affect upon growth.

Firstly, inequality can accelerate growth if the propensity to save out of profits is greater than the propensity to save at the expense of wages. This means that a redistribution of income from wages (of the poor) in favour of profits (to the benefit of the rich), increases total savings and makes for an acceleration of growth. Secondly, inequality can impede growth, in so far as the poor, given constraints in the market for capital, have limited access to credit. Significant inequality in the distribution of property restricts total investment, since the poor are denied the opportunity of participating in profitable investment projects.

Thirdly, inequality impedes growth since the median elector tends to favour the redistribution of income (given that, as a rule the median income is lower than the average income). If such redistribution is administered through the taxation system, this can have a significant distorting effect since an economy where taxes are high will grow at a slower rate. Finally, one can point to the negative effect of inequality on growth that is results from restriction of access of the poorer strata to education, given the deleterious effect that this has upon the quality of human capital; and to a reluctance, in societies that are polarized, to take important political decisions (see Krugman, 2009).

[17] Acemoglu et al., 2006; Entov et al., 2004.

Particular interactions of individual factors can intensify or reduce the combined effect that they have upon growth. One example is the effect of the "resource curse": lower rates of growth have been observed in countries that possess an abundance of natural resources.[18] In the scholarly literature, two basic aspects of this tendency have been highlighted: the macroeconomic and the institutional.

The macroeconomic aspect consists in the fact that the existence of significant reserves of natural resources and the prevalence of high prices for these resources engenders what has been described as the "Dutch disease": given increasing prices and a strengthening of the national currency there takes place a transfer of wealth to countries that are exporters of natural resources; and within these countries there comes about a corresponding flow of factors of production into the extractive branches of the economy, and from the sector of traded goods to the service sector. [19] As a consequence, those sectors that are involved in the extraction of minerals and the production of non-traded goods flourish, are growing rapidly to the detriment of the processing branches of the economy. The institutional aspect consists in the fact that availability of high incomes from natural resources can "degrade" the institutions of such an economic system.[20] An increase in the prices of natural resources is even more harmful if the institutions are underdeveloped. [21]

[18] Sachs, Warner, 1995; 1997.
[19] Bruno, Sachs, 1982.
[20] Treisman, 2010.
[21] Mehlum et al., 2006.

Factor analysis of economic growth rates

Contemporary complex methodologies (calculations) for analysing economic growth and explaining differences in rates and levels of economic development in terms of particular factors began with the work of R. Solow (Solow, 1957). The fundamental proposition of Solow is that economic growth can be broken down into components, some of them can be associated with an increase in the volumes of factors of production utilized and some not, because as a rule they constitute a randomly distributed residuals and are associated with technological progress (with a change in total factor productivity).[22] Differences in the volume and quality of the labour force, of capital of various kinds, and of distinctive technologies can explain differences in the levels of GDP between countries and changes in these components over time can explain economic growth.

Research into the reasons for economic growth has reached a number of conclusions. Firstly, whilst economics now possesses formal procedures for breaking down economic growth by factors, the laws of economic growth are not yet fully understood. Economists, with the help of one model or another can explain one or another instance of economic growth or stagnation, but are unable to provide a recipe for growth[23] or to offer an explanation of differences in income between countries that is compatible with all methodologies. There is no adequate explanation in contemporary economic models of the "economic miracle", that is, the transition of countries from a low level of economic development to high rates of economic growth.[24] Secondly, differences in growth, both in time[25] and in space, [26] are most

[22]. For a short review of the evolution and results of these methodologies, see Helpman, 2004; Entov et al., 2006.

[23] See Isterli, 2006.

[24] Ito, 2000.

[25] Certainly, findings vary according to research, but examples adduced in the classical studies suggest that productivity accounts for up to ¾ of economic growth: the growth of the US economy over the last 50 years at an average annual rate of 2% cannot be explained in terms of the

frequently explained in terms of productivity (in the implementation of technology). Thirdly, data on the economic growth of particular countries to not disprove the hypothesis of the existence of a conditional convergence of growth rates (growth rates of countries gradually stabilize at certain levels in the long-term) but do disprove the hypothesis of an unconditional convergence (long-term growth rates that are identical for all countries). [27] At the same time, convergence in levels of economic development is observed only in those countries where, during the period of agrarian development, flexible institutions were created that enabled adaptation to the specific requirements of dynamic development and associated structural change ("Convergence Club"); by contrast, those countries that were unable to adapt to the changing conditions of development of the 19th-20th centuries fell further behind the leader-countries [28]

Let us compare growth in the post-Soviet territories with historical examples of rapid growth in the second half of the twentieth century. As we can see from the data in Table 1, periods of rapid economic growth in CIS countries and in East Asia in the last three decades and in European countries in the period following the Second World War have in common a high share of investments in GDP (20-39%) and a significant contribution of total factor productivity (TFP) to growth (up to a half of the volume of growth is attributable to increases in productivity).

growth of capital intensity and human capital – these can only account for 0.5%. The remaining 1.5% is attributable to total factor productivity (see Isterli, 2006).

[26] Over half of the difference in the level of economic development of countries can be explained in terms of productivity: income per worker in the USA is 35 times greater than in Nigeria, but capital accounts for a difference of only 1.5 times and education and the labour force account for a difference of 3.1 times. Only a 5 times difference in incomes can be explained in terms of factors of production. This means that a difference of 7.5 times can be attributed to total factory productivity (see Helpman, 2004).

[27] Barro, Sala-i-Martin, 1992.

[28] Gaidar, 2005, English edition, 2012.

Table 1

Breakdown of average rates of economic growth for a number of countries with developed and transitional economies *(% of average annual values)*

Country	Period	Real GDP (%)	Investments (% of GDP)	Percentage contribution to growth		
				Capital	Labour	TFP
Chile	1976–1985	3.4	15.9	1.4	2.0	–0.1
	1986–1995	7.7	21.8	2.8	1.8	3.1
	1996–2006	4.3	22.9	2.4	1.2	0.6
China	1976–1985	8.7	29.0	3.4	1.4	3.9
	1986–1995	10.0	31.4	4.2	1.1	4.6
	1996–2006	8.8	36.8	4.4	0.8	3.7
Ireland	1976–1985	3.6	25.2	2.4	0.2	0.9
	1986–1995	4.6	20.2	1.3	1.1	2.3
	1996–2006	7.3	24.6	2.8	2.6	1.9
South Korea	1976–1985	7.4	29.7	3.7	1.4	2.3
	1986–1995	8.7	34.3	4.0	1.9	2.8
	1996–2006	5.4	34.4	2.7	0.9	1.9
France	1950-1960	4.9	…	1.8	0.2	2.9
	1961-1973	4.5	24.2	2.4	0.4	1.7
	1974–1985	1.7	22.6	1.3	0.1	0.4
	1986–1995	1.7	22.6	1.0	0.2	0.5
	1996–2006	1.9	23.3	0.9	0.6	0.4
Germany	1950–1960	8.2	…	2.5	1.0	4.7
	1960–1973	4.4	25.9	2.6	0.2	1.6
	1974–1985	1.8	21.0	1.1	–0.1	0.8

	1986–1995	2.8	20.6	1.0	0.4	1.4
	1996–2006	1.4	20.0	0.8	0.2	0.4
Japan	1952–1960	10.9	…	3.5	2.9	4.5
	1961–1973	9.7	25.4	4.3	0.8	4.6
	1974–1985	3.3	27.3	2.4	0.5	0.4
	1986–1995	3.2	28.5	1.9	0.6	0.6
	1996–2006	1.2	24.7	0.8	–0.1	0.5
USA	1947–1960	3.7	…	1.7	0.6	1.4
	1960–1973	4.3	15.7	1.5	1.2	1.6
	1974–1985	2.8	15.7	1.4	1.2	0.3
	1986–1995	2.9	16.2	1.3	0.9	0.6
	1996–2006	3.3	19.2	1.7	0.8	0.7
East Asia	1966–1990	8.9	32.0	4.0	3.3	1.7
CIS-12	1996–2006	6.0	22.8	3.7	0.2	2.1
CIS without Mongolia and Uzbekistan	1996–2006	6.2	21.4	3.6	0.0	2.5
Armenia	1996–2006	9.1	20.6	4.6	–0.6	5.2
Azerbaijan	1996–2006	11.4	35.5	7.1	0.2	4.1
Belorussia	1996–2006	7.2	24.8	4.6	–0.1	2.8
Georgia	1996–2006	6.8	22.3	4.4	–0.2	2.4
Kirghizia	1996–2006	4.5	18.2	3.0	0.6	1.0
Kazakhstan	1996–2006	6.8	21.2	3.8	0.4	2.6
Moldova	1996–2006	2.5	20.0	2.0	–0.6	1.0
Mongolia	1996–2006	4.7	35.6	5.2	0.8	–1.3
Russia	1996–2006	4.2	19.1	2.4	0.1	1.7
	1996–	6.2	12.9	2.6	0.7	2.9

Tadzhikistan	2006					
Ukraine	1996–2006	3.3	19.8	1.7	–0.2	1.8
Uzbekistan	1996–2006	4.6	23.6	3.3	0.7	0.7
Baltic States	1996–2006	7.1	26.1	4.0	0.2	2.9
Estonia	1996–2006	7.6	29.6	4.5	0.1	3.0
Latvia	1996–2006	7.4	26.2	4.2	0.4	2.8
Lithuania	1996–2006	6.4	22.5	3.1	0.1	3.1
Central Europe	1996–2006	4.0	25.1	2.4	0.1	1.4
Czech Republic	1996–2006	2.9	28.9	2.3	–0.2	0.8
Hungary	1996–2006	4.2	22.9	2.3	0.4	1.5
Poland	1996–2006	4.4	21.0	2.2	0.0	2.1
Slovakia	1996–2006	4.5	28.5	2.9	0.4	1.3
Slovenia	1996–2006	4.0	24.2	2.4	0.1	1.5
South-East Europe	1996–2006	4.2	21.0	3.2	–0.1	1.0

Source: IMF, 2007

In the CIS countries and in post-war Europe, growth was, characteristically, "reconstruction growth", the characteristics of which were a low volume of already existing capital at the start of the period, significant disproportions in the economy and a short-fall of technological and organizational innovations in the civil sector (as a consequence of the planned economy or the preceding war economy). This means that in these countries high growth rates were achieved thanks to a reallocation of resources and the dissemination of advanced technologies.

In the case of the "Asian Tigers" (South Korea, Taiwan, Hong Kong, and Singapore), growth was achieved to a significant degree thanks to an increase in the volumes of human and physical capital added – up to 70% according to some calculations[29] rather than to total factor productivity – which contributed up to 30%. This growth featured rapid accumulation of factors of production, technological borrowing and institutional reforms.

During the period 1998-2008 Russia experienced mainly reconstruction growth in the context of an extremely favourable external economic conjuncture: there was an improvement in the terms of trade (oil and raw materials prices rose constantly), and thanks to a policy of import substitution that was facilitated by a low rouble exchange rate following the crisis of 1998. The outcome was a relatively large contribution of capital and total factor productivity to economic growth. [30]

[29] For example, see: IMF, 2007; Young, 1995; Islam, 1995; Mankiw et al., 1992.

[30] See the annual reviews of the Gaidar Institute for Economic Policy "The Russian Economy. Trends and Perspectives".

www.iep.ru/index.php?option=com_bibiet&Itemid=50&catid=117&lang=ru&task=showallbib.

The role of budgetary policy

Given the variety of mechanisms for economic growth[31] that have been implemented in different countries we can easily understand why there has been a lively discussion during the last 60 years of the contribution that government policy (fiscal, budgetary, monetary and credit, institutional) can make to the attainment of attractive economic growth rates. The stabilizing potential of government policy in the short-term has never been questioned, but there have been serious disagreements over the effectiveness of particular measures.[32] Whether there should be maximum loading of unused capital and labour, whether levels of inflation should be held back or lowered, whether interest rates should be lowered, whether the money supply should be increased – such questions have become controversial and are bound up with the search for a model that can adequately replicate the functioning of the economy.

In respect of long-term growth, in Solow's exogenous growth model the role of government policy as a determinant is minimal: the rates of economic growth are determined by the rates of growth of the population and the rate of technological progress (Solow, 1956). R.Lucas, (Lucas, 1988) and R.Barro (Barro, 1990) in working out the foundations of endogenous growth models[33], identified mechanisms whereby government policy could influence long-term rates of economic growth. Recent studies by the World Bank and the IMF underline the importance of government policy not only for short-term macroeconomic stabilization, that is corrections to (stimulation of) short-term rates of economic growth, but also for the

[31] See: Drobyshevsky, 2009; Drobyshevsky et al., 2007; Sinelnikov-Murylev et al., 1998; Drobyshevsky et al., 2012.

[32] See above on differences between neo-Keynsianism, neo-classical theory and the theory of the real business-cycle.

[33] On endogenous growth models, see Romer, 1994.

formation of conditions of sustainable long-term growth and increasing the level of economic development and welfare of the population. [34]

In the economic literature on government budget policy, expenditure is usually divided into two categories: productive and unproductive.[35] Productive expenditure is understood as being expenditure that impacts upon economic growth directly or indirectly by bringing about an increase in reserves of factors of production (physical and human capital) and (or) through an increase in total factor productivity. In economic theory, the volumes of such expenditures can be expressed as variables in a production function. Forms of government expenditure that are weakly or not at all associated with increases in factors of production or with total factor productivity (when they are applied in excess of the level that is required for the normal functioning of the economy), are classified as unproductive.

By this definition, productive expenditures are considered to be those spent on education (associated with an increase in human capital), on scientific research and development (which enable a growth in innovation and to technological progress that will result in an increase in total factory productivity) on infrastructure, transport and communications (which increase the productivity of private capital) and on health care (improvements in the health of the population make for an increase in the number of workers and in labour productivity).[36] Expenditures that are *unproductive* (albeit they might be necessary up to a particular level) are deemed to be those on government administration, law enforcement, the national economy and defence[37] (hardly any productive capacity is created by such expenditure which, instead, diverts resources from other sectors of the economy).

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[34] For example, see Tanzi, Zee, 1997; IMF, 2007; World Bank, 2006; 2007; 2013.
[35] IMF, 1995.
[36] For example, see European Commission, 2012.
[37] Sometimes defence expenditure is classified as productive, in so far as defence research and development can contribute to technological progress and create new jobs (Barro, 1991). For a detailed review of this hypothesis and of empirical research on the influence of defence expenditure on growth, see Dicle, Dicle, 2010.

Empirical research has not produced an unambiguous answer to the question whether aggregate public expenditure stimulates long-term economic growth. Indeed, according to the Wagner hypothesis there is an important reverse dependency, according to which as personal incomes increase, the value of consumption of social goods relative to that of private goods increases[38]. According to this hypothesis, as an economy develops the share of government expenditure in the economy usually increases. The vested interests of the bureaucracy and the formation of institutions for the collection of taxes reinforce this process.

Drawing conclusions from the extensive empirical research,[39] we can conclude that the general level of government expenditure has a positive influence upon economic growth only up to a particular level, beyond which any increase will have a negative effect. In other words, if this indicator rises above a particular level (for a given level of economic development) economic growth will be stifled. [40]

There is no unambiguous answer to the question which components of government expenditure influence economic growth. Most studies indicate that productive expenditures do not have a negative effect upon growth and unproductive expenditures do not have a positive effect (see Table 2).

[38] Wagner, 1883

[39] Lucas, 1988; Aschauer, 1989; Barro, 1991; 1996; Barro, Lee, 1993; Barro, Sala-i-Martin, 1995; Feldstein, 1996; Tanzi, Zee, 1997; Alesina et al., 1999; Devarajan et al., 1996; Rodrik, 1998.

[40] Gaidar, 1997.

Table 2

Empirical research on the influence of components of public expenditure upon long-term growth

Research	Sample	Period	Components of public expenditure	Influence on economic growth
Barro, 1991	98 countries	1960–1985	Government consumption, government investments (% of GDP)	Consumption (−). Influence on investment insignificant
Easterly, Rebelo, 1993	~100 countries	1970–1988	Government investment in various spheres (% of GDP)	Investment in transport and communications (+), influence on other forms of investment insignificant
Kneller et al., 1999	24 OECD countries	1970–1995	Aggregate productive expenditures, aggregate unproductive expenditures (% of GDP)	Productive expenditure (+), unproductive expenditure (−)
Gupta et al., 2005	39 developing countries	1990–2000	Salaries of civil servants, commodity consumption, investments, transfers and subsidies, servicing of government debt (% of GDP; % of aggregate government expenditure)	Salaries of civil servants (−), investments in basic capacity (+), remainder insignificant
Bose et al., 2007	30 developing countries	1970–1990	Government expenditures in various spheres (% of GDP)	Expenditures on education (+), influence of remaining forms of expenditure insignificant
Baldacci et al., 2008	118 developing countries	1971–2000	Expenditure on education, health care (% of GDP)	Both forms of expenditure (+) (by means of an increase in human capital)
Dunne, Uye, 2009	Survey of 103 studies of particular countries and groups of countries	Various	Defence expenditure (% of GDP)	20% of studies (+) 37% of studies (−) In 43% of studies no meaningful link established

Source: compiled using World Bank data (2013)

Be this as it may, there is evidence that some government expenditures are capable of influencing economic growth, if they are applied efficiently. IMF studies have shown that government expenditures are capable of influencing growth if they are properly targeted, if costs are kept to a minimum and if the correct instruments for managing the expenditure are employed (IMF, 1995).[41] There can be a number of reasons for government expenditure being ineffective, including appropriation of a share of the budgetary resources by influence groups. This can lead to a relative or absolute increase in the costs of public expenditure programmes without any improvement in outcomes (Krueger, 1990).

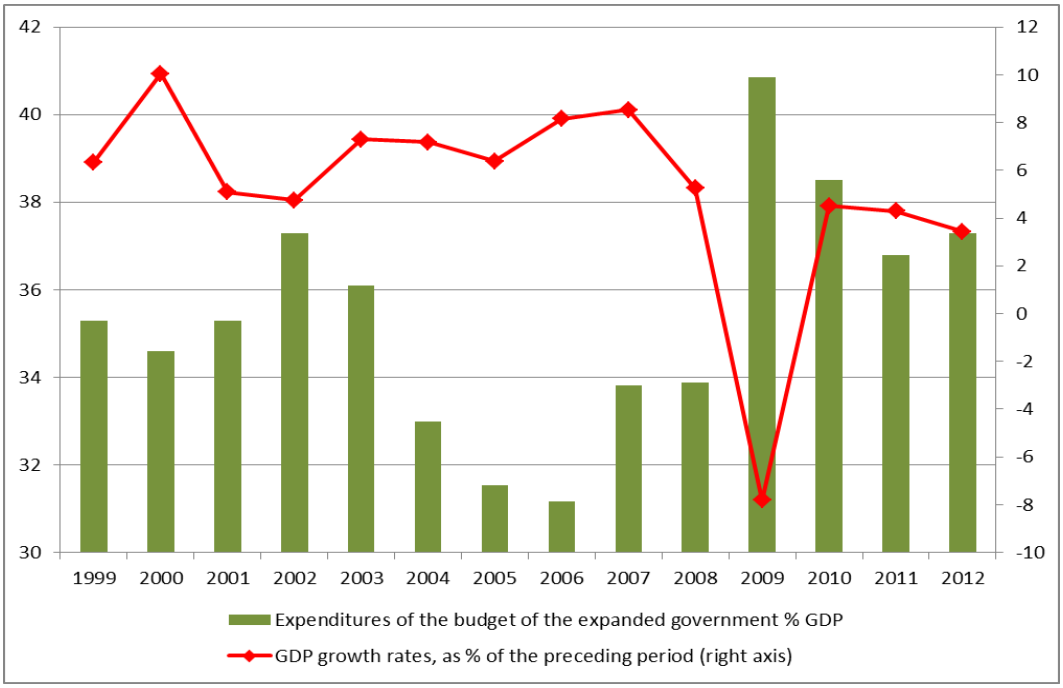
[41] For example, according to recommendations of the IMF, increased efficiency of expenditures on health care requires the development of relatively inexpensive programmes of preventive medicine and not increased expenditures on curative medicine. The output of a large number of teachers by colleges is inefficient if they have been poorly trained. Expenditures in the sphere of education will be inefficient if elevated expenditures on higher education are accompanied by underfunding of primary education.

Budget policy and economic growth in Russia

During the period 1999-2012 in Russia there was no noticeable link between the level of government expenditure and economic growth. During periods of relatively low government expenditure there were both accelerations and decelerations of growth and this was also true of periods of high expenditure (see Figure 2). Real growth of GDP in Russia for the period 1999-2012 averaged 5.1% per annum.[42] Part of this growth can be attributed to the higher share of Russian GDP that is affected by the world market in energy resources and raw materials. If prices for energy resources in real terms had remained at the level of the beginning of the 2000s, then annual growth would have been 1-1.5 percentage points lower.

[42] On trends and factors for development in the Russian economy in the period 2009-2012, see Mau, 2010; 2011; 2012; 2013.

GDP growth rates and budget expenditures of the enlarged government of the Russian Federation 1999-2012



Sources: Rosstat; RF Treasury.

Figure 2

As we have already noted, the prerequisites of efficiency of short-term measures depend to a significant degree upon the economic model that is being employed, that is upon the nature of short-term (cyclical) fluctuations. As a rule, an effective expansionist monetary policy is accompanied by price restraint, that is, an expectation of low levels of inflation (otherwise, an increase in the money supply will rapidly lead to an increase in inflation). An effective fiscal or budgetary policy presupposes the existence of reserve, non-utilized, factors of production (since otherwise additional government expenditures will either be applied to no effect, which will make for an increase in prices; or result in a diversion of resources from the private sector and reduce output in that sector), the absence of serious disproportions ("bottlenecks") in the development of particular branches, and the absence of crowding-out effects (competition for resources with the private sector),

etc. [43] The existence or absence of a budget deficit must also be taken into account (the multiplier of a balanced budget in the simple theoretical model must not be equal to or not more than, one).

Let us consider possible short-term government measures for smoothing out the fluctuations in economic activity and for enable the "loading" (utilization) of existing factors of production. At present, as far as we can see, the preconditions under which any short-term stimulus would be effective are not present and opportunities for short-term measures are extremely limited. At present, output in Russia responds weakly to increases in government expenditure. This can be seen from the estimates given above of potential growth rates (3%-4% per annum), from the high level of loading of production capacity (up to 95% in some branches)[44] and from the low level of unemployment (which fell to 5.5% in 2012).[45]

That opportunities for short-term stimulus measures are limited may be seen from the calculations of multipliers of government expenditures given in Table 3.

[43] Keynes, 1936; Samuelson, 1939; Hicks, 1950; Klein, 1950; Lucas, Sargent, 1978; Sargent, Wallace, 1975; 1981; Kydland, Prescott, 1982; King et al., 1988.

[44] Institute of the Economy of the Transition Period, 2013.

[45] See Kazakova, Sinelnikov-Murylev, 2009; unemployment statistics on the Rosstat website - www.gks.ru

Table 3

Empirical calculations of multipliers of government expenditure

Country	Researchers	Multiplier*	Value
Russia	Drobyshevsky, Nazarov, 2012	Government expenditures by output	0.46
		Government expenditure by total consumption	0.215
		Defence expenditures by output	0.0
Russia	Yudaeva, 2012	Non-percentage expenditures by output	0.13
		Expenditures on general government activity by output	–0.90
		Expenditures on state security by output	0.29
		Expenditures the national economy, housing and communal services, environmental protection, by output	0.55
		Expenditure on culture and social amenities by output	0.20
USA	Mountford, Uhling, 2002	1955–2000	0.5
	Monacelli, Perotti, 2008	1960–2000	1.1
		1960–1979	1.6
		1979–2000	0.5
	Blanchard, Perotti, 2002	1960–1997	1.3
Germany	Perotti, 2004	1960–2000	1.2
Germany		1960–1974	1.7
Germany		1974–2000	0.8
Great Britain		1960–2000	0.3
Great Britain		1960–1979	0.9
Great Britain		1979–2000	–0.1
Canada		1960–2000	0.5
Canada		1960–1979	0.9
Canada		1980–2000	0.2
Australia		1960–2000	0.3
Australia		1960–1979	0.5
Australia		1979–2000	0.8
Italy	Giardano et al., 2008	1982–2004	1.7

* For the developed economies, multipliers of total government expenditures are given.

Source: Drobyshevsky, Nazarov, 2012, Yudaeva, 2012, Mountford, Uhling, 2002, Monacelli, Perotti, 2008, Blanchard, Perotti, 2002, Perotti, 2004, Giardano et al., 2008.

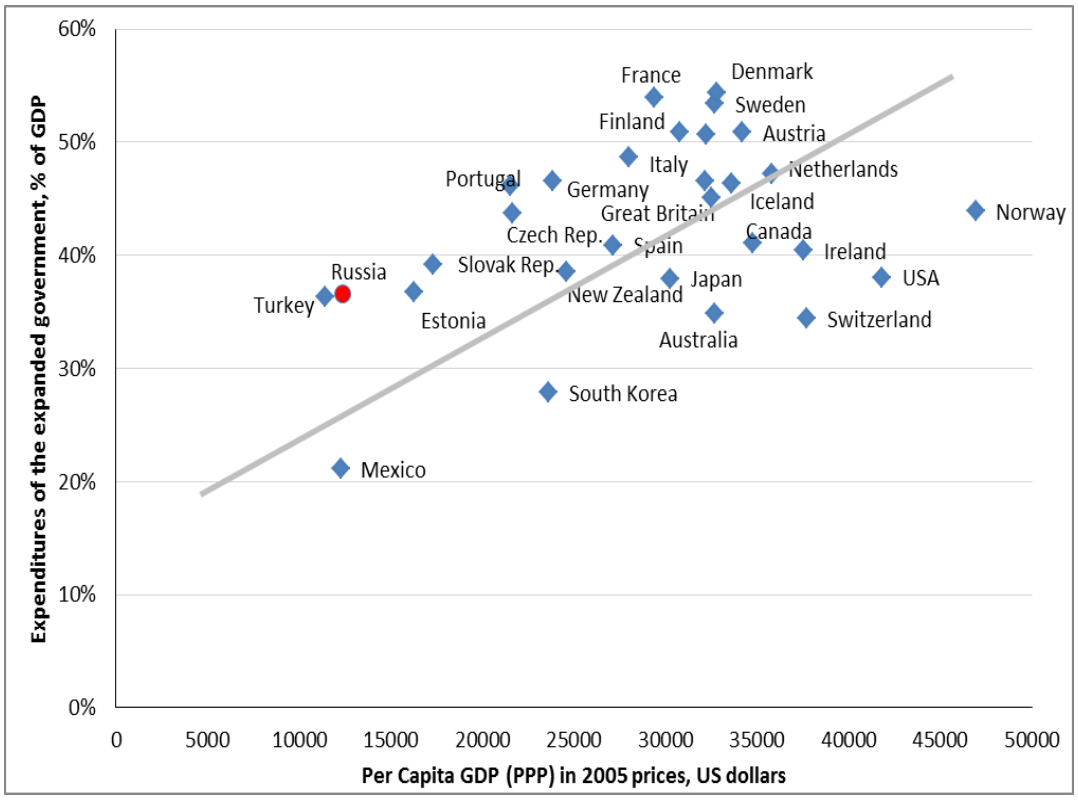
In straightforward theoretical terms, multipliers should be lower than 1.0 but in reality this occurs only in particular cases. In recent years in Russia (and in certain periods in the developed countries) total government expenditures and individual

components of these expenditures have resulted either in the diversion of resources from the private sector, where output was more effective, or in an insignificant increase in output in the public sector accompanied by the creation of negative stimuli for the development of the private sector. This means that the multiplier effect that one would expect from the application of government expenditure does not offset the negative effect of this expenditure upon the economy. *This leads us to the conclusion that in conditions in which the potential for reconstruction growth has been exhausted, rather than measures of short-term stimulus being intensified, policy should be revised in such a way as to create the long-term prerequisites of economic growth.*

At present, the level of government expenditure in Russia is higher than in countries with a comparable level of economic development (See Figure 3). The share of expenditures of the enlarged government in the Russian Federation, 36.6% of GDP (the average for 2011-2012) corresponds to indicators of countries where per capita GDP, at purchasing power parity (PPP), is approximately 25,000 dollars - these countries are Slovenia, New Zealand, South Korea and others (in these countries budgetary expenditures do not amount exactly to 36.6%, but on average in this group they approximate to this figure).

Government expenditures and level of economic development*

(Average for 2000-2011)



Source: World Bank statistical data (WDI on line)

*Note that the inter-country dependency depicted in the graph cannot provide direct evidence of the negative effect of government expenditure on growth above a particular level, since to answer this question we would need to study dependency over time for each individual country.

Figure 3

This means that Russia lacks the long-term reserves that would justify an increase in government expenditures. The implication for budgetary policy is that if there is to be a stimulus to economic growth in the medium and long-terms then government expenditures should be reduced (or at least not increased).[46]

The only way of delivering greater social welfare that will be conducive to economic growth is to increase the efficiency of expenditures; and for this to be

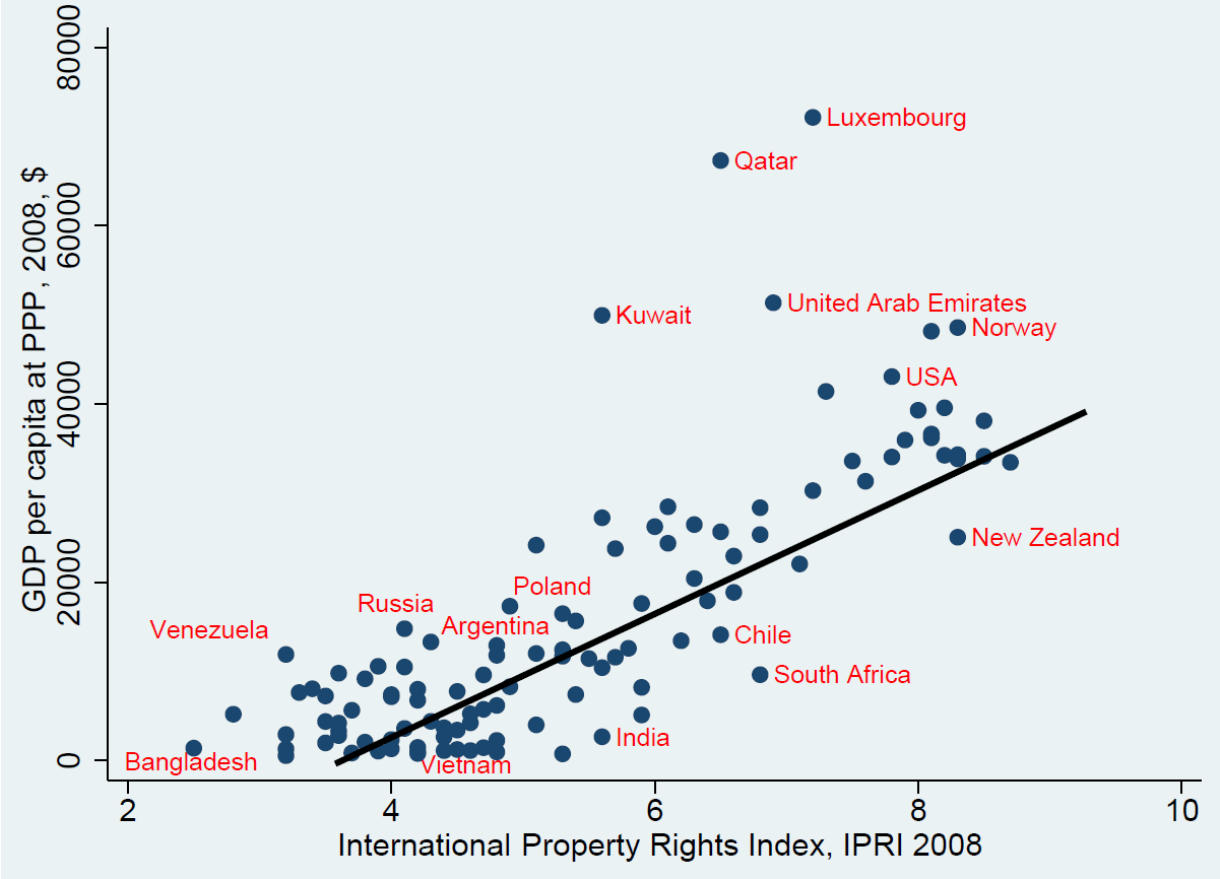
[46] The elimination of manifest economic and structural disproportions would produce significant positive externalities in the private sector, and this could, of course justify increases in particular items of budget expenditure in the short-term.

achieved the quality of social institutions must be improved.[47] In this respect, Russia lags far behind countries with a comparable level of economic development. For example, with a GDP per capita at PPP of 15,000 USD in 2008, which is a value approximate to those of Poland, Latvia, Chile and Argentina[48], the quality of social institutions, in particular the index of protection of property rights, is on the same level as countries with a GDP per capita of 2,500-3,500 USD, namely Indonesia, the Philippines and Vietnam (see Figure 4).

[47] Institutions are of the greatest importance when it comes to achieving efficiency of government expenditures. Where institutions are low-grade, a unit of budgetary expenditure produces a lesser effect. For this reason, there has to be greater expenditure to achieve a given result than would be the case with institutions of a higher standard.

[48] In these countries, the level of development of social institutions is one and a half times higher than in Russia.

Institutions and level of economic development



Source: GDP per capita at PPP – World Bank data (WDI online); International Property Rights Index - Property Rights Alliance, 2009. IPRI Report.

Figure 4

We should note that there is a great difference between the structure of government expenditure in Russia and that of the developed countries: In Russia in recent years the share of expenditure on defence, security and the national economy has significantly increased at a time of underfunding of education, health care and infrastructure.[49] As the data in Table 4 make clear, relative to the EU and the USA (with corrections to differences in level of economic development) there is a sharp reorientation towards non-productive expenditure that does not contribute to economic growth.

Table 4

Budgetary expenditures of the enlarged government in Russia, the EU and the USA

[49] See Drobyshevsky et al., 2011; Knobel, Sokolov, 2012.

(% of GDP)

	Russia	Russia	EU 25	USA
	2012	**2007–2011**	**2007–2011**	**2007–2011**
Expenditures, including:	37.3	37.1	48.9	40.6
National defence	3.0	2.7	1.3	4.8
National security and law enforcement	3.1	2.8	1.7	2.2
National economy	5.3	5.5	5.0	4.0
Education	4.2	4.2	5.6	6.5
Health care	3.7	3.8	6.5	8.5

Source: Eurostat data; OECD; RF Treasury

International experience and current trends in the Russian economy enable us to draw a number of conclusions and, on the basis of these, to propose specific budgetary measures aimed at stimulating economic growth.

First of all, the range of short-term budgetary measures that will attenuate fluctuations in economic activity is limited. Russia does not possess the preconditions under which short-term measures of stimulus can be effective; output does not respond (or responds weakly) to increases in government expenditure.

Secondly, opportunities for increasing government expenditures in the medium and long-term are lacking. The prerequisites of long-term growth have to be created: this means changing the structure of government expenditures, reducing unproductive expenditures and increasing productive expenditures whilst at the same time bringing about a qualitative transformation of budgetary institutions so as to increase the efficiency of budget expenditures.

Thirdly, budgetary measures for stimulating growth must, primarily, be directed towards increasing the volumes and improving the quality of factors of production (human and physical capital) and at raising total factor productivity (in the services provided by infrastructure, transport and communications).

Options for budgetary stimulus of economic growth

The measures proposed in this section take into account the macroeconomic situation envisaged in the budgetary policy in Strategy-2020.[50] The innovations that we propose, within the budget system as a whole, must be implemented over 3-5 years and will entail an increase of 3% in the productive budget expenditures of the enlarged government These expenditures will improve the quality of the entrepreneurial and investment climate, enhance the potential of human capital and contribute to the formation of a contemporary transportation and engineering infrastructure. [51]

Simultaneously, unproductive expenditures must be reduced by 3% of GDP. It will be necessary to increase the expenditures of the enlarged government/ on education by 1.2% of GDP, on health care by 1.0% of GDP, on road building by 0.8% of GDP. Expenditures on law enforcement must be reduced by 0.9% of GDP, on the national economy and housing and communal services (excluding road building) by 1.05 of GDP.

Human capital and labour resources: In education there must be an effective contract for the professorial and teaching staff of colleges and middle schools, an increase in average salaries, a reconstruction of the network of educational institutions aimed at improving their effectiveness, improvements to the technical baccalaureate, new educational technologies for the training of the kind of specialists that are needed by the economy, improved methods for measuring the quality of education.

[50] http://2020strategy.ru/; See also Drobyshevsky, Sinelnikov, 2012.

[51] For a more detailed comparison of the structure of the budget of the Russian Federation with that of a number of other countries and an appraisal of the budgetary policy of the Russian Federation in the medium term, see Knobel, Sokolov, 2012.

Steps towards improving the quality of education must include further state support for the modernization of regional educational systems, so as to develop the network of institutions of pre-school and general education; the modernization of technical and pedagogical equipment in colleges and schools; improvements in the system of grant support for students; an enhancement of the social status of teaching staff; and continued gradual implementation of a system of normative per capita funding.

In the sphere of health care there must be consistent improvements in the quality of education of medical personnel, accompanied by a reduction in the number of students in medicine; hospitals and polyclinics must be provided with up-to-date equipment. The system of compulsory medical insurance (CMI) must be developed, but at the same time a system for evaluating medical technologies must be introduced. There must be greater specificity in the description of medical services funded by CMI; and an equalization of the terms under which state and private organizations deliver medical care that is funded by CMI. Among the most important measures for improving the health of the population we would include improvements in the amount of information available to citizens on the state of their health and on the health care that they receive (utilizing computerized medical records). Medical savings accounts should replace the present system of supplementary provision of medicines.

Total factor productivity: A gradual increase in expenditures on the development of the transport infrastructure (highways, airports, seaports) will make for an increase in the efficiency of production in the long-term. New infrastructure projects, some of which could involve private investment, must be optimized not only with regard to expenditures on construction but also with regard to the cost of maintenance and servicing (a transition to life-cycle contracts and concessions). At the same time, some of the necessary increases in expenditures will have to be extended beyond 2020, so as to avoid short-term increases in the cost of construction

and any decline in the efficiency of utilization of funding (in conditions of limited productive capacities in the building sector). In the sphere of energy infrastructure the key objectives must be an improvement in the technological procedures for connection to the electricity grid and the introduction of co-generation.

Defence expenditures can be reduced by declining the size of the armed forces two and a half times, to the average level for OECD countries. There should be a complete transition to military service by contract. There should be a further transfer of military service personnel to service in the civil sector. The associated costs should be optimized by the imposition of anti-corruption controls over this process (by outsourcing the servicing and repairs of equipment, the maintenance and utilization of premises and infrastructure, etc.). A reduction in the size of the army will not only achieve savings in government expenditure, it will also release labour resources from a branch of the economy where they are not used productively.[52] Reducing the number of secret assignations in the defence budget will contribute to transparency and provide an informational basis for optimizing expenditures under this heading.

In the spheres of *state security and law enforcement* savings can be achieved by drastically reducing numbers of personnel to average levels for the OECD, doing away with the duplication of divisions and agencies, divesting particular institutions of functions that are inappropriate to them or in general unnecessary, transferring contingents of the Ministry of the Interior of Russia and other agencies to the civilian sector and improving the computerization of this sector. A reasonable and fair relationship must be established between the wage levels of law enforcement personnel and average wage levels in the economy (including the regions) so that corruption in dealings with the citizenry can be reduced.

[52] See Friedman, 2010.

If savings are to be achieved in the *national economy*, the involvement of the state in competitive branches of the economy must be reduced, whilst the competitiveness of organizations with partial state share-holding in strategic branches of the economy must be improved. To this end, the privatization of such public corporations as “Sovkomflot”, “Sberbank”, “RusHydro”, “Rosneft” must be continued, and some of the functions of state corporation “Rostec”, public corporation United Aircraft Corporation, public corporation United Shipbuilding Corporation, federal state unitary enterprise “Rosmorport”, and state corporation “Avtodor” must be handed over to the private sector. State subsidization of enterprises must cease, since this significantly distorts market relations and discourages private investment in particular sectors of the economy. Over 1300 share-holding companies should be privatized, of which about a quarter operate in the non-productive sector (services, trade, finance), about one quarter in agriculture, 20% in industry and 15% in construction.

At the same time, in sectors where there has been “market failure”, the state must re-assume the function of regulator. We have in mind cases where the transfer of services into private hands had turned out to be ineffective. These are, in the first instance, housing and communal services (associations of owners in housing must be given support), electricity (connection to supply); and rail freight (access to the railway infrastructure).

If these changes are to be implemented, the volume of funding of state programmes in the market sectors of the economy must be optimized. Expenditures on state procurement must be reduced and this should apply also to companies with state-shareholding involved in the government programmes “Developing and improving the competitiveness of industry”, “Developing the aviation industry”, “Developing the construction industry”, “Developing the electronics and radio-electronic industry”, “Developing the pharmaceutical and medical industries”.

In passing, we would point to the need for a gradual abolition of hidden subsidies to the economy through the maintenance of low energy prices (export duties on oil amount to a subsidy of the economy equivalent of about 4% of GDP).[53] Analyses have shown that this practice, far from facilitating the production of competitive goods and subsidizing the end user of energy resources, in fact masks the inefficiency of the oil processing industries that are utilizing technology that is loss-making in terms of world prices.

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Our conclusion, regrettably, is that there are no straightforward budgetary or monetary measures that are capable of providing a rapid stimulus to economic growth. Major reforms can seldom be implemented quickly and painlessly. There are few opportunities for short-term budgetary measures that will attenuate fluctuations in the economy. The conditions in which effective short-term stimulus measures can be effective do not exist in Russia, where output does not respond readily to increases in government expenditure. Nor are there any options for increasing government expenditure in the medium and long-terms. The only solution lies in the creation of the prerequisites of economic growth in the long-term, by restructuring expenditure and reforming budgetary institutions. The measures adopted must be aimed at increasing the volumes and quality of factors of production (human and physical capital), and at improving total factor productivity. This last will entail the development of infrastructure, transport and communications and social institutions. The thoroughness with which these measures are implemented will depend to a critical degree upon the political will and commitment to reform of the country's leadership.

[53] See Idrisov, Sinelnikov, 2012; Bobylev et al., 2012.

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