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# CASE Network Reports

## Public Expenditures on Education and Health in Russian Federation before and during the Global Crisis

Irina Sinitsina

No. 103/2011



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## **Abbreviations**

BVE	Basic vocational education
CB&EBF	Consolidated budget of the RF and extra-budgetary funds
CBR	Consolidated budget of the RF regions
CIT	Corporate income tax
CMI	Compulsory Medical Insurance
CMI TF	Territorial CMI funds
FDI	Foreign direct investments
FF CMI	Federal Compulsory Medical Insurance Fund
PF	Pension Fund
PISA	Programme for International Student Assessment
PIT	Personal income tax
PNP	Priority National Project
SEBF	State extra-budgetary funds
SVE	Secondary vocational education
TEBF	Territorial extra-budgetary funds
TPSG	Territorial programs of state guarantees
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UST	Universal social tax
VAT	Value added tax

## **The author**

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## **Abstract**

This paper explores the effects that the global financial crisis of 2008 – 2010 had on the funding and performance of the healthcare and education sectors in the Russian Federation (RF). Both education and healthcare expenditures increased in terms of total general government (GG) spending relative to GDP, partly as a result of reduced GDP. The crisis induced further centralization by increasing both the role of the federal budget in funding social services and the dependence of regions on federal transfers, but it did not result in enhanced resource allocation or more effective public spending. By revealing the inefficiencies that accumulated in education and healthcare financing and management throughout the 2000s, the crisis exposed acute funding shortages in contrast to the government's stated goals and an urgent need for reform in these sectors. The impact of the financial crisis on the delivery of education and health services appeared to be delayed and was mitigated by the resources accumulated during the pre-crisis boom. The paper concludes with several recommendations for the RF public service sector concerning improvements in the inter-governmental transfer system through increasing transparency and introducing performance-oriented budgeting.

## **Executive summary**

The established patterns of the delimitation of revenue sources and expenditure obligations between the tiers of the Russian Federation (RF) budgetary system resulted in a mismatch between the revenue allocation and spending responsibilities at the regional and local levels of government. Among other causes, this was the result of a high variation in the levels of the regions' development which required considerable inter-governmental transfers in order to reduce regional differentiation in budgetary sufficiency.

In the pre-crisis period, these imbalances were further aggravated following the acceleration of growth in federal budget revenues due to an extremely favorable external environment. This growth narrowed the budgetary autonomy of the regions even more and caused many of them to be highly dependent on federal budget transfers to carry out their expenditure mandates, including education and healthcare services delivery. The abundance of resources allowed the government to keep an overall budget surplus (including considerable reserves) and to substantially increase expenditures throughout the budgetary system. The attempts to introduce performance-oriented planning for public expenditures did not succeed, which resulted in further complications and in the reduced transparency of the inter-budgetary transfer system.

The slump in the real sector in late 2008 and the subsequent recession that began in early 2009 resulted in a sharp decrease in revenues in the RF budgetary system. At the same time, the decline in revenues at the regional level was more moderate and displayed a slower rate of contraction. Despite the fall in budget revenues, the RF Government implemented a discretionary anti-cyclical fiscal policy, ensuring virtually no expenditure cutbacks and initiating additional expenditures to execute anti-crisis measures. As a result, expenditures at all tiers of the budgetary system expanded relative to GDP.

Federal budget expenditures demonstrated the most rapid growth both in nominal and real terms, with inter-governmental transfers being the fastest growing item. Transfers from the federal budget formed a cushion thanks to which the regions were able to overcome the peak of the economic crisis. At the same time, the regions became even more dependent on the decisions made at the federal level. The share of transfers in the revenues of state extra-budgetary funds also increased substantially, while the proportion of insurance contributions shrank. In the consolidated budgets of regions, it was capital expenditures that were trimmed most intensively, while expenditures on servicing public and municipal debts, as well as

expenditures on items that were (co-) financed from the federal budget demonstrated a substantial increase.

The system of federal transfers turned out to be ill-suited to face the challenges posed by the financial crisis. Throughout the crisis, the inter-regional distribution of transfers was administered “manually”, depending on the strength of lobbying pressures or taking into consideration political factors.

During the crisis, inter-governmental fiscal relations failed to capture the real processes going on at the regional level and to effectively supplement resource shortages in specific areas in view of declining (in real terms) regional revenues. The crisis brought about a considerable increase in the number of deficit-ridden regional budgets. The inter-budgetary regulations retained pro-cyclic features characteristic of the period of economic growth and failed to protect the guaranteed rights of citizens of access to standard quality services.

A high dependence on federal transfers did not stimulate modernization at the regional level. Despite expectations, the crisis did not induce more economically rational behavior and did not result in the reduction of the number of inefficient enterprises and hidden unemployment. Only a few regions managed to continue reforms initiated during the pre-crisis period.

Crisis-induced centralization also brought about an increase in the federal budget's role in education and health funding, with a corresponding decline in the role of regional budgets which bear the major burden of responsibility for financing the constitutional guarantees. The proportion of territorial extra-budgetary funds in financing health care has increased, which was the result of the deeper involvement of these funds in the implementation of the state program for free guaranteed medical services.

The crisis coincided with the continuing trend of a declining student population both in secondary and tertiary education, which made the need to adjust the number of teachers, as well as the number of schools and higher educational institutions, even more urgent. However, the crisis did not result in noticeable changes in the excessive number of schools or in the reduction of the number of teachers and school personnel. In tertiary education, along with declining admission indicators, a trend towards greater popularity of more economic forms of education (evening courses, correspondence courses, etc.) became evident. This will most probably result in some reduction of educational institutions' revenues, due to a decline in costs covered by students.

The results of 2009 demonstrate a 0.6 p.p. increase in real consolidated expenditures on education relative to GDP – from 4.0% GDP in 2008 to 4.6% GDP in 2009, partly due to a considerable GDP reduction. The latter is true also both for

the federal budget (from 0.9% to 1.1 % GDP) and the consolidated regional budget expenditures (from 3.1% to 3.4% GDP).

The crisis affected neither the size nor the geography of education spending from regional budgets. In the majority of regions, education funding continued to grow in line with general budget spending, or even displayed higher dynamics. At the same time, in most cases, this growth did not compensate for inflation; in constant prices, only about half of the regions recorded positive growth. Quite a few regions maintained (or even significantly raised) education spending even under falling revenues and declining general spending.

Education funding figures by levels of education reveal that pre-school education suffered the least. Meanwhile, expenditures on secondary education have followed the overall education spending trends, while vocational training and re-training seem to have suffered most from the crisis, with 52 regions reducing their spending on this item, including 29 regions with a fall of over 10% and 11 regions where spending was cut by more than 20%. The latter list includes almost exclusively the regions with the largest output decline and the worst labor market situation.

Due to a drop in GDP in 2009, the percentage of health care funding in GDP increased compared to 2008 (from 3.7% GDP to 4.2% GDP). Compared to education, regional health care spending suffered noticeably more from the crisis, even despite the fact that spending from consolidated regional budgets was supplemented by expenditures from the Medical Insurance Territorial Funds. In 2008 prices, 53 regions, almost two-thirds of the total, reduced their health spending in 2009 compared to 2008; of those, 20 RF subjects decreased their expenditures by over 10%. In the areas most heavily affected by the crisis, this reduction amounted to 20 – 25%. On the other hand, only 11 regions increased their health spending by more than 10%, predominantly due to federal transfers.

The crisis revealed the major problems that accumulated in healthcare financing throughout the last decade: the unfinished and inconsistent medical insurance reform, the inadequate accessibility of services, an increase in fee-based services, etc. Among many factors affecting the low efficiency of public healthcare spending in Russia, a pivotal role is played by the acute shortage of funds despite the stated goals of the government.

By the end of 2009, the financial deficit of the Program of state guarantees for the provision of free medical assistance in 75 regions amounted to 23.3% of health care funding in the RF consolidated budget for the same year. Consequently, normative standards for all categories of free medical assistance were substantially under-financed in the majority of regions.

In the mid-term perspective, federal budget obligations remain high relative to GDP, considerably exceeding the respective proportion in 2008. On the whole, the post-crisis public expenditure adjustment reflects a trend towards a slowdown of public expenditure growth typical for 2009 and partly for 2010, and thus constitutes a move towards a more balanced budget. Yet the internal structure of expenditures raises serious concerns. The concerns relate, for example, to an increase in defense expenditures, and the continuing funding of programs that cannot be regarded as the country's priority targets. On the other hand, the politically motivated promises of a substantial increase in pension expenditures could bring about an urgent need for ad hoc additional funding, which would ruin the fragile budget sustainability.

At the regional level, the planned reduction of federal transfers and the limited revenue potential of regional budgets put under question the ability of the latter to finance their expenditure obligations in education and health services. The result could be an increase in paid services accompanied by a reduction in the volume and quality of free state-guaranteed services.

The impact of the financial crisis upon the delivery of education and health services appears to be delayed. The major consequences will be seen when the resources accumulated during the pre-crisis boom become exhausted; the situation could further deteriorate in the case of any new external shock.

One of the main recommendations for the public service sector, including education and healthcare, is to improve the inter-governmental transfer system with regard to increasing its transparency and enhancing efficiency by introducing performance-oriented budgeting. Since the federal budget potential to finance these transfers is decreasing, there is a clear need for the optimization of the number of subsidies, as well as for proper channeling of the transferred resources in accordance with government priorities. The development of a set of indicators that would allow policymakers to evaluate the efficiency of budget expenditures at the regional and municipal levels would be of great value.



# Introduction<sup>1</sup>

This paper has been prepared within the framework of the project “The Impact of the Global Financial Crisis on Public Service Delivery in Economies of the former Soviet Union,” which is supported by the Local Government and Public Service Reform Initiative of the Open Society Institute.<sup>2</sup> This project aims to analyze the attitudes of the governments in the countries of the Former Soviet Union towards the financing of key public services in education and health under the conditions of the global economic crisis. The purpose of the current study is to analyze the effect the global financial crisis had on education and health services delivery in Russia.

The study explores:

- economic, fiscal and policy developments in RF during the pre-crisis period and during the crisis, with special attention paid to the fiscal sustainability in the mid-term perspective;
- educational status - government policies and government spending on education, and the impact of the crisis on the education sector’s financing and performance;
- health status - government policies and government spending on health care provision, and the impact of the crisis on the healthcare service sector’s financing and performance;
- regional differences in education and health care provision, and the crisis’ impact on regional differences in financing specific areas within education and healthcare services.

The study is focused on the following major issues related to the crisis’ impact on education and health care delivery:

- analysis of the budget situation before and during the crisis period with a primary focus on major policy developments in public finance as the main prerequisite for maintaining the sustainable public financing of service delivery in the spheres of education and health care;

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<sup>1</sup> This paper has been prepared with the editorial assistance of Paulina Szyrmer.

<sup>2</sup> The author is grateful to Marek Dąbrowski for his time and efforts spent editing and improving this paper.

- analysis of the key sector indicators for each of the spheres (in health care: health status of the population, mortality and morbidity rates, availability of personnel and infrastructure, access to health services and regional differentiation; in education: enrolment by education cycle, availability of teachers and facilities, education quality as measured by PISA testing system, public vs. private provision of education services, demographic trends and regional differentiation);
- policy reforms and spending trends in education and health care before and during the crisis period;
- efficiency of spending based on international comparisons;
- mid-term outlook for each of the sectors in terms of spending and provisional indicators;
- a regional outlook of the crisis' impact on funding of education and health care.

The report is prepared as a desk study. The dominant analytical framework was that of analyzing statistical and other data, making use of statistical presentation and analytic narratives methods. Other methods of transparent presentation/mapping of various institutional and policy developments (in tabular or in graphic form) were also used, e.g. most of the results in the regional part of the study is presented in the form of index maps.

The study is based on a multitude of statistical data compendiums and programmatic and policy documents developed and published by several RF Government institutions: Federal State Statistics Service (Rosstat), RF Federal Treasury, RF Ministry of Finance, RF Ministry of Health and Social Development, RF Ministry of Regional Development, RF Ministry of Science and Education, Federal Fund of Compulsory Medical Insurance, etc. International comparisons were provided on the basis of the WHO statistical database, the "European Health For All" database, the UNICEF and UNESCO statistical databases, the Programme for International Student Assessment (PISA) database, the Times "Higher Education World University Ranking" results, and the World Bank World Development Indicators database.

Reviewing the various analytical reports provided by the leading RF research centers and institutions was of great help. These included: The Gaidar Institute for Economic Policy (prior to 2010, the Institute for the Economy in Transition), Independent Institute for Social Policy (IISP), Urban Economics Institute, Institute for Public Finance Reform (IPFR), Center for Macroeconomics and Short-Term Forecasts, Center for Fiscal Policy, Institutes for Educational Studies and for the Economy of Health Care of the Higher School of Economics (HSE). The study also used WHO and UNESCO analytical studies as well as reports prepared by the World Bank and UNDP.

# 1. Fiscal situation

## 1.1. Pre-crisis developments

Russia's high rates of economic growth over the past decade lay at the core of impressive changes in the country's socio-economic development in the early 21st century. During the nine years since 1999 (when economic growth started), the GDP growth amounted to 83% as compared to 1998. GDP per capita (PPP) increased from \$6,758 in 1999 to \$14,692 in 2007. The rapid growth had an impact on the population's real incomes and household consumption. Poverty rate was declining, but income differentiation was on the rise. All major fiscal and monetary indicators exhibited a sustained growth. Positive shifts took place in the tax, fiscal, corporate, labor and land legislation.

The inflow of foreign currency contributed to a dramatic reduction of public external debt. Yet, whereas prior to 2007 the external debt burden relative to GDP declined, afterwards it started to grow, with public debt exceeding US\$500 billion in 2007. That greatly increased Russia's dependence on fluctuation in the global financial markets. At the same time, inflows of foreign currency and the consequent strengthening of the ruble, both in nominal and real terms, have reduced the competitiveness of domestic producers and hindered the diversification of manufacturing. In spite of improving macroeconomic indicators, political and legal institutions recorded a setback, which contributed to the deterioration of Russia's investment climate and discouraged FDI. By 2008, Russia's performance worsened compared to 2003 according to the World Bank Governance Indicators of Government Effectiveness and Regulatory Quality. Russia did not make any significant progress according to indicators for the Rule of Law and Control of Corruption.

The rapid economic growth of 2000-2007 was determined, to a substantial degree, by the situation on the oil market. The growth in oil prices that had started in 1999 did not stop throughout the entire pre-crisis period.

In spite of rapid economic growth prior to the crisis, the Russian economy continued to experience serious distortions and imbalances that challenged long-term economic development, including:

- high dependence of the economy on raw materials exports (in 1999, the proportion of energy products in Russian exports amounted to 44%, in 2007 it rose to 62%); overall raw materials exports, including

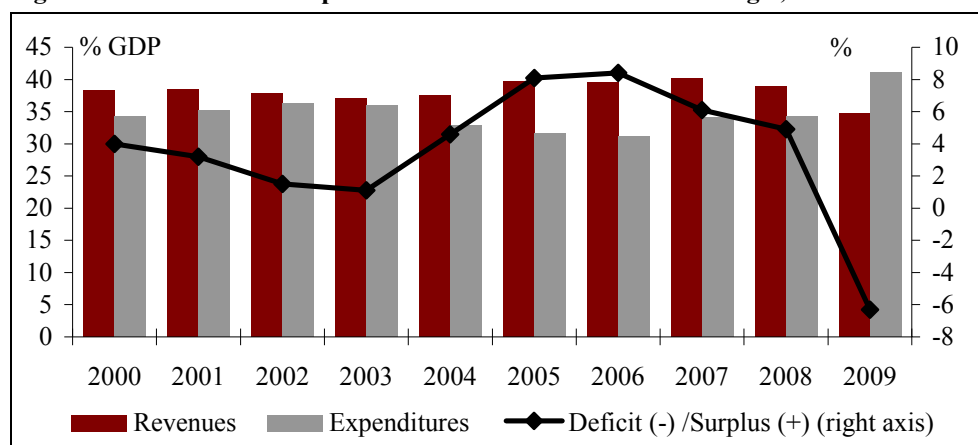
metals, timber and coal accounted for about three fourths of total Russian exports in 2007, while the share of machinery and equipment exports fell from 8.8% in 2000 to 5.6% in 2007;

- high dependence of the federal budget on oil and gas revenues (in 2000-2002, the oil and gas industry provided about a quarter of federal budget revenues; in 2005-2007, this proportion exceeded 40%);
- inadequate competitiveness of Russian goods (while the volume of exports increased by 3.5 times that of imports grew fivefold in 2000-2007);
- low share of FDI in total capital inflows (whereas in 2000, FDI accounted for about 40% of total foreign investments, in 2005-2007 their share decreased to 25-30%).

The issues of economic diversification, enhancing competitiveness, strengthening the institutional environment, and improving the investment climate were formulated as priorities of Russia's economic policy in the early 2000s (the so-called «Gref's program»). However, the period of rapid economic growth in 2000-2007 did not help to solve these problems. Their persistence caused a sharp output decline in response to the financial crisis of 2008-2009, and will affect the conditions of economic recovery in the medium term.

Russia represents a low level of fiscal redistribution, significantly below that of most countries in Europe. This fact determines a relatively low level of public expenditure on social services. However, a rapid increase in fossil fuel prices in 2005-2007 helped budget revenues grow at a faster rate: in 2007, general government (GG) revenues exceeded 40% of GDP (see Fig. 1.1).

**Figure 1.1. Revenues and expenditures of the RF consolidated budget, % GDP**



Sources: RF Ministry of Finance, IET (2008).

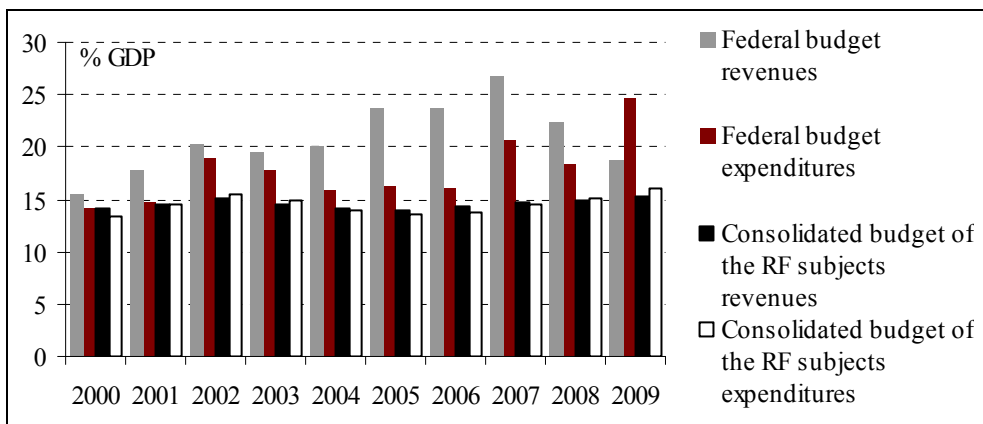
In spite of continued revenue growth, the proportion of GG expenditure to GDP grew only up until 2003, with a consecutive gradual decline thereafter (by 5 p.p. of GDP). A certain reversion of this trend started in 2007, as a result of the increased social obligations, including those associated with national priority projects (see below), new investment programs, and the presidential elections of 2008 (see Fig. 1.1).

The rapid growth in all types of GG revenues was determined, to a large extent, by increasing export prices on oil, gas, nonferrous metals and wood after 1999. They brought more revenue not only directly, through higher receipts from export duties or Mineral tax, but through the growth of aggregate domestic demand and GDP.

Since 2000, there were also serious changes in revenues distribution between the different tiers of the budget system. The size of federal revenues consistently exceeded the sub-federal budgets' revenues, and the gap between them increased from 1.4 p.p. of GDP in 2000 to 8.9 p.p. of GDP in 2007 (see Fig. 1.2).

Whereas revenues at all levels of government (as a fraction of GDP) increased steadily throughout 2000-2007, the expenditure trends have been varied. In 2000-2002, expenditures grew at almost the same rate as revenues. Since 2003, expenditures increased at a slower rate compared to GDP. By 2007, growth in expenditures outpaced growth in revenues. The fiscal balance followed changes in revenue and expenditures, remaining consistently positive prior to 2009.

**Figure 1.2. Revenues and expenditures across various tiers of RF budgetary system, %GDP**



Sources: RF Ministry of Finance, RF Treasury.

Despite the slower growth of GG expenditures compared to revenues, fiscal policy was increasingly pro-cyclical in the years preceding the crisis. While the

medium-term fiscal framework was based on a relatively conservative and prudent target for the non-oil deficit (4.7% of GDP), its actual size was much higher. This reflected growing political pressures to spend a bigger part of the oil wealth on investments and other priority projects, as well as a failure to curb other spending because of the lack of public sector reforms (IMF 2009a).

In these circumstances, considering the volatile nature of revenues growth, and to ensure the country against a future deterioration of the external environment, the government established the Stabilization Fund in 2004 (with a part of the proceeds from oil export duties and the Mineral tax on oil, when the price on Urals grade oil exceeds the benchmark price). The Fund was intended to balance the federal budget if oil prices fell below the threshold, to absorb excess liquidity and to reduce inflationary pressure on the ruble. The favorable external conditions that prevailed in 2004-2007 allowed substantial reserves to accumulate in the Fund. At the same time, the government used the Fund's resources for unplanned expenditures, including the repayment of the Pension Fund deficit. The Stabilization Fund existed in its initial form until February 2008, when it was divided into two parts: the Reserve Fund and National Welfare Fund. The first of these funds cushioned the negative fiscal effects of the financial crisis in 2009 (see Section 1.2).

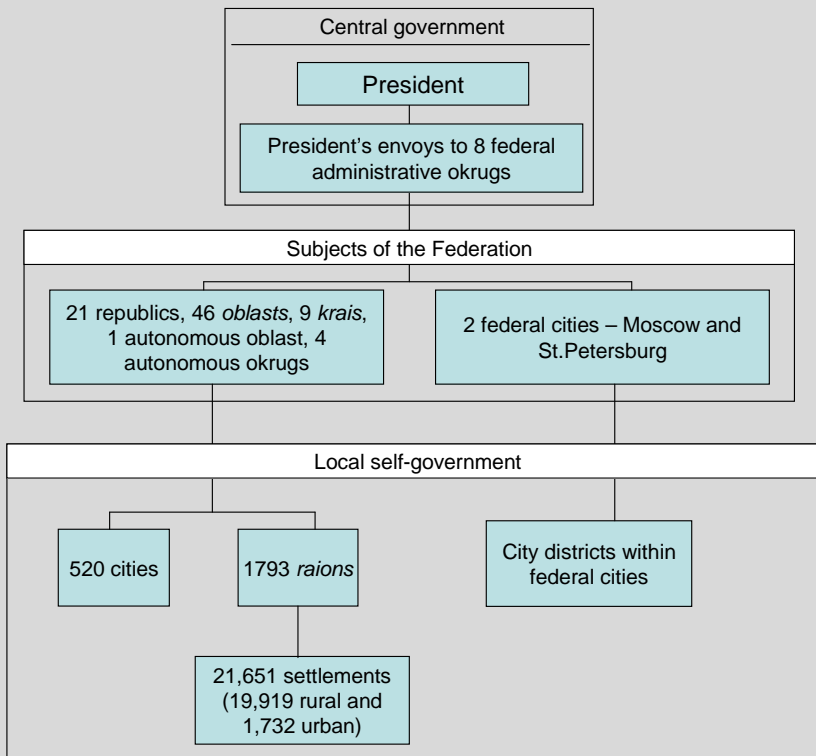
In accordance with the Budget Code, the bulk of responsibilities to finance the social infrastructure sectors is borne by regional and local budgets (see Box 1). For example, in 2006, the largest share of public spending on education was provided by local budgets (52.7% of the respective consolidated budget expenditures), regional budgets accounted for 26.5%, and the federal budget accounted for 20.8% of the total. In health care, the proportion of the federal budget spent accounted for 19.7%, while that of territorial budgets accounted for 80.3% of the total, of which 53.6% was for regional and 26.7% for local budgets. The financial situation of these sectors largely depends on the specifics of the re-distribution of budget resources between various tiers of government.

**Box 1. RF Budget system: Financing education and health care**

Russia's budget system consists of the federal budget, regional budgets and over 24 thousand local budgets (Fig. 1.3). As of January 1, 2011, the regional tier included 83 regions, which are referred to as *subjects of the Federation*. These subjects include 21 republics (native territories), 46 oblasts, 9 krais, 4 autonomous okrugs, 1 autonomous oblast, and the two federal cities of Moscow and St. Petersburg. According to the Constitution, all subjects of the Federation have equal rights, but the powers of autonomous okrugs are limited by federal laws. As of 2007, the regions were subdivided into 520 larger cities (known as *gorodskoi okrugs*) and 1,793 rural areas (municipal *raions*). The raions are further subdivided into 21,651 smaller settlements (called *poselenie*), which include towns and smaller rural areas that combine two or three villages. All local government units are theoretically independent of regional governments in terms of their budgetary and administrative status.

In practice, however, they depend heavily on regional transfers and regional public investment policies.

**Figure 1.3. Russian Federation's federal structure**



Source: De Silva et al. 2009.

Each level of government formulates and approves its own budget without the approval of the higher-level government, and each has its own designated revenue sources and responsibilities. However, the fiscal autonomy of regions and municipalities is narrowly constrained: the total spending of regional and municipal governments depends on higher-level decisions.

The system of revenue assignment is such that almost all taxing powers are concentrated at the federal level, and federal laws determine the primary distribution of revenue sources between regions and municipalities. Each level of government is assigned retention rates of shared federal taxes, and tax sources are labeled as regional or local, although the tax base and the range within which the rates of those taxes can vary are set by the federal government.

The 1993 RF Constitution lists the exclusive responsibilities of the federal government as well as the joint responsibilities of the federal government and the subjects of the Federation. Education and health care functions are included on the list of joint responsibilities without a further breakdown. In practice, and in line with the legislation in force, they are distributed between the government tiers in the following way:

Education	Health care		
<i>Federal government</i>			
Providing higher professional (tertiary) education	Providing high tech specialized medical assistance in federal medical centers		
Financing federal earmarked programs and national priority projects in the field of education	Financing federal earmarked programs and national priority projects in the field of health care		
Scientific research in the field of education	Scientific research in the field of health care		
<i>Regional (subjects' of Federation) governments</i>			
Providing vocational education	Providing health care in general and specialized hospitals (for tuberculosis, cancer, psychiatric care, etc.)		
Providing funds to municipalities for preschool, primary, secondary, and after-school education	Providing medical insurance for the unemployed		
<i>Local (municipal raion) governments</i>			
Providing preschool, primary, and secondary education along with supplementary after-school programs using regional budget subsidies	Providing health care in general hospitals, maternity care, and ambulance services		
<p>The functions of local (poselenie-level) governments do not include any education- or healthcare-related items. In autonomous okrugs, education, health care, and other social functions over which regions have jurisdiction are exercised by the government of the oblast or krai that includes the specific autonomous okrug. The Table below provides a general idea of the current assignment of responsibilities across different levels of government.</p>			
<b>Expenditures on Public Functions by Tier of Government as Percentage of Total Expenditure, 2006</b>			
Government function	Federal budget (%)	Regional budgets (%)	Local budgets (%)
<b>Total outlays</b>	54	29	17
<b>Education</b>	22	26	52
Preschool	1	16	82
Primary and secondary	1	21	78
Vocational	28	69	2
Retraining and continuous	53	44	3
Higher professional	95	5	0
<b>Health care and sports</b>	22	59	19
Health care	13	69	18
Sports and physical fitness	13	58	29
<i>Source: De Silva et al. 2009.</i>			

The revenue capabilities of regional budgets were shaped in accordance with the Tax and Budget Codes. According to IET (2008), a significant degree of asymmetry in the fiscal capacities of individual regions requires a certain concentration of tax revenues in the federal budget. Throughout the pre-crisis period, the proportion of regional budget expenditures in the total spending of consolidated budget remained high. Its relative reduction was observed only in 2006, being associated with a significant increase of federal budget expenditures, including those aimed at funding national projects (see Fig. 1.2). The structure of tax revenues of the RF subjects underwent significant changes in 2000-2007: the number of taxes was reduced while the shares of CIT, PIT and the excise taxes belonging

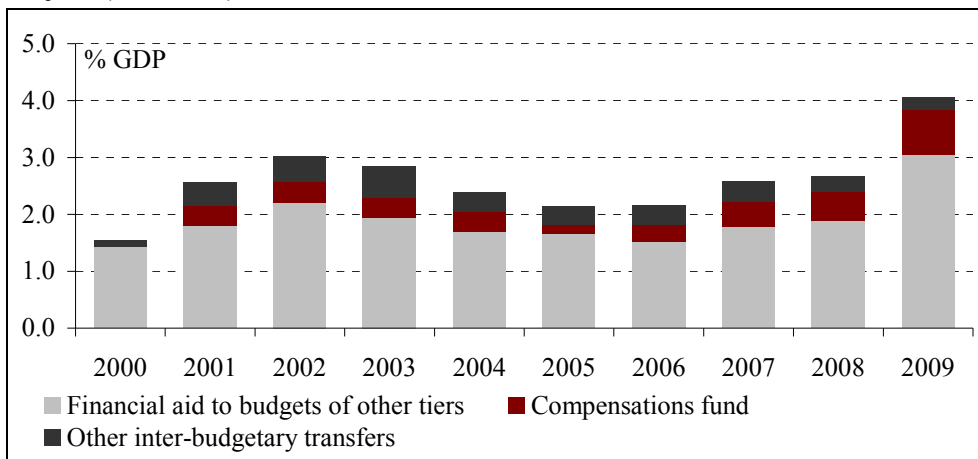


to these budgets increased. Yet these changes were accompanied by a decline in the relative importance of traditional regional taxes. As a result, the share of regional revenues in the RF consolidated budget decreased substantially from 56.6% in 1998 to 30.9% in 2005.

As a consequence, a mismatch between the revenue allocation and expenditure responsibilities at the regional level increased in the period of 1999-2005. Whilst this trend was somewhat corrected in 2006-2007 (due to a reallocation of expenditure commitments in 2006, increasing financial aid to the regions in 2007, and – most importantly – due to a rapid tax base growth from the revenue sources assigned to sub-federal budgets), and the financial autonomy of the regions slightly increased, it has not changed the situation in a fundamental way. It is important to note that this mismatch was larger in social expenditures compared to other spending items: on average, about a half of the regional budgets is spent on social purposes. However, in the majority of regions, this proportion is even higher.

In practical terms, this means that regional and municipal budgets became more dependent on inter-budget transfers. However, whereas 2000-2002 saw a tendency towards a certain increase in financial assistance to the regions, partly due to the compensation of revenue losses of sub-national authorities associated with tax reforms, in 2003-2006 the amount of federal transfers to sub-national budgets even decreased (from 3.03% to 2.17% of GDP). In 2007, this trend was reversed again, when the amount of inter-budget transfers grew to 2.6% of GDP (Fig. 1.4).

**Figure 1.4. Financial aid from the federal budget to consolidated budgets of the RF subjects (% of GDP)**



Sources: RF Ministry of Finance, IET (2008).

In 2005-2007, the system of inter-budget transfers in Russia became additionally influenced by a dramatic reduction in the political autonomy of the regions,

with the role of regional government mostly limited to the execution of federal decisions. The above circumstances negatively influenced the conditions of financing social services at the regional level. In particular, one should mention the increased complexity and reduced transparency of inter-governmental transfers, as well as growing fiscal centralization across all levels of the budget system (federal government – regional governments – municipalities).

On the eve of the crisis, the number of inter-budget transfers increased significantly: over 100 at the beginning of 2008, including 6 types of transfers in the "Grants" subsection, 58 types in the "Subsidies" subsection, and 31 types in that of "Subventions". For 24 items, the size of funding did not exceed RUR 1 billion. This meant that for individual RF subjects, the effective administration of some small transfers became virtually impossible (IET 2010)<sup>3</sup>. Accordingly, the number of co-financing lines also increased up to 58 in 2008. This was accompanied by the growing role of federal ministries in the distribution of federal financial assistance; several inter-budgetary tools started to perform extrinsic functions.

Whereas the financial position of sub-national budgets could generally be characterized as sustainable (considering rapid economic growth and federal financial assistance – see IET, 2008), the funding of certain expenditure commitments, including those in the sphere of public social services, encountered serious difficulties.

An overly centralized fiscal system was a particular problem for municipal budgets: most of them cannot function on a sustainable basis as they have less than 20% of their expenditures financed from their own revenues. This leads, among other things, to a rapid decline of capital costs compared to operating costs and, as a result, to the under-financing of investments. Resolving this problem is impossible without strengthening the revenue basis of local budgets (Sumskaya 2009).

The so-called "priority national projects" were designed to improve the financing of certain socially important spheres such as health care and education at the regional level. Already in 2006, the first year of the projects' implementation, total funding for these sectors from the federal budget (including the resources of the off-budget funds) amounted to 0.7% of GDP. At the regional level, these projects were funded through inter-budget transfers, which resulted in a drastic increase in the number of subsidies to regions.

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<sup>3</sup> In developed countries with a federal form of government, there are usually two channels for the provision of inter-budget transfers: leveling fiscal capacities of regions and support of regional spending on priority areas at socially acceptable levels. Their functioning is ensured by one to three large transfers from the federal budget areas and by 3 to 15 smaller transfers.

The implementation of national projects<sup>4</sup>, with funding priorities determined and financed directly from the federal budget, made it difficult to identify the actual regional and local needs. For example, one region might require an increase in the salaries of general practitioners, while another may need more medical specialists or the construction of a specialized health care center. In addition, as funding the areas selected for national projects was primarily a responsibility of regional governments, the implementation of these projects meant not only an increased number of intergovernmental transfers, but also additional expenditure mandates. For example, in many cases the acquisition of costly high-tech medical equipment was not accompanied by follow-up funding for skilled personnel who could operate or maintain this equipment, for the acquisition of consumables and spare parts, etc. Similarly, transfers for the acquisition of computers for local schools often did not provide for a continuous internet connection or for computer maintenance. These and similar problems resulted in extra expenditures for the regional budgets (IET 2008).

Major *developments* in public finance were related to the implementation of *tax reform*, which was aimed at lowering the tax burden on enterprises, strengthening the importance of the resource sector as the primary source of tax revenues, as well as the simplification of small business taxation. In 2002, the CIT tax rate was reduced from 35% to 24%. The unified social tax (UST)<sup>5</sup> replaced insurance contributions to extra-budgetary funds, and although its rate was set a rather high level (26%), it encouraged entrepreneurs to reduce out-of-pocket payments. The Mineral tax was made dependent on the world market prices, which contributed substantially to the growth in budget revenues. The tax rates in the simplified taxation system were also significantly reduced.

Starting in 2001, a flat PIT rate was introduced and set at 13%, leading to more budget revenues from the hitherto shadow incomes. In addition, in 2001, a tax on housing stock and social and cultural institutions was abolished.

At the same time, the introduction of a transport tax instead of taxes on the use of highways and on vehicle owners, and the elimination of a tax on foreign currency purchases contributed to a considerable reduction of regional budget revenues. On the other hand, the modification of revenue sharing schemes between the federal and regional budgets with regard to excise tax on alcohol and oil products has

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<sup>4</sup> The four Priority National Projects (PNP) included: PNP “Education” (achieving a high quality of education and skilled personnel training); PNP “Health” (improvement of the quality of medical services); PNP “Accessible and comfortable housing for Russian citizens”, and PNP “Development of agro-industrial complex”(reduction of dependency on food imports by raising the efficiency of domestic agriculture).

<sup>5</sup> Canceled from January 1<sup>st</sup>, 2011.

somewhat stabilized the situation. In 2004, the sales tax was abolished, but regional budgets were compensated by an increase in the regional share in CIT.

In parallel with changes in tax legislation, certain measures to improve tax administration were also initiated. For example, in 2003 a one-stop principle was introduced for registering a new business in the tax office. Yet fiscal performance remained severely hindered by widespread corruption practices, by over-complicated reporting requirements which created considerable obstacles for small business development, etc. Overall, despite the contradictory results of the tax reform, it resulted in a functional (albeit imperfect) tax system.

The importance of measures aimed at improving the efficiency of public expenditures, primarily an introduction of a performance-oriented budgeting system, has been articulated at all administrative levels starting from 2004, as well as in regular national socio-economic development programs. Still, up to the present time, its implementation is limited to the analytical and monitoring stages of planning and assessment of efficiency of budget expenditures. This work has been going on at the levels of the federal budget and several RF subjects, but it has not yet become a constituent part of the budgetary process.

The 2007 changes introduced to the RF Budget Code envisaged moving to a three-year program-oriented budget planning. Besides, they attempted to increase the autonomy of sub-federal budgets, and provide a more clear delimitation of responsibility between different tiers of the budgetary system. Regional and local budgets were given the right to choose among the instruments of budgetary planning, to shape budgetary classification, etc.

However, the reform of local self-government that was developed in the beginning of the 2000's and was planned to be implemented step-by-step starting in 2006, was not completed during the pre-crisis period as a result of numerous collisions and mismatches with the actual model of federalism currently functioning in Russia.

To enhance public investment growth, new organizational structures named "development institutions" have been established since 2005. These entities were meant to create conditions for generating high technology and to support initiatives within the entrepreneurial sector. By their organizational form, they are either state corporations (Vnesheconombank, Rosnano Corporation, etc.) or open joint stock companies (Rosselhozbank, JSC "Russian venture company", etc.), or the RF investment funds; each of them received considerable support from the federal budget, primarily in the form of shares in their capital stock.

## 1.2. Fiscal performance during the crisis

### 1.2.1. Macroeconomic developments during the crisis

The development of the Russian economy in 2009-2010 and its medium-term macroeconomic perspective were determined by the following processes:

- reaction of the economy to changes in external conditions, including the drop in world commodity prices at the end of 2008 and in the beginning of 2009, followed by their partial recovery by mid-2009 (average annual world prices for crude oil declined from \$96 per barrel in 2008 to \$56-58 per barrel in 2009; in 2010, prices further recovered to \$70-80 per barrel);
- correction of the overheated labor, loan and real estate markets;
- overcoming the consequences of the temporary balance of payments crisis at the end of 2008 and in early 2009 (Abramova et al. 2009).

The GDP decrease started at the end of 2008 (- 0.4% negative growth in m/m terms was registered in October 2008), and the overall Q4 results saw almost a 6% GDP decrease. In 2009, after a deep output decline in the first half of the year, the economy demonstrated signs of stabilization and recovery by the end of the year. Overall Russia recorded a considerable deterioration of its main socio-economic indicators, including a GDP decrease by 7.9 %. According to 2010 projections, the recovery was to be moderate.

Since November 2008, the government introduced a broad set of anti-crisis measures, which increased the government's control over the economy. In the autumn of 2008, the anti-crisis measures were more of a "pin-point response" character and required largely the use of "manual control" mechanisms. The comprehensive government anti-crisis program was developed only by March 2009 (RF Government 2009).

The total amount of financial resources involved in the anti-crisis measures in 2008-2009 (as of the beginning of 2010) reached RUR 3528.4 bn (8.5% GDP 2008): 61.2% of this amount was financed from the federal budget, and 38.8% came from extra-budgetary (quasi-budgetary) sources. The main bulk of resources (59.5% of the total) was directed to financing "***Measures on securing the financial stability of the economy***". In particular, they involved subsidies, subventions and budget loans aimed at balancing regional budgets (10.3% of the total anti-crisis resources). 59% of their financing came from extra-budgetary (quasi-budgetary) sources. 49.2% of total anti-crisis resources was channeled to combating liquidity shortages, recapitalizing the largest banks, assisting banks and corpo-

rations in repayment of their external corporate debts, as well as to regions to get their budgets balanced. The government support to the banking system was exercised by means of boosting the largest banks' capital and providing liquidity in the form of subordinated loans.

The second most important area of anti-crisis measures (21.3% of the total amount of anti-crisis resources) was aimed at the **support of the industrial and technological sectors**. These measures were financed from the federal budget by 80% and focused on protecting corporations from bankruptcy with the help of direct budget aid, government guarantees and the provision of tax benefits. Additional financing from the federal budget was exercised by means of granting subsidies and subventions to support individual industries – primarily the military-industrial complex, the aircraft industry, motor vehicles manufacturing, shipbuilding, as well as selected agricultural producers. In addition, the government employed a public procurement mechanism that was used e.g. for the procurement of motor vehicles for the federal and territorial government agencies (IET 2010).

Measures related to the **support of social protection, state social guaranties and employment** accounted for 19,2% of the total amount of additional financial resources and were entirely financed from the federal budget. These measures included: support to the labor market and assistance to employment measures, an increase of unemployment benefits, permission to use the “maternity allowance” to improve housing conditions, procurement of housing for veterans, and co-financing of special programs in the housing and utilities sector, namely the restructuring of private individuals' mortgage arrears. 65% of anti-crisis resources envisaged for social-related measures were used for transfers to extra-budgetary funds and the anti-crisis fund. This funding was used for the reinforcement of regional and local budgets to support their social anti-crisis functions and for the support of the labor market. Besides, additional financial support was provided to the CMI system through increasing transfers to those CMI territorial funds that experienced a significant reduction in revenues.

The unprecedented scale of public expenditures on anti-crisis programs resulted in a major increase of the GG expenditures (by some 6.9 p.p. GDP as compared to 2008), primarily due to the growth of federal budget expenditures (by 6.5 p.p. GDP). The gap between revenues and expenditures widened, and 2009 became the first year in the past decade when the GG deficit was reported to account for 6.3% of GDP. On the other hand, part of the anti-crisis measures made it possible to keep households real disposal incomes intact through an increase in public pensions and other social guaranties which softened the negative effects of the decrease in real wages.

The resources of the Reserve Fund made financing the GG deficit possible in 2009. As a result, the accumulated stock of the Fund decreased from 9.8% GDP at the end of 2008 to 4.7% GDP at the end of 2009. The recession at the end 2008 and in early 2009 resulted in a sharp decrease in GG revenues. In 2009, GG revenues fell by 4.2 p.p. of GDP, primarily due to a considerable reduction in federal budget revenues (by 3.6 p.p. of GDP) (see Figs. 2.1 and 2.2). The revenues decline at the regional level was more moderate. Still, the crisis caused a considerable increase in the number of deficit-ridden regional budgets: from 44 in 2008 to 62 in 2009.

### **1.2.2. Budget revenue performance**

The crisis radically changed the structure of GG revenues. Not surprisingly, it was the revenues from taxes and levies that directly depend on the prices of energy resources and demand for Russian exports (namely, the revenues from Mineral Tax) and revenues from foreign economic activity that plunged most drastically – by 1.3 and 1.7 p.p. of GDP respectively. At the same time, PIT, VAT, excise tax and UST shares in GDP increased.

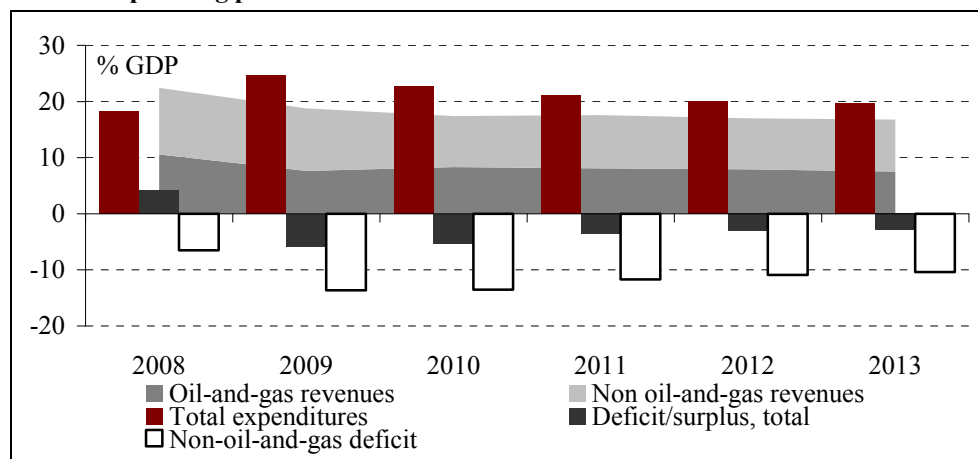
The overall GG tax revenues decreased by 3.4 p.p. of GDP. Declining revenues, primarily in the oil and gas sector, and the general slump of business activity in other industries have resulted in a plunge of CIT revenues. In 2009, the GG revenues from this tax accounted for 3.2% of GDP, compared to 6% of GDP in 2008. As of early 2010, most enterprises found themselves in dire financial straits, while the government stimulus package was delivered only to a limited number of the most critical, backbone corporations and fell short of securing a mass positive effect. The reduction of CIT revenues in 2009 can also be attributed to a decrease in the CIT tax rate from 24% to 20% since January 1, 2009. Besides, 2009 saw several amendments to Art. 25 of the Tax Code (related to CIT administering) which also reduced the tax base.

The principal causes behind the absolute and relative contraction of federal budget revenues in 2009 as compared to 2008, were: 1) a fall in the contribution of oil and gas related revenues (by 3% of GDP), and 2) a reduction in non-oil and non-gas revenues, resulting from the recession (see Fig. 1.5).

The financial and economic crisis brought considerable changes into the structure of revenues at all levels of the RF budgetary system. All levels experienced a considerable decrease of the CIT share in total revenues, and it was especially tangible at the regional level (a 9.3 p.p. decrease from 28.3% to 18% in 2009); at the same time, the relative share of PIT within regional budgets tended to expand – from 26.9% to 28.1%. The share of VAT in the federal budget obtained from sales of goods and services within the country also increased. The roles of social taxes

and contributions went up as well – by 2.8 p.p. in the consolidated budget and by 1.4 p.p. in the federal budget.

**Figure 1.5. Major parameters of the RF Federal Budget for 2008–2010 and for the 2011–2013 planning period**



Sources: RF Ministry of Finance, RF Government (2010b), IET calculations.

The relative decline in CIT significance was replaced at the regional level by an increase in excise taxes on goods and services produced within the country, real estate taxes, and revenues from paid services. The role of federal transfers increased from 19.4% to 27.3% of the total revenues of regional budgets. The grants to the regional and municipal budgets recorded growth as they went from 6.3% of total regional budget revenues in 2008 to 9.85% in 2009; grants for leveling budget capacity went from 5.3% to 6.3% and inter-budgetary subsidies went from 7.0% to 9.0% of GDP.

The revenue structure of the state extra-budgetary funds (SEBF) and territorial extra-budgetary funds (TEBF) also experienced considerable changes. The share of inter-budgetary transfers in the overall revenues of SEBF increased substantially (from 49.1% in 2008 to 56.1% in 2009), while the total amount of these transfers increased by 33%. The proportion of insurance contributions shrank from 40.2% to 34.9%, while the total amount of these contributions increased by 1.3%. Thus the relative role of UST contributions in the overall amount of SEBF revenues declined, although in nominal terms the amounts collected did not decrease.

Thus transfers from the federal budget formed a cushion thanks to which regions were able to survive the peak of the economic crisis. At the same time, the regions became even more dependent on federal decisions (as the trend for centralization described in section 1.1 strengthened).



The situation at the *regional level* appeared to be diversified. Compared to 2008, almost one fourth of the regions experienced a decrease in their budget revenues. These were primarily highly developed regions – federal cities and regions producing oil, natural gas and metallurgical products highly dependent on CIT revenues. Almost 50 regional budgets recorded a surplus, mostly thanks to federal transfers. Moreover, in some of the less developed and remote regions, budget revenues increased dramatically: 1.6-1.7 times in the Chechen Republic and in Chukotka, 1.4 times in Kamchatka, and 1.3 times in Adygeya (Zubarevich 2010). As a result, according to the Ministry of Finance, the percentage of non-repayable federal transfers in the budgets of 32 regions exceeded 40%, including 70% in the Chechen Republic, Ingushetia, Dagestan, Tyva, and the Altai Republic (RF Ministry of Finance 2010)

With a dramatic decline in tax and non-tax revenues in 2009, several regions have renewed active borrowing. Given the deterioration of financial market conditions and high interest rates on commercial credits, budgetary loans became one of the key sources of borrowing for the regional budgets. Since 2009, budgetary loans have become available with a maturity of up to three years. In 2009, the federal government provided such loans for the total sum of RUR 170 bn (compared to RUR 20 bn in 2008). Budgetary loans were disbursed to 80 RF subjects. As a result, they accounted for almost 8% of the federal aid to the regions. Together with grants to balance the budget, they constituted about 20% of the overall resources transferred to the regional budgets (compared to 5.2% in 2008) (IET 2010). Besides, the growing difficulties in financing recurrent budgetary expenses forced the regional authorities to borrow on the credit market. As of January 1<sup>st</sup>, 2010, the total amount in loans obtained by regions from financial institutions was RUR 304.6 bn (RF Ministry of Finance 2010).

The crisis period changed the relative importance of individual financial instruments used to support the regions (see Fig. 1.4). The total volume of financial resources the federal budget transferred to RF subjects increased by 34% in 2009 and reached 4.06% GDP. The most rapid growth was demonstrated in the case of subventions (up 71%) and budget loans that increased more than tenfold compared to 2008. Transfers grew by 36% and subsidies increased by 12%. In contrast, the volume of other extra-budgetary transfers shrank by 30%. The share of subventions in the total amount of federal transfers grew from 14% in 2008 to 19.2% in 2009. The proportion of grants was on the rise, too, – from 36% to 39%. In contrast, the proportion of subsidies decreased from 40 to 36%, while the share of other interbudgetary transfers plunged by 4.6 p.p., to 5.9% of the total amount of transfers (IET 2010).

The growth of regional budget dependence on federal transfers was justified in the crisis period, but it resulted in an even greater sophistication of the transfers'

structure. The current budget for 2010-2012 includes 87 different kinds of transfers, including four types of grants, 43 types of subsidies (including federal target programs and subprograms), 21 types of subventions and 19 listed as other inter-budgetary transfers (IET 2010). Clearly, these numbers are excessive from the viewpoint of effective and transparent administration.

**Table 1.1. Priorities of federal financing of anti-crisis measures at the regional level<sup>1</sup>**

	Proportion in the overall amount of federal assistance to the regions, %		Share of individual anti-crisis measures in overall anti-crisis transfers, % (2009)	Nominal increase in 2009, 2008=100
	2008	2009		
1. Anti-crisis priorities, total	25.3	46.8	100.0	356.9
1.1. On regional budgets' balancing	4.9	19.3	41.3	546.0
1.1.1. Grants (transfers) for budget balancing	3.4	10.2	21.9	416.8
1.1.2. Budgetary loans	1.5	9.1	19.4	839.0
1.2. Labor market support	3.0	7.0	15.0	321.1
1.2.1. Subsidies for additional measures to soften tension on the labor market	0.0	1.9	4.1	-
1.2.2. Subsidies for support of SMEs, including agricultural (farmer) enterprises	0.3	1.0	2.1	524.8
1.2.3. Subventions for supporting employment, including administration expenses	2.8	4.1	8.8	206.8
1.3. Support for the housing market*	6.6	10.1	21.5	211.0
1.4. Support of the national machine building industry**	0.0	1.1	2.2	-
1.5. Support of agricultural production	5.4	4.8	10.3	123.2
1.6. Support to CMI regional program insofar as it concerns the basic CMI program***	5.27	5.54	11.9	145.9

<sup>1</sup> Based on the results of survey of behavior of 6 regions during the crisis.

\* Subventions on provision of housing to specific categories of the population envisaged by Federal Law № 5-FZ of September 12, 1995, Federal Law № FZ-181 of November 24, 1995, and by other legislative acts

\*\* Subsidies to the regional budgets for the purchase of motor vehicles and municipal equipment.

\*\*\* In 2008 - grants (transfers) to the territorial CMI funds for territorial CMI programs implemented within the framework of basic CMI programs; in 2009 - the sum of the above grants (transfers) and resources from the CMI Federal fund transferred to the territorial CMI budgets for the implementation of the territorial programs for the provision of State guarantees of free medical services to RF citizens.

*Source:* IET & IISP (2010).

Despite a very diversified structure of transfers, they turned out to be ill-suited for facing the challenges posed by the financial crisis (see Table 1.1). The inter-regional distribution of transfers was administered in a discretionary manner depending on the strength of lobbying pressures or taking into consideration political factors. For example, in 2009, budget balancing grants (the most rapidly growing transfer category which experienced a fourfold increase in 2009 and played a visible role in the regional budgets – 3% of the overall revenues) were rather channeled to those regions that were not seriously affected by the crisis and did not experience a significant reduction of industrial production and tax revenues. This extra financing was rather intended to meet other goals, e.g. organization of a special economic zone in Kaliningrad, or the construction of infrastructural objects for the 2014 APEC summit in Vladivostok, etc. Subsidies to federal targeted programs did not perform anti-crisis functions either, and the shares of these subsidies in respective regional budgets were the highest in the regions otherwise enjoying high federal support – Chechnya (26%), the Primorie Territory (21%), and Kaliningrad oblast (14%). Several other regions obtained large transfers as compensation payments for mergers with autonomous regions (Krasnoyarsk and Kamchatka Territories), or compensations for a dramatic reduction in tax revenues after the withdrawal of large corporations (Chukotka) (Zubarevich 2010).

Transfers designed to explicitly address crisis-related challenges, e.g. support to SMEs, did not really meet their stated goal due to their small amounts (on average 0.3% of regional budget revenues). Among various types of federal transfers, the real anti-crisis functions were performed only by transfers directly aimed at employment protection and other support measures for the regional labor markets, as well as by transfers related to various kinds of social benefits (Zubarevich 2010). Thus, as can be seen from Table 1.1, at most 7% to 15% of total federal assistance to the regions performed some anti-crisis functions.

On the whole, the inter-budgetary regulative system failed to address the crisis-related challenges at the regional level and effectively supplement resource shortages in specific spheres of financing in view of declining regional revenues. An important lesson from the 2009 experience is that the inter-budgetary regulations continued their pro-cyclic features of the period of economic growth and thus

failed to provide guarantees of equal rights of citizens for access to services of a standard quality (Kurlyandskaya 2009).

### **1.2.3. Major changes in the expenditure structure**

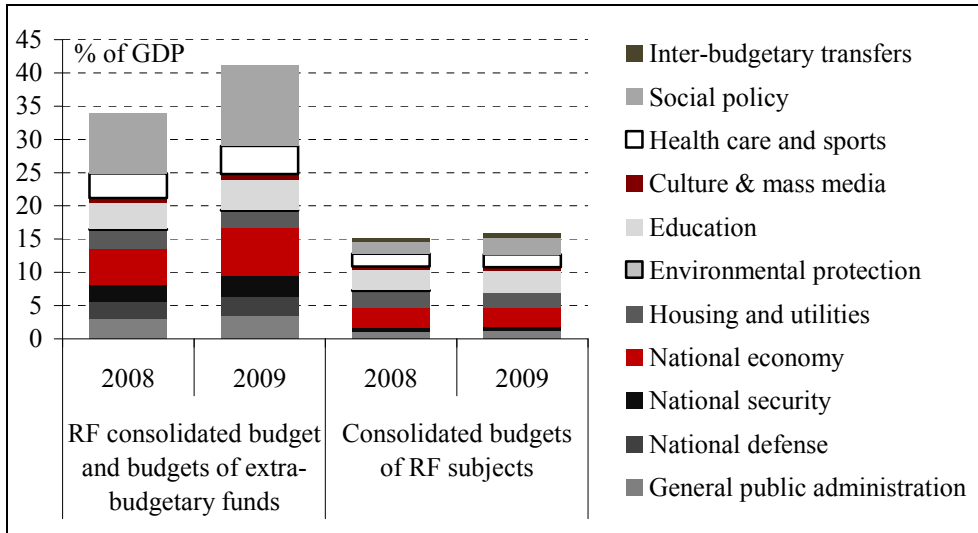
Despite a significant fall in budget revenues in 2009, the RF Government implemented a “counter-cyclical” fiscal policy, ensuring virtually no expenditure cutbacks and initiating additional expenditures to execute anti-crisis measures (see Section 1.2.1). The major reason for a substantial increase in federal budget expenditures, as well as in the budgets of government extra-budgetary funds, was the need to mitigate the adverse effects of the global financial crisis. As a result, expenditures at all levels of the budgetary system expanded relative to GDP. Given the dramatic decline of GDP, total consolidated budget expenditures increased from 34.2% of GDP in 2008 to 41.1% in 2009, federal budget expenditures grew by 6.6 p.p. of GDP – from 18.3% to 24.7%, and consolidated regional budgets gained an additional 1 p.p. of GDP (see Figs. 2.1 and 2.2). The expenditures of the State EBFs also grew considerably – by 2.2 p.p. of GDP, from 6.99% of GDP in 2008 to 9.18% of GDP in 2009.

Federal budget expenditures demonstrated the most rapid growth both in nominal and real terms (24.5%), with intra-budget transfers being the most rapidly growing item (31% in real terms). As a result, the proportion of intra-budget transfers in the overall federal budget expenditures reached 37.2% in 2009. The nominal growth of the consolidated regional expenditures was rather moderate; in real terms, the expenditures contracted by 2.4%. State EBF expenditures increased in real terms by 20.8%, while the real expenditures of the territorial EBFs grew by only 1.2%.

As a result, the functional structure of expenditures also displayed notable modifications, with investment expenditures being cut vs. increased financial support for households and domestic business. The structure of expenditures by function relative to GDP underwent considerable changes (see Fig. 1.6). Within the consolidated budget (GG), the “Social policy” item accounted for 12.1% of GDP vs. 9.1% of GDP in 2008, with a considerable shift towards State EBFs (from 6.54% GDP to 8.80% GDP) and consolidated regional budgets (from 1.8% GDP to 2.5% GDP). A considerable increase was registered for the item “National economy” – up to 7.1% of GDP in 2009 vs. 5.4% of GDP in 2008. Expenditures on education and health care also went up – by 0.6 p.p. and 0.5 p.p. respectively; this was primarily a result of GDP decline since the increase in these expenditures in real terms (using GDP deflator) was moderate – 4.6% for education and 4.3% for health and sports. In the case of health care expenditures, the growing role of

the federal budget was supplemented by increased funding from territorial EBFs (from 1.19% of GDP in 2008 to 1.39% of GDP in 2009).

**Figure 1.6. Structure of expenditures in RF budgetary system by tier in 2008-2009, % of GDP**



Sources: RF Treasury, authors' calculations.

Different trends of expenditure growth among the various tiers of the budgetary system in 2009 resulted in changes in the GG expenditure structure. The share of regional budget expenditures declined from 42.6% in 2008 to 37.2% in 2009. The growing centralization of resources resulted in increasing shares of the federal budget (from 34.6% to 37.8%) and the budgets of the government EBFs (from 19.3% to 21.5%) in GG. The crisis-induced centralization also increased the role of the federal budget in education (from 21.3 to 23.4%) and health (from 18 to 21.3%) funding, with a corresponding dramatic decline of the role of regional budgets that bear the major burden of responsibility for financing the constitutional guarantees – by 2.1 p.p. for education and by 4.8 p.p. for health care and sports. The proportion of the territorial government EBFs in the funding of health care and sports has also increased (from 31.8% in 2008 to 32.8% in 2009); this was a result of the greater involvement of these funds in implementing the state program for free guaranteed medical services.

The structure of expenditures of the regional consolidated budgets also underwent substantial changes in 2009. Although the total size of regional expenditures remained practically unchanged, the relative importance of several items increased substantially. The latter included: 1) “Social policy” (e.g., increase in expenditures

on implementation of the government employment policy funded with federal subventions); 2) “Inter-budgetary transfers” (mostly transfers to the CMI Territorial Funds); 3) “General public administration matters” (servicing public and municipal debts fueled by intense subnational borrowings); and 4) “Education”.

The greatest relative decrease occurred in the “Housing and utilities sector” and “National economy”, with expenditures on the former cut in nominal terms by 16.2%, and with those on national economy by 8% (comparing to 2008). The cuts in the housing and utilities sector occurred largely due a 23% fall in capital investment. In general, it was capital expenditures that were trimmed most extensively, while expenditures on servicing public and municipal debts, as well as expenditures on items that were (co-) financed from the federal budget demonstrated a substantial increase.

The situation of regional budgets was very differentiated. In late 2008 and in 2009 some regions intentionally refused to cut down budget expenditures and failed to form the necessary financial reserves. In some regions this was caused by suspicions that the federal government would provide financial assistance only to those regions that had a cash gap (i.e., no financial reserves). Another obstacle to expenditure adjustment was related to the dominance of “hard items”, mainly of a social character, in the regional expenditures.

According to the Ministry of Finance data, a growth in budget expenditures was registered in 65 regions. Expenditures grew most rapidly in Ingushetia (by 70.6%), Dagestan (by 36.2%), Adygeia (by 33.4%), the Primorie Territory (by 33.0%), the Altai Republic (by 25.4%), and Tver oblast (by 24.8%). In many cases, expenditure growth was a direct result of spending resources received via the inter-budgetary transfer channels. On the other hand, 18 regions registered an expenditure reduction which was primarily related to the reduction of business and financial activities. The most dramatic reduction was recorded in the Khanty-Mansi Autonomous Okrug (by 19.0%), Tyumen oblast, (by 17.2%), Chelyabinsk oblast (by 16.4%), Moscow (by 12.2%), St. Petersburg (by 9.3%), and Sverdlovsk oblast (by 8.5%).

In 2009, expenditures on wages grew faster (10%) than the aggregate expenditures of consolidated regional budgets. The most rapid growth of wage expenditures (including tax charges) as compared to 2008 was recorded in Ingushetia (35.0%), Moscow (29.0%), Rostov oblast (26.8%), Stavropol Territory (25.4%), Saratov oblast (22.3%) and Astrakhan oblast (21.8%). There were only a few regions where these expenditures declined: in Kaliningrad oblast (by 8.2%), Irkutsk oblast (by 7.3%), Tatarstan (5.7%), Tyumen oblast (4.7%), the Khanty-Mansi Autonomous Okrug (3.9%), and Vologda oblast (by 3.6%) (Ministry of Finance 2010).

Expenditures on wages constituted about 30% of the overall regional budget expenditures. Contrary to expectations, in 2009 there were no signs of wage arrears growth, either at the nationwide or the regional levels. Moreover, the arrears in 2009 decreased and constituted 76.3% (RUR 3.6 bn as of 1.01.2010) of the 2008 stock. The bulk of wage arrears were concentrated in manufacturing, while the arrears in the “education” and “healthcare and social services” sectors were negligible – RUR 8.5 and 8.3 mln accordingly. The total number of employed persons affected by wage arrears in the whole country amounted to about 164.5 thousand (as of 1.01.2010), while in the education sector the respective figure was about 1.8 thousand and in healthcare and social services – just about 1 thousand. The average sum of arrears per person affected in education was RUR 4.8 thousand (36% of an average wage in education), and in healthcare and social services it amounted to RUR 9.2 thousand (62% of an average wage in the sector). For comparison, the respective average at the country level was RUR 21 thousand (113% of an average wage). 55% of wage arrears in education were caused by delays of transfers from the upper-level budgets. The respective indicator for the health and social services sphere was 24.9%. The rest of the arrears resulted from a shortage of resources in mother organizations.

On the whole, the crisis brought about a considerable increase in the number of deficit-ridden regional budgets: from 44 in 2008 to 62 in 2009. As of January 1st, 2010, the overall deficit of regional budgets reached RUR 329.3 bn (0.84% GDP). 84% of the overall deficit was the responsibility of the regional budgets themselves and the rest – of the local budget entities. A major part of the deficit (44%, or RUR 145.7 bn) was concentrated in the city of Moscow. Another 20% of the deficit was distributed between five highly developed regions (the Krasnoyarsk Territory, the Nizhni Novgorod oblast, the Moscow oblast, the Samara oblast and Tatarstan), and a further 15% – between seven regions (the Chechen Republic, the Tyumen oblast, the Saratov oblast, the Stavropol Territory, the Vologda oblast, the Arkhangelsk oblast and St. Petersburg) (Ministry of Finance 2010).

Regional and local budget deficits resulted in an increase of indebtedness that, given the limited amount of their own budget resources, threatened the sustainability of regional budgets. In the course of 2009, the volume of the debt of the RF subjects increased by 48% and reached (as of January 1<sup>st</sup>, 2010) RUR 890.5 bn (2.3% GDP). The size of the local budgets’ debt increased during the same time period by 27% and amounted to RUR 134.9 bn (0.35% GDP). (Ministry of Finance 2010). Thus, indebtedness can become a serious problem in the near future, since in 2009 in about one third of RF regions, expenditures exceeded budget revenues by 30%. To avoid a default on the debt obligations of the Moscow oblast in 2009, the federal budget was compelled to perform a chain of balancing transfers.

Yet, arbitrary ad hoc decisions cannot be regarded as an appropriate solution for this problem in many other regions (Zubarevich 2010).

The assessment performed by the RF Ministry of Regional Development in 2010 demonstrated that inefficient spending persists across virtually all budget items and levels of government due to the slow pace of institutional and structural reforms. In 2009, inefficient expenditures in public administration, health care, education and utilities and housing totaled RUR 415 bn, 3% more than in 2008. The highest level of inefficient spending was reported in education (RUR 142 bn, or 34% of the total); in health care, public administration and housing it was close to 20%. This assessment is corroborated by the results of public opinion polls that demonstrated a declining public satisfaction with regional authorities' activities in education and public administration, and a low (albeit slightly growing) satisfaction with health care and housing and utilities (RF Ministry of Regional Development 2010).

#### **1.2.4. Major changes in public finance management**

In late 2008 and 2009, a series of measures aimed at mitigating the impact of the crisis on sub-national budgets was initiated by the Ministry of Finance. These measures focused primarily on: (1) containing the size of regional budget expenditures; (2) stimulating the growth of sub-national budget revenues; (3) loosening the restrictions for borrowing and deficit growth; (4) providing new focally directed lines of anti-crisis financing.

At the end of 2008, the RF Ministry of Finance (2008) recommended that regions plan 2009 budget expenditures based on the forecast of smaller tax revenues (from CIT and payroll taxes). It was also recommended that surplus revenues received in 2008 be kept as a reserve for 2009, instead of financing current expenditures, to avoid raising salaries, etc.

Also, at the end of 2008, amendments were made to a number of articles in the Tax and Budget Codes. First, the CIT rate was reduced from 24% to 20% since January 1, 2009, but this reduction was carried out exclusively at the expense of the federal budget component. Moreover, an additional 0.5% of the CIT rate was transferred to the regional budgets. As a result, only the equivalent of 2% of the CIT rate is now transferred to the federal budget (previously 6.5%), while 18% is transferred to regional budgets (previously 17.5%). Meanwhile, the bottom threshold for the regional CIT rate has remained unchanged (13.5%), which effectively increased the maximum level of the CIT regional benefit from 4% to 4.5% (Federal law № 305-FZ, 2008).



Amendments were also introduced to Art. 56 of the Budget Code that defined the tax revenues of regional budgets (Federal law № 310-FZ, 2008). As of January 1, 2009, revenues from excise taxes on motor gasoline, straight gasoline, diesel fuel and motor oil have been transferred to the regional budgets at the rate of 100% (60% previously).

A few changes were introduced into Budget Code regulations related to budget loans: first, the loan terms were extended from one to three years. Second, the regions of the Far North and equated territories were granted the right to provide budget loans (at the expense of regional budgets) to legal entities for the purchase and delivery of fuel to those subjects. Previously, the right to provide budget loans to legal entities (including foreign legal entities) was the exclusive authority of the Russian Federation, and even then only at the expense of targeted foreign credits (borrowings).

To compensate for a significant reduction in the capacity of regions to attract credit resources, the Law «On the Federal Budget for 2009 and planning period of 2010-2011» increased the total amount of budget loans to regions from the federal budget up to RUR 20 billion in 2009.

In 2009, several amendments were introduced to the Budget Code with the aim of softening the limitations in respect to the size of regional deficits and the total size of regional and municipal public debts (Federal Law № 58-FZ, 2008). Prior to 2008, the size of the budget deficit of any RF subject was limited to 15% of the approved total regional revenues (less subventions). Indeed, this provision was already corrected in 2008 when the RF subjects were granted the right to exceed this limit by the amount of revenues from sales of stock or other forms of participation in capital, as well as by diminishing cash balances of the regional budget. The new amendment allowed RF subjects to exceed this limit by the amount equal to the balance of federal budget loans. In contrast to the previous amendments, the effect of this provision is limited in time, with January 1<sup>st</sup>, 2013 as the deadline. Similarly, local self-governance bodies were allowed to exceed the ceiling of the municipal budget deficit (10%) by the balance of budget loans from the regional budget. In addition, the debt limit of the RF subjects (or municipal entities) was also alleviated: currently; it can exceed the ceiling set by the Budget Code by the size of budget loans attracted from other tiers of the budget system.

Limits on the size of other transfers provided from RF subjects' budgets to local budgets were modified as well. The volume of such transfers may exceed 10% of the aggregate volume of transfers (less subventions) by the amount of subsidies aimed at balancing the local budgets.

In the first half of 2009, in view of tightening budgetary constraints, the Ministry of Finance and the Federal Treasury issued a joint clarification of procedures

for budget balancing at the regional level. It allowed regions to use the surplus balances of subsidies and subventions from the Federal budget to bridge their temporary budget cash gaps in the course of a financial year, provided that it did not result in the growth of accrued expenditures for those expenditure items that should be funded by means of the aforementioned targeted transfers (RF Ministry of Finance & Federal Treasury, 2009).

To ease the crisis-induced tensions on regional labor markets, a new public finance management initiative was introduced in early 2009, namely targeted subsidies from the federal budget to the budgets of the RF subjects (RF Government 2008c).

The subsidies are provided for co-financing regional programs to implement specific measures aimed at combating unemployment and reducing tensions in regional labor markets, including:

- (a) advanced vocational training for employees facing the threat of mass redundancy (introduction of part-time work days, temporary suspension of work, leave without pay, arrangements for the release of employees, etc.);
- (b) public works, temporary employment, and internships so that job seekers can gain experience; aimed at graduates of educational institutions as well as workers facing the threat of mass redundancy;
- (c) targeted support to citizens, including moving to a new job location;
- (d) assistance to small businesses and promotion of self-employment.

The calculation of the subsidy is performed separately for each type using a special formula; 95% of the cost for each co-financed program is funded from the federal budget. In 2009, RUR 43.7 bn was planned to be allocated for such subsidies. During Q1 – Q3 of 2009, RF regions concluded contracts for the implementation of regional programs for RUR 27.7 bn, or 79.8% of the total sum which the regions applied. The total number of program participants was 1,765 thousand from 80.9 thousand enterprises (Federal Labor and Employment Service 2009).

### **1.2.5. Mid-term budget sustainability**

During the 2011-2013 planning period, overall GG revenues are expected to remain almost unchanged in relation to GDP (an increase to 34.8% of GDP in 2011 and then a reduction to 33.2% GDP in 2013). This will be the result of a reduction in federal budget revenues (by 0.6 p.p. GDP), as well as a reduction of the revenues (less inter-budgetary transfers) of the consolidated budgets of RF subjects (by 0.3 p.p. GDP). At the same time, the overall size of public expendi-

tures is due to decline by 3.1 p.p. GDP, from 39.4% in 2010 to 36.3% GDP in 2013. This would be the result of a dramatic drop in federal budget expenditures (by 3.0 p.p. GDP), which is in turn due primarily to a reduction of inter-budgetary transfers (2.4 p.p. GDP), as well as to a decrease in the expenditures of the consolidated budgets of RF subjects (by 2.5 p.p. GDP). Thus, both the revenues and expenditure sides of the federal budget will be subject to radical changes: revenues in relation to GDP are projected to decline to the level of 17.6% in 2011, 17.0% in 2012, and 16.8% in 2013. Accordingly, federal budget expenditures will decrease in 2011 to the level of 21.2% of GDP, and in 2012-2013 – to 20.1% and 19.7% of GDP respectively (see Fig. 1.5).

The projected budget for 2011 and for 2012-2013 is based on the projections of GDP growth at the rate of 4-4.5% during the whole planning period. It relies on the assumption that during this period, the external economic environment and the situation on the world resource and capital markets will remain favorable. It also assumes some reduction of budget dependence on oil and gas revenues. Despite a continued growth in nominal terms, the share of oil-and-gas revenues in GDP will contract from 8.3% of GDP in 2010 to 7.5% of GDP in 2013, while the non-oil-and-gas revenues will increase from 9.1% to 9.9% of GDP. As a result, the non-oil-and-gas deficit of the federal budget is planned to decline from 13.5% of GDP in 2010 to 10.4% of GDP in 2013 (see Fig. 1.5).

In addition, the projected level of oil and gas prices that in the pre-crisis period used to secure the surplus budget balance, will not be able to bridge the gap between the budget revenues and expenditures in the near future because of the expansion of social obligations, the need to finance anti-crisis measures and the decrease in tax revenues due to a drop in production. In a mid-term perspective, the gap between revenues and expenditures will persist, but its size will be reduced. The Ministry of Finance planned to reduce the federal budget deficit to 5.3% GDP in 2010 (at the expected level of oil prices at US\$ 75 per barrel), 3.6% of GDP in 2011, 3.1% of GDP in 2012 and 2.9% of GDP in 2013 (based on the Ministry of Economy forecasts of oil prices growth in 2013 up to US\$ 79 per barrel) (see Fig. 1.5).

Contrary to earlier expectations, the resources of the Reserve Fund will not be exhausted in 2010 and will be partially (RUR 242.3 bn) used to cover the 2011 budget deficit (IET 2010b). To avoid a serious disruption of budget sustainability, government-issued securities are expected to play a major role in financing the budget deficit in the mid-term period. The size of net internal borrowing is planned not to exceed RUR 1,000 bn a year. Although the growth of public debt can negatively affect the budgetary system's sustainability in the long term, in the mid-term, its structure remains safe: a growing portion of it will be the result of borrowing on the internal market (from 11.5% GDP in 2010 to 16.3% GDP in

2013), while foreign debt will remain at the level of 4% GDP. At the same time, debt service expenditures will grow 1.5 times as a result of intensive borrowing. According to the Ministry of Finance estimates, if the Russian economy grows at an annual rate of 4% over the next four years and the budget deficit is kept at the level of 3% of GDP, in 2020 the public debt will increase up to 33% of GDP and federal budget interest expenses will grow up to 3-4% GDP with lending rates at the level of 6-8%.

Revenues from privatization are also planned to be used for the financing of the budget deficit. In 2011, these revenues are expected to amount to RUR 298 bn (0.6% of GDP), with a reduction to RUR 276 bn in 2012 (0.5% of GDP) and an increase to RUR 309.4 bn (0.5% of GDP) in 2013.

As one of the instruments for reducing the federal budget deficit, mid-term budget projections envisage measures aimed at expanding the tax base. The changes in tax and customs legislation planned in the mid-term are due to increase federal budget revenues by 0.6% GDP in 2011, by another 0.7% in 2012, and by 0.9% GDP in 2013. In 2011, a major part of the tax burden increase is planned to come from the growth of social insurance contribution rates (from 26% to 34%). Beyond that, a 60% increase of the Mineral Tax on natural gas production and a growth of excise taxes on tobacco and alcohol are envisaged.

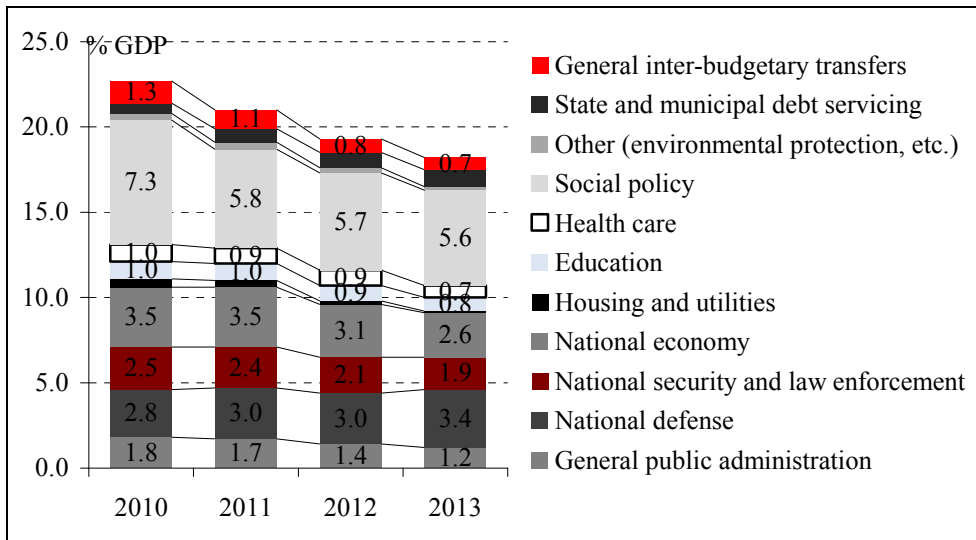
Another strand of policy aimed at strengthening budget sustainability in the mid-term perspective focuses on adjusting federal expenditures. The 2011 budget plans to curtail a considerable part of anti-crisis measures. Still, some will be continued, e.g., labor market support, interest rate subsidies, support of the automobile and aircraft industries and other critical sectors of the economy.

However, the financial obligations of the federal budget remain high relative to GDP, considerably exceeding the respective proportion in 2008. To support budget sustainability in the mid-term period, changes in the expenditure structure are envisaged. The only two items which will expand their respective shares in the federal budget (both in nominal terms and relative to GDP), are “National defense”(from 2.8 to 3.4% GDP) and “State and municipal debt servicing”. The remaining items are projected to lose their positions relative to GDP (see Fig. 1.7).

The most radical expenditure cuts will be in the “Social policy” item: from 7.3% of GDP in 2010 to 5.6% of GDP in 2013. In 2011, an 11% nominal reduction will be justified by a substantial drop in transfers to finance the State EBFs deficits due to the increased rates of social insurance contributions. Still, in 2012-2013, an increase of expenditures is projected (on average 8% a year). This will be the result of financing federal responsibilities (social benefits and compensations, indexation of wages for the budgetary sphere employees, pension obligations, etc.). The pension system will pose a considerable threat to the budget sustainabil-

ity in the mid-term. In 2012-2013, to finance the Pension Fund deficit, considerable transfers from the federal budget to the Pension Fund (half of its revenue) will be required. In addition, the resources of the National Wellbeing Fund are planned to be involved (IET 2010b).

**Figure 1.7. RF federal budget projected expenditures: functional classification, 2010-2013, % of GDP**



Sources: RF Government (2010a); authors' calculations.

In the mid-term, healthcare financing from the federal budget (including the respective transfers to the lower-level budgets) is also planned to be reduced (from 0.9% GDP in 2010 to 0.7% GDP in 2013). Yet the federal budget funding of the Priority National Project (PNP) "Health" will stay intact: RUR 134.9 bn in 2011 (0.30% GDP), RUR 139.5 bn in 2012 (0.25% GDP), and RUR 100.5 bn in 2013 (0.16% GDP). At the same time, a reduction in federal budget financing will be substituted by the resources of the CMI system. It is estimated that the raising of social insurance rates by 2 p.p. will bring an additional RUR 460 bn into the CMI system in 2011-2012, which is comparable to the amount of federal budget resources allocated for the "Healthcare" item in 2011 (Shkel 2010). The majority of CMI resources will be transferred to the regions in the form of grants and will be earmarked to finance healthcare modernization (IET 2010b). Thus the role of the territorial CMI EBFs in healthcare funding is planned to increase, from 1.1% GDP in 2010 to 1.5% GDP in 2013. At the same time, the CMI Federal Fund plans to accumulate the additional revenues without huge inter-budgetary transfers (the share of transfers in its revenues will decrease from 6.3% in 2011 to 4.7% in 2013).

In view of the deterioration of the demographic situation and the decrease in the number of pupils and students, federal budget expenditures on education in nominal terms will tend to stay almost intact by 2013 (leaving aside the 16% increase in 2011). This will reduce the proportion of education expenditures in the overall federal budget from 5.6% in 2010 to 4.3% in 2013, and, respectively, will reduce their share relative to GDP – from 0.98% to 0.84%. At the present moment, it is hard to estimate the exact size of the regional budgets' education expenditures. According to the Chairman of the State Duma Committee on Education, the consolidated education budget in 2011 is projected to be substantially increased in nominal terms and to exceed the level of RUR 2,000 bn (Shkel 2010). Still, the share of these expenditures in GDP will tend to decline from the maximum level in 2009 (4.6%) to a provisional 4.2% GDP in 2010 and to about 4% in 2011.

On the whole, the post-crisis public expenditure adjustment in the mid-term period reflects a trend towards a slowdown in public expenditure growth, as recorded in 2009 and partly in 2010, and thus a move towards a more balanced budget. Still, uncertainty on the revenues side, which is highly dependent on the external factors, remains a considerable threat to sustainability in the mid-term. Besides, the internal structure of expenditures creates several potential dangers. Among them is the unprecedented increase in defense spending, from 13.1% to 19.1% of total federal expenditures by 2013 due to the launch of the national re-armament program (Gurvich 2010). Another set of potential threats concerns social expenditures. Their planned overall reduction, combined with politically motivated promises of a substantial rise in pension payments, could bring the urgent need for ad hoc additional funding which could ruin the fragile budget sustainability.

Another block of potential threats to the mid-term budget sustainability is related to the revenue potential of regional budgets. The ability of the regions to finance their expenditure obligations looks problematic in view of the planned reduction of inter-budgetary transfers (Fig. 1.7). To strengthen the regional tax base, several amendments to the RF tax legislation are planned in order to: (1) improve the administration of all kinds of taxes that form the revenue base of the regional budgets, and (2) eliminate a major part of regional and local tax exemptions established in accordance with the federal legislation. The latter is due to substantially increase the regions' revenues from the corporate property tax and the land tax receipts.

Still, in the mid-term, the regional budgets will remain highly dependent on federal transfers although their relative importance will tend to decrease (from 21.7% of regional revenues to 13% in 2013; relative to GDP, the amount of resources transferred will decline from 3% in 2010 to 1.6 % in 2013).

To ensure a more balanced budgetary situation at the regional level, several major changes in the inter-budgetary relations policy are required: (1) a radical improvement in the efficiency of inter-budgetary transfers, and (2) improvements in the delimitation of expenditure obligations between the levels of the budgetary system, including the local government level. Recently, the details of this delimitation were changing virtually every year, which substantially hampered the process of budget planning at the regional and local levels. On top of that, the system of inter-budgetary transfers remains overly complicated.

According to the 2011 budget plan, the size of transfers (grants) is due to increase by 4%, the volume of subsidies will grow by 8.3%, and subventions are planned to decrease by 32.5%. Still, the proportion of grants remains relatively low—43% of the overall amount of inter-budgetary transfers to the regions (3/4 of that is covered by the grants on budget sufficiency). Of that, subsidies constitute about 37%, and subventions account for 20%. Starting in 2012, the main priority is planned to be given to grants on budget sufficiency, while subventions on financing the current expenditures, such as subventions on co-financing wages for the budget sphere employees and social benefits for some categories of recipients, will be canceled. This would help to avoid cases in which self-sustainable regions receive transfers from the federal budget for executing their own responsibilities. On the other hand, subsidies from the federal budget are the primary instrument used to implement universal standards at the regional level. Since the federal budget potential to finance these transfers is decreasing, there is a clear need to optimize the number of subsidies and to ensure that transferred resources are properly channeled in accordance with the priorities of the government policy.

To address the danger of fiscal unsustainability, a set of legislative and organizational reforms aimed at budget expenditures rationalization was initiated. They aimed to change the budget expenditure management system: in particular, they envisioned a shift towards a program-based structure of budget expenditures, the adoption of a more conservative and long-term forecasting model, and the optimization of the public procurement system. To enhance the efficiency and transparency of federal expenditures at the regional level, the Ministry of Finance declared its aim to shift to long-term purpose-oriented programs (LPOP). These would replace the current federal target programs, and as of 2012, will cover all fields of governmental and public sector activities. These programs will include a set of more specific targeted programs of various agencies. On the whole, the idea was approved by the experts' community, since it envisaged a change in the principle of financing itself: from funding of organizations to a provision of public sector services.

However, there are doubts regarding both the possibilities of implementing these measures in the institutional environment in Russia and its very tight time

schedule. The primary obstacle on the way to an efficient program-based structure of budget expenditures is that it requires, as a prerequisite, a number of reforms at all levels of public administration, including a reconstruction of a vigorous and transparent self-governance system and of effective public control, both of which are presently highly problematic. Besides, the mechanisms of evaluating the efficiency of public service provision by the consumers are lacking. The introduction of performance-oriented budgeting and management also requires increasing the autonomy of the users of budget resources, a process that has just started and faces serious difficulties.

The new federal law modifying the legal status of budget institutions (Federal Law No. 83-FZ 2010) that came into effect January 1<sup>st</sup>, 2011 (with a transition period until June 2012) renders them the right of free disposal of the earned resources and the acquired assets. At the same time, the government completely disengages itself from the obligations of these entities, providing their funding through subsidies for the execution of the state order (i.e. a minimal list of compulsory services) rather than through budget appropriations. The new legal status will be rendered to the majority of state and municipal organizations, including institutions providing education and medical services. The new law has also created incentives for the “optimization” of the state and municipal budget institutions’ networks: the federal ministries and agencies as well as the founders of regional and municipal budget organizations have been granted the right to re-organize, consolidate and liquidate the subordinate organizations, guaranteeing the retention of budget funding after personnel reduction.

In the autumn of 2010, the transition procedures were modified: in view of the forthcoming parliamentary and presidential elections, governors were granted the right to select the schedule of transition to a new system by choosing from three available options, depending on the economic and political situations in the regions. More importantly, the reform was suspended until 2013 with respect to health care institutions. The reaction of both the expert community and education sector employees has been negative because of the fear that under budget constraints, institutions providing public services will remain underfinanced and will have to increase the proportion of paid services.



## 2. Education

Despite the crisis in the educational system and the complexities associated with market transition, the educational level of Russia's population grew noticeably between the censuses of 1989 and 2002. The share of population with a tertiary and secondary vocational education has increased.

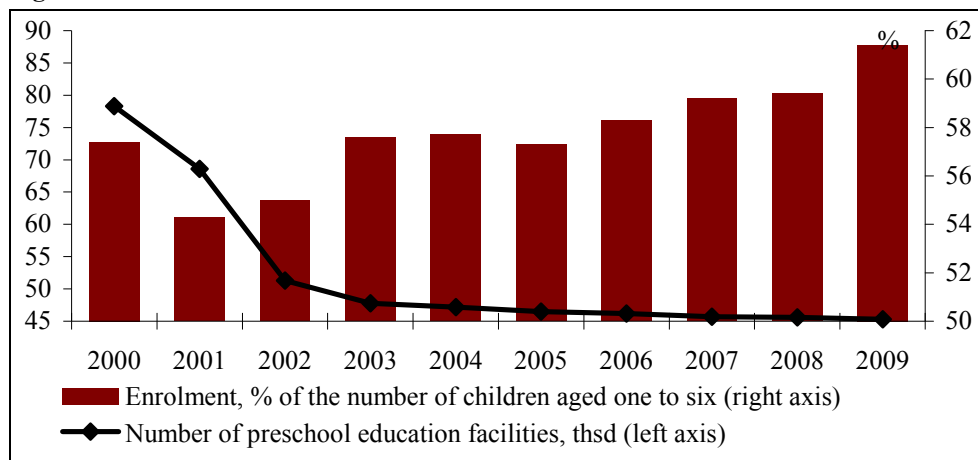
The economic crisis and unfavorable demographic trends have posed new challenges to the education system, such as the need to advance reforms, training new specialists for post-crisis development, etc.

### 2.1. Key sector indicators

In *pre-school education*, a prolonged declining trend in the number and percentage of children attending nurseries and kindergartens was somewhat reversed in the 2000s - from 55% of preschool age children in 2000 to 61.4% in 2009 (see Fig. 2.1.). This was caused by growing birth rates since the beginning of the 2000s and the economic boom; labor demand went up and mothers were anxious to send their children to kindergartens in order to be able to work. The economic crisis, however, may change this trend, because for low-income households, access to preschool education facilities depends mostly on the tuition rates and the availability of benefits.

The number of children per 100 places in preschool education facilities increased from 81 in 2000 to 106 in 2009. According to Rosstat data, in 2008, 2.23 million children required places in nurseries and kindergartens. Thus, to date, the proportion of 5-6 year old children attending preschool education facilities remains insufficient. In 2004 the idea of introducing "early schooling" was proposed, mostly for children from low-income households, in order to prepare them for primary school. This measure would have allowed leveling starting conditions for pupils from lower income groups and raising education quality in primary schools. In the wake of the global economic crisis, this issue has acquired even greater importance (IET 2010).

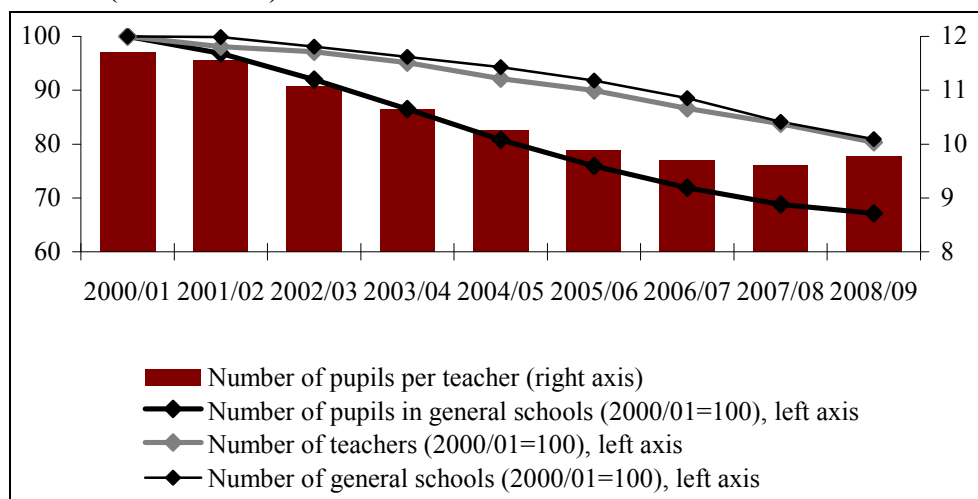
Figure 2.1. Pre-school education: enrolment and facilities



Source: Rosstat.

The number of pupils in *general (ISCED levels 1-3) schools* continued falling in 2007-2009. As a result, the number of state and municipal schools significantly decreased (from 65.5 thousand in 2003/04 to 52.4 thousand in the 2009/10 academic year), along with the number of teachers (from 1666 to 1407 thousand in the 2008/09 academic year) (Fig 2.2).

Figure 2.2. State-owned (municipal) general schools: numbers of schools, pupils and teachers (2000/01 = 100)



Source: Rosstat.

According to the RF Ministry of Education, demographic factors caused a more than 40% reduction of the number of pupils in general schools in the past decade: from 22 million in 1998 to 13.6 million in 2009. It is estimated that the growth of these numbers will not start again until 2015-2016 (Fursenko 2010a). The number of teachers declined by 20% from 2000/01 until the 2007/08 academic year. The reduction in the number of schools lagged behind the decline in the number of pupils: between 2000/01 and 2008/09, the number of schools decreased by about 15.7 thousand (25%).

Still, a simple comparison between the changes in the number of schools and in the number of pupils does not allow for a correct assessment of the scale of the required restructuring of the school network. In Russia, there is a large number of small schools in distant rural areas that could hardly be closed due to the dispersed settlement system, large distances and the low density of roads, which are essential for bringing pupils to alternative school locations. In addition to territorial characteristics, one should bear in mind the social factor: in many Russian regions, education is a sector providing substantial employment opportunities, thereby preventing unemployment growth (Fursenko 2010b). With the onset of the global economic crisis, this fact has become even more evident. Social service sectors like education or health actively exercise this function, especially in single-industry cities.

The number of pupils per teacher continued falling throughout the decade. By the 2008/09 academic year, this ratio already declined to 9.8:1 as opposed to 11.7:1 at the beginning of the 2000s. For comparison, the same ratio in European countries is about 13-16 pupils per teacher. To approach this level, Russia should decrease the number of teachers to about 1 million, i.e. by about 200 thousand people, with a corresponding upgrade in their professional level.<sup>6</sup>

In addition, schools across Russia tend to employ excessive numbers of technical and auxiliary personnel – cleaners, security, etc. A reasonable ratio between such workers' and the number of teachers (30:70) is not followed in the majority of schools. A solution to this problem lies in outsourcing – a transfer of several non-educational functions to non-staff workers or specialized firms (Fursenko 2010a).

The age structure of the teaching staff remains unfavorable: the inflow of young teachers to schools is minimal, teaching personnel are getting older. To a large extent, this hampers the introduction of new pedagogical methods and tech-

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<sup>6</sup> According to A. Fursenko, RF Minister of Education and Science, one possible way to rationalize the number of teachers is to offer them jobs in pre-school education facilities that have a shortage of skilled personnel relative to the growing number of children attending kindergartens (Fursenko 2010a).

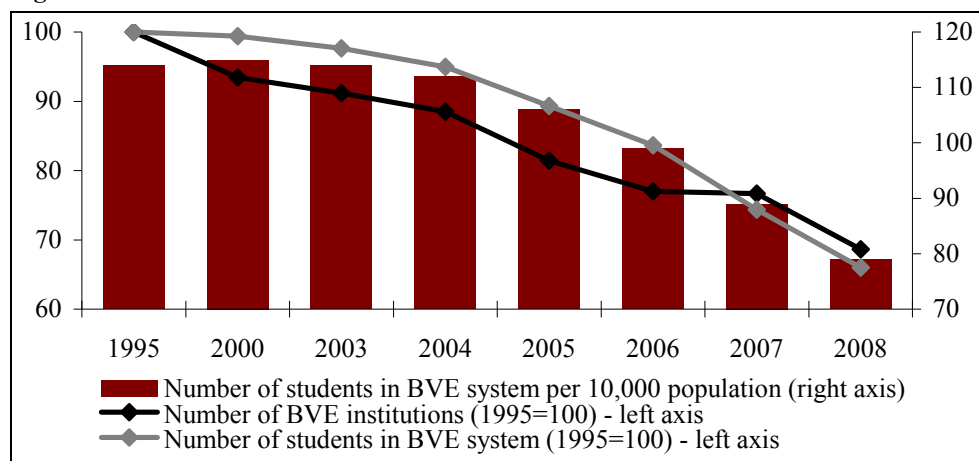
nologies, as well as the promotion of institutional changes in general education, and it is becoming a serious obstacle to Russia's school modernization.

The underdeveloped and aging infrastructure also severely complicates reforms of the Russian school system. In the 2009/10 academic year, 18% of state-owned and municipal schools lacked a permanent water supply, 14% lacked central heating, 24% had no access to sanitation. 22.6% of general schools (with 24% of pupils) require capital repairs; 21% of schools lack gym halls, almost 67% have no school halls, 10% lack canteens or a cafeteria, and 6.5% have no libraries. 23% of general schools still have to practice two- and even three-shift teaching, encompassing 1.7 million pupils, or 13% of the total.

The situation with school computerization is also still far from perfect: according to the RF Ministry of Education and Science, in the 2009/10 academic year there were 19 pupils per computer on average, with the best situation in the Perm Kray (6:1), Chukotka (7:1), Kaliningrad and Kaluga oblasts (8:1), and Karelia, Chuvashia and Moscow (9:1). On average, every school had 16.2 computers (28.2 in urban areas and 9.2 in rural ones); Internet access was available only on 10.3, 18.9 and 5.2 computers, correspondingly. Despite some improvement in the above indicators, Russia still lags behind developed European countries.

In *basic vocational education* (BVE), the number of students went down by one third in 2000–2008; during the same period, the number of BVE institutions was reduced by 26.6% (Fig. 2.3).

**Figure 2.3. Basic vocational education: number of students and institutions**

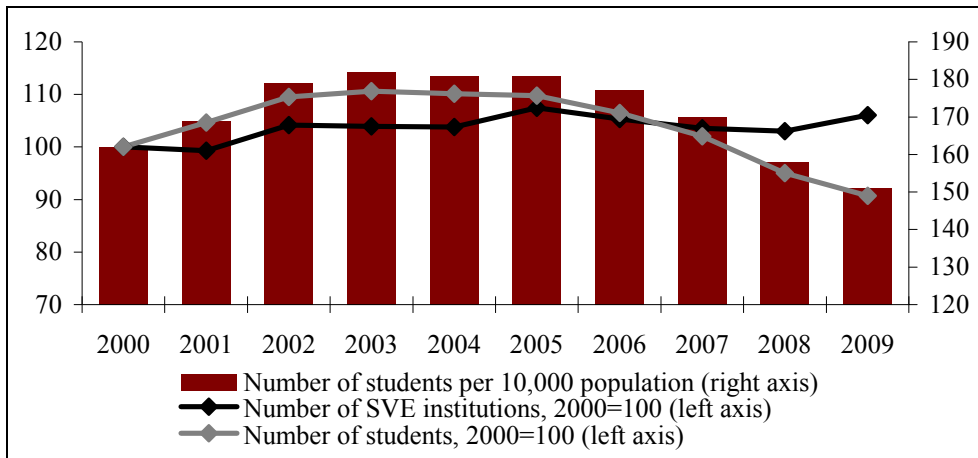


Source: Rosstat.

BVE has been recently regarded as one of the most problem-ridden sectors of national education. Meanwhile, prior to the onset of the economic crisis, the demand for skilled labor grew consistently. Correspondingly, the share of jobless BVE graduates was also declining (IET 2010). However, even prior to the crisis, unemployment among BVE graduates displayed an upward trend in a number of less developed RF regions, like Dagestan, Kabardino-Balkaria, Kalmykia, North Ossetia, Tyva, and the Altai Republic.

By the mid-2000s, employers were becoming increasingly distrustful of the traditional vocational education system. Between 2004 and 2006, according to survey data, the proportion of enterprises that abandoned cooperation with BVEs increased from 59% to 67%, and the share of those who gave up cooperating with *secondary vocational education* institutions (SVEs) grew from 61% to 65%. Not unexpectedly, not long before the crisis, large businesses began to incorporate BVE institutions into their structures and establish their own training centers and colleges (Glovatskaya 2007). However, this type of policy could not be implemented by medium- and small businesses that did not have sufficient resources. At the same time, during the pre-crisis period, the BVE share in the consolidated education budget was consistently declining.

**Figure 2.4. Secondary vocational education: number of students and institutions**



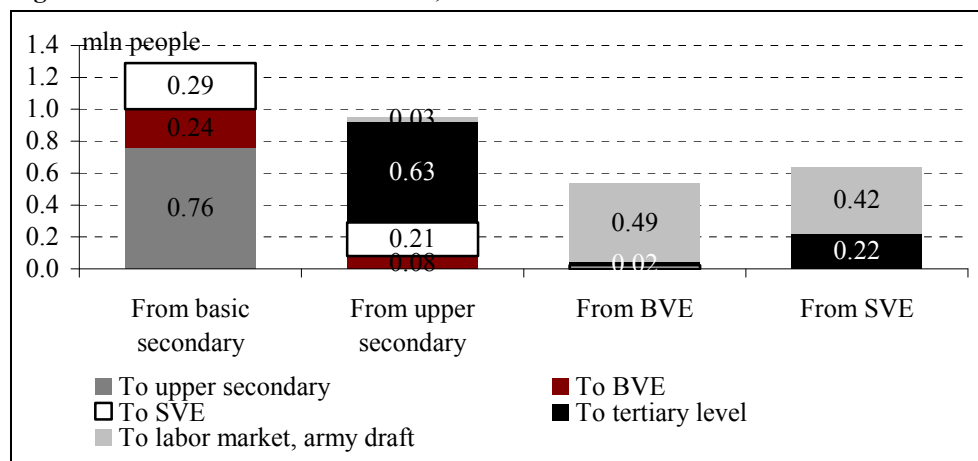
Source: Rosstat.

According to Rosstat data, the number of state-owned, municipal and private SVEs remained relatively stable in 2000-2009 (Fig. 2.4). The number of students was reduced by 10%, with the greatest decrease among evening students. The number of private SVEs demonstrated especially rapid growth during the past decade, growing from 114 institutions in 2000/2001 to 302 in 2009/2010); in

2009, however, the number of students attending private SVEs shrank by nearly 17%, which was obviously related to the ongoing crisis and the limited ability to pay tuition fees.

It should be noted that at present, fewer secondary (11-year) school graduates are choosing BVE or SVE institutions (Fig. 2.5); regardless of the region they reside in, tertiary education is the preferred way of continuing learning. The choice in favor of BVEs is made by a mere 8% of graduates, while about 20% choose SVEs. Even in the city of Ivanovo, at the center of the textile region severely hit by the crisis, more secondary school graduates are making the choice in favor of tertiary education compared to Moscow. One may assume that this is the result of families aspiring to give their children a chance to escape a negative economic situation by means of obtaining a university degree (IET 2010).

**Figure 2.5. Structure of entrants flows, 2009**



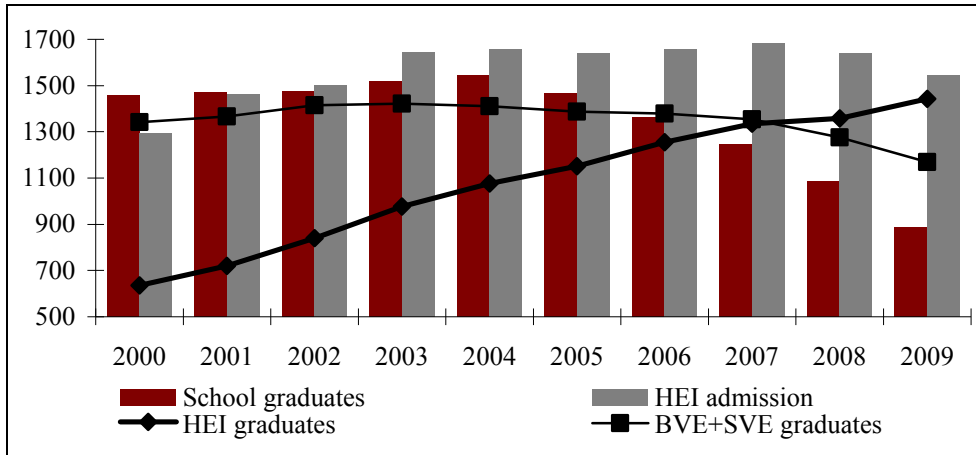
Source: Kuzminov et al. (2011).

Starting from 2003-2004, as Rosstat data demonstrate, the interest in obtaining SVE began to wane and the numbers of college graduates started to decline, as did the relative proportion of technical specialists entering the labor market for the first time (Fig. 2.6).

In 2008, admission into state-owned and municipal SVE institutions decreased by 60.3 thousand, or by 8.3% as compared to 2007. 28.4% of the total number of first-year students in vocational technical schools were admitted under the condition of complete compensation for tuition costs (for comparison, these proportions in 2006 and 2007 were much larger - 34.5% and 32.6% respectively). In 2009,

admission went up just by 0.5%, while the proportion of “paid admissions” declined further, down to 27.5% (IET 2010).

**Figure 2.6. Admission and graduates: secondary, vocational and tertiary education (thousands)**



Source: Source: Rosstat.

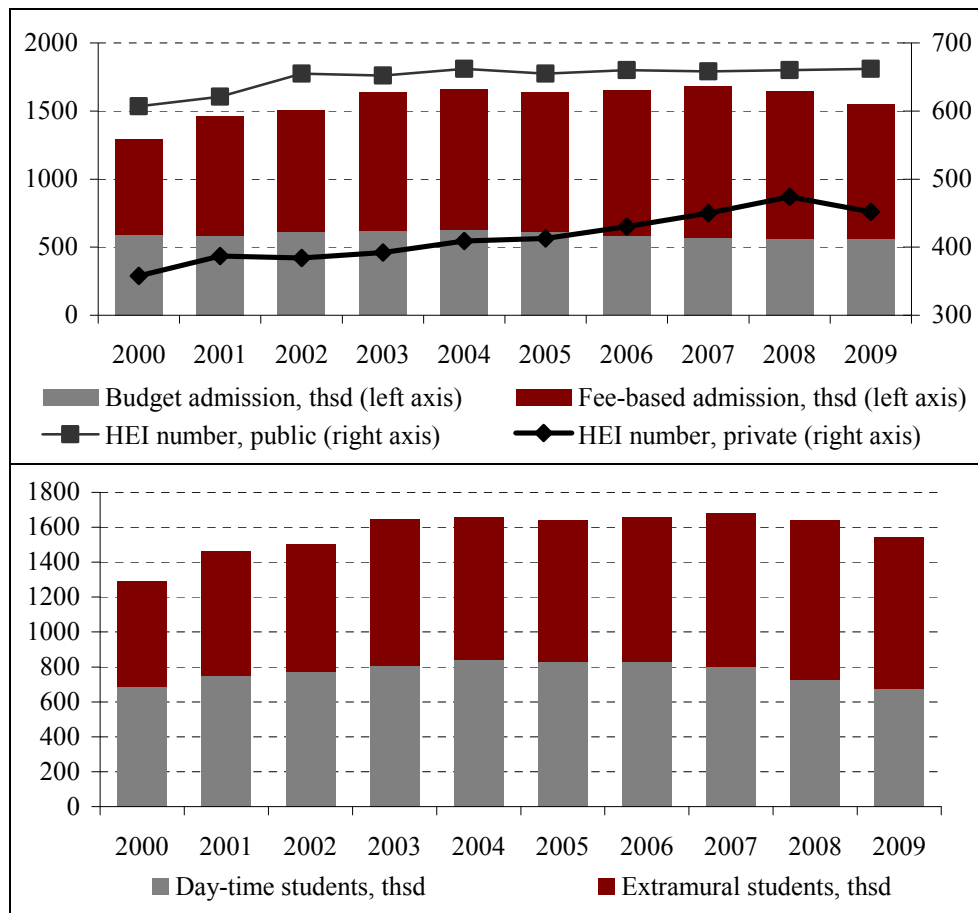
Right up until 2009, the number of unemployed SVE graduates (day students) was decreasing in Russia as a whole. At the same time, the Southern, Urals and Far Eastern federal districts demonstrated an upward trend. Sociological surveys also demonstrated that in 2005-2008, SVE was increasingly turning into a “transitional” level of vocational training: the vast majority of graduates aspired to enter tertiary educational institutions. For example, out of 76% of SVE graduates who planned on continuing their education, 91% were opting for university degrees. Thus, the efficiency factor of the SVE system does not exceed 25-30%, corresponding to the proportion of graduates entering the labor market directly (IET 2010c).

During 2000 – 2009, the *tertiary education* system was growing rapidly both in terms of the number of institutions (state-owned and private) and the number of students (Fig. 2.7). Starting in 2000, enrolment in tertiary education institutions consistently exceeded the number of secondary school graduates. By the number of students per 10,000 of population (523), Russia ranks the second in the world after the US<sup>7</sup>.

<sup>7</sup> If SVE students are also included, Russia becomes the absolute leader, with 695 students per 10,000 population.

During this period, the total number of students increased almost 1.6 times, while those in daytime departments – 1.2 times. The number of students in public sector institutions increased 1.4 times, and those in daytime departments grew 1.2 times. Private tertiary educational institutions demonstrated the most rapid growth – 2.7 and 1.4 times respectively; this sector was responsible for 43.6% of the overall increase in the number of students in the 2000s (Fig. 2.7).

Figure 2.7. HEIs number and admission structure



Source: Rosstat.

In the 2006/2007 academic year, the proportion of paying students (both in public and private sectors) reached 66%. This proportion has changed somewhat, most probably reflecting the impact of the economic crisis: in 2009, the share of students enrolled on a paying basis in the public sector of tertiary education de-



clined (by 0,9%) and reached 57.9% of the total enrolment. Still, at present, almost two-thirds of students pay tuition fees for their studies.

Another major recent change is the decline in the number of day students enrolled in tertiary education. The proportion of students who chose evening and by-correspondence studies in the 2000s has increased both in public and private tertiary education institutions and tends to increase over time. In public institutions, this share expanded from 35.6% of total enrolment in 2000/01 to 44.2% in the 2009/10 academic year. In private institutions, this trend was even more pronounced: 51.6% and 72.4% of total enrolment respectively. Increased enrolment in evening and extramural courses is in many cases justified by considerably lower tuition fees and the possibility of working to compensate for these expenses. The results of this trend are twofold: for respective educational institutions, both public and private, this means shrinking financial resources since full-time budgetary students are significantly more profitable. In addition, the education quality seriously suffers.

The imminent decline in the number of students is the result of a demographic “pit” that occurred in the early 1990s ( Table 2.1). According to recent estimates made by the Ministry of Education and Science, by 2013 the total number of students may dwindle from the recent figure of 7.4 million to merely 4.5 million. As a result, more than 100,000 university professors and lecturers may lose their jobs in the coming years (Kostenko 2010). On the other hand, this reduction (which will most likely result in a re-distribution of student flows towards stronger universities) may stimulate a transition to a competitive budget funding of tertiary education institutions based on the number of students admitted. This will not lead, however, to an outright winding-up of the weaker institutions: in many depressive regions, their preservation may be justified by the high unemployment rates, given the low mobility of young people in Russia (Klyachko et al. 2009).

**Table 2.1. Students’ enrolment and graduation, 1995-2008 (thousand)**

	1995	2000	2003	2004	2005	2006	2007	2008
Students admitted into higher education institutions	681	1292	1644	1659	1641	1658	1682	1642
Of these:								
State-owned and municipal	629	1140	1412	1384	1373	1377	1384	1363
Non-public	52	152	232	275	268	281	298	279
Specialists graduated from higher education institutions	403		977	1076	1151	1255	1336	1358
per 10,000 population, persons	27	39	60	65	68	74	78	79

Source: Rosstat.

Data on student admission in 2008-2009 allows us to conclude that in the time of economic crisis, applicants became more interested in more economic forms of education, from the viewpoint of personal costs. This will result, most probably, in a reduction of educational institutions' revenues.

## **2.2. Education indicators: Regional differentiation**

Inter-regional differences in the *educational levels* of persons aged 20-39 are relatively small: from 10.4 years in North Ossetia to 12.7 years in Moscow and 12.8 years in St. Petersburg. At the same time, in the European part of Russia (excluding the agricultural Northern Caucasus), the level of education is generally higher than in Siberia and the Far East. During the Soviet period, the North-East of the country was notable for a higher educational level due to extensive immigration of younger and better educated persons. Currently, a relatively high educational level in the East remains only in the Tomsk oblast (a well established university center) and in two autonomous okrugs, Yamal-Nenets and Khanty-Mansi, which remained attractive for skilled in-migrants.

The two federal cities (Moscow and St. Petersburg) have the highest shares (42-43%) of employed people with university degrees, followed by Moscow oblast (31%) and large university centers – Tomsk, Novosibirsk, Rostov, Samara, Voronezh oblasts and the Khabarovsk Territory (27 - 30%). The variation in the remaining regions is not significant. The exceptions are the republics of the Northern Caucasus, where a specific employment pattern emerged with an increased proportion of employees in the management and 'budget' spheres, in which a university education is required more often but, at the same time, it is also more easily accessible. As a result, the proportion of people there who have completed higher education is higher than the country average (30-38%) (IISP 2010).

*Secondary education* has remained basically public and free all over Russia; even in Moscow, the proportion of non-public schools does not exceed 7.8% (compared to the national average of 1.2%), involving only 1.9% of Moscow's schoolchildren. In the majority of RF regions, the problem of school infrastructure availability became less acute due to decreased birthrates in the 1990s, while in the North, a migration outflow played an additional role. At the same time, in many Far East and in some Siberian regions, from 15% to 20% of pupils study in a two-shift system, while in the autonomous okrugs of Tyumen oblast this proportion exceeds 25%. The same problem exists in the Southern republics with high birth

rates: in Tyva, Dagestan and Ingushetia, over 30% of pupils have to attend school during the second shift.

The country-wide shortage of education facilities is particularly grave in Ingushetia, where only 1.7 sq.m of educational floorspace per pupil is available (about half of the national average); a quarter of schools are operating in emergency conditions. The gap between the lagging regions and the leaders is narrowing very slowly, as almost 20% of capital investments in education is made in only two RF subjects – Moscow (16% in 2008) and the Khanty-Mansi AO (4%). A lack of teachers is mainly a problem in the Far East, where up to 10% of teacher positions are vacant. This is primarily a result of the small class sizes, despite a higher than average total number of teachers per 1,000 population. In the majority of other regions, the shortage of teachers is less important, with one exception: almost 50% of foreign language teachers' positions are vacant (IISP 2010).

The transition led to a shrinking of *basic vocational education* throughout the 1990s in all RF regions, as demand for blue-collar professions declined drastically. As a result, growing industries experienced worker shortages, but nevertheless the inflow of students into vocational schools did not resume. The adaptation of *secondary vocational education* was more successful: the number of students continued to grow across the country, albeit more slowly. The geography of secondary vocational education did not change much: industrial areas of the Urals, the Volga region and Siberia have the highest proportion of students in colleges and technical schools; this is also true for some regions with less developed tertiary education, where technical schools play a compensatory role.

On the contrary, major changes occurred in the regional structure of *tertiary education*. Financial problems during the transition severely limited students' migration into large university centers. At the same time, higher education was increasingly perceived as a major prerequisite for a successful career and increased earnings; as a result, the trend towards a reduction in the number of students was replaced in the mid-1990s by accelerated growth of higher education institutions "in the regions". The highest growth rates were observed in the "rich" exporting regions with the lowest university endowments – the Khanty-Mansi Autonomous Okrug, Murmansk oblast and Yakutia (see Table A1.1, Annex 1). Many less developed and peripheral regions with initially low levels of university education, especially in the agricultural South, also experienced high rates of growth. On the other hand, the tertiary education "boom" bypassed several peripheral regions of Central Russia. One example is Kostroma oblast, which experienced only a small increase in the student enrollments and minimal increase in the number of private educational institutions and fee-paying students.

Federal cities with the maximum students numbers did not demonstrate high growth rates. At the same time, Moscow became an unsurpassed leader in the development of educational services and the number of non-public educational institutions that concentrate 32% of students in the capital (in St. Petersburg this proportion is almost three times as small). The growth rates of various forms of tertiary education institutions, albeit generally high, also varied across the country. In Siberia and the Far East, public institutions and universities grew at higher than average rates; on the other hand, in Tatarstan and in the European South (especially in Ingushetia, Kalmykia, in the Krasnodar and Stavropol territories) private institutions expanded at a higher rate.

Territorial differences in the proportion of fee-based tertiary education depend on several factors: the existence of “old” university centers, the policies of the local authority, consumer demand, etc. For example, in the European South, the rate of university education commercialization is particularly high in those regions where it was initially less developed; in the Krasnodar and Stavropol territories and in the Volgograd and Astrakhan oblasts, more than half of students pay for their education. In Dagestan and Rostov oblast – an “old” university center that for a long time retained a low proportion of fee-based students – is now rapidly catching up with the leaders. In other republics of the Northern Caucasus region, this fraction is somewhat lower, due to the specific policies of regional authorities. An increased proportion of fee-based tertiary education is also characteristic for a vast majority of Northern and Eastern regions of Russia.

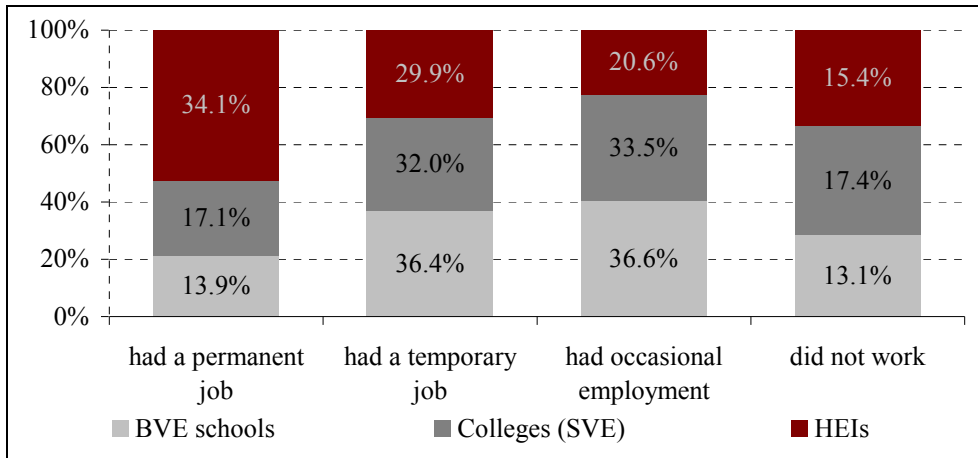
### **2.3. Education quality**

Raising the quality of *general education* is closely associated with progress in network and personnel restructuring, the ability of the system to introduce innovative schemes and methods at the school level, the availability of up-to-date equipment, etc. Education quality in terms of output is reflected in the RF’s relatively low (and in a number of cases falling) PISA scores in 2003 – 2009 (as compared to OECD averages); this analysis is presented in the section on the efficiency of public spending.

Increased demand for higher quality *tertiary level* graduates is currently at the top of the modernization agenda. A growing demand for higher education is indicative of its increasing prestige value and the population’s readiness to invest private resources into the development of human capital. At the same time, along with turning into a primarily fee-based service, its quality still remains uncompeti-

tive in the majority of universities. The increasingly popular practice of part-time studies and other simplified ways of obtaining a university degree result in the fact that a substantial number of students are concentrated on issues other than training programs and work to earn their living during the course of their studies (Fig. 2.8). This often goes hand in hand with inadequate technical support of the teaching process and a shortage of skilled professors.

**Figure 2.8. The proportion of students that work at different levels of education (2009)**



Source: Kuzminov et al. (2011).

There are several indicators of the poor quality of education: in 2009, there was only one personal computer per every 5 day students at tertiary-level public institutions, while at public SVE institutions, one computer was available per every 7 students. Internet access was available only on 77.7% of the computers installed at tertiary-level public institutions, whereas at public SVE institutions, the corresponding figure was 54.3%.

According to the estimations of the Ministry of Education and Science, only one third of tertiary education institutions in Russia meet the requirements of an up-to-date educational process (Kostenko 2010). Thus, not surprisingly, international ratings even for the best universities in Russia look poor compared to their counterparts in Europe or Asia.

The number of university graduates with social aspirations exceeding their actual educational attainments is consistently growing. In many institutions, 20-30% of educational programs do not provide even for a minimal scope of knowledge. This is due not only to the prevalence of part-time tertiary education in Russia, but to the declining quality at all levels of education. Businesses' costs of training

university graduates amount to about 40% of university training costs as compared to no more than 15% in Western countries (Glovatskaya 2007). Over 70% of graduates require additional training when starting their first job after graduation.

A truly civilized market for tertiary education services has not yet emerged and the quality of education services is very differentiated across regions. It ranges from a conservation of a semi-Soviet-type model or a primitive bazaar-type commercialization (in which students can practically purchase a diploma) to more up-to-date examples in a few established university centers.

As a result, in 2008, every fourth graduate worked in a field other than his/her specialization by training and up to 70% of graduate students in economics, management and law (about 50% of the total) lacked even basic professional competencies.

State quality control which, in theory, should be exercised through uniform state educational standards, educational institution licensing, state accreditation and through state (final) graduates' attestation, in practice is ineffective due to a widespread corruption and lobbying. Competition for diplomas on the labor market also cannot serve as an indicator of the quality of education since getting an attractive job is often dependent not on the "quality" of a diploma but rather on personal and family connections.

## **2.4. Policy reforms in education sector**

The declared strategic *goal* of the state education policy is to increase the accessibility of high-quality education that meets the requirements of innovative economic development, the needs of the society, and of every citizen.

The realization of this goal implies the resolution of the following priority tasks:

- ensuring the innovative character of basic education;
- modernizing the education institutions so they can serve as instruments of social development;
- establishing an up-to-date system of lifelong learning, training and re-training of specialists;
- developing mechanisms for the assessment of quality and demand for education services with consumers' participation.

"Education" was one of the four *PNPs* adopted in 2005 and was meant to enhance the modernization of Russian education in order to improve its quality, and

to ensure it is adequate to the needs of the society and a changing socio-economic environment. This project includes two major mechanisms aimed at boosting systemic changes in education: 1) the identification and priority support to leaders that are “growth points” for education quality; 2) the introduction of new management mechanisms and their implementation. An important institutional change is the introduction of new compensation plans for teachers, which include, *inter alia*, additional payments for class management based on a per capita financing principle. In the regions where this system was introduced, average teachers’ wages increased 2.3 times.

The national project includes the following focus areas: “Support for and development of best practices in national education”, “Introduction of contemporary educational technologies”, “Establishment of national world-class universities and business schools”, “Enhancement of educational work at schools”, and “Development of vocational training system in the armed forces”. The project’s implementation is still underway, although some programs have already been completed and brought about positive results. For example, in several leading universities, the gap in the supply of modern equipment and technologies has been reduced by 10 to 15 years. In the regions that participated in the programs, the number of schoolchildren studying in up-to-date schools has grown from 30% to 70% (Fursenko 2010a).

## 2.5. Access to education

Russia has a strong tradition of providing universal access to education. The Federal Law on Education (1992) guarantees that the citizens shall have access to public and free pre-school, primary general, basic general, secondary (complete) general education and primary vocational training. The law also guarantees access, on a competitive basis, to free secondary vocational, tertiary and post-graduate education and training in state and municipal educational establishments within the state educational standards, should the citizen receive education at this level for the first time. In order to ensure that all citizens have access to education, the government covers all or part of their education costs. The state also provides support to those citizens who exhibit outstanding education capabilities through special government grants.

Access to general education in Russia is practically universal (99%). Inequality here may relate only to education quality – e.g. in poorly equipped and outdated schools in rural areas or in small towns. This results in inequality in access to university education inherited from the Soviet times. Today this inequality is exacer-

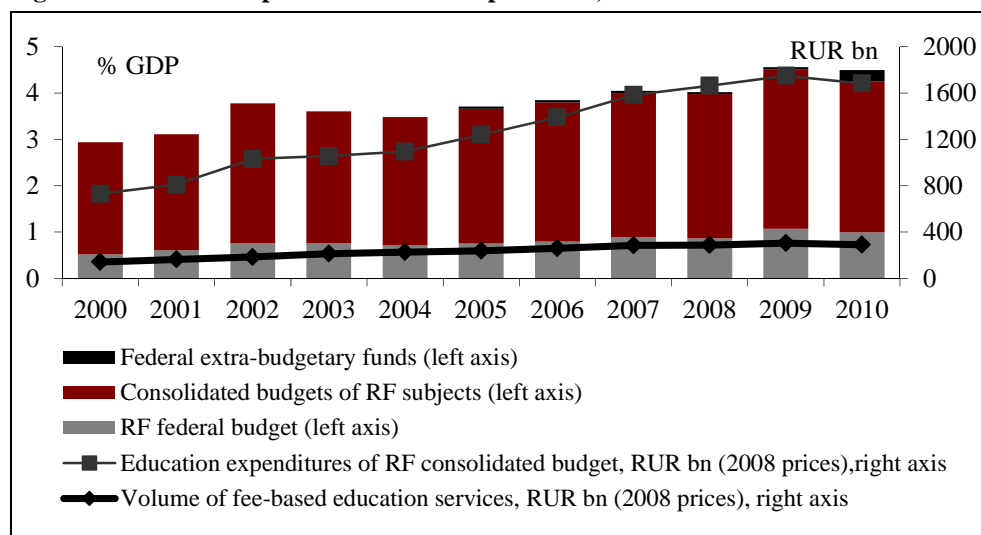
bated by widespread fee-based tertiary education. On the other hand, the unfavorable demographic situation leads to a reduction in the number of potential students, which results in fiercer competition for them, particularly among secondary educational institutions.

The poor quality tertiary education partly assumes the role previously performed by SVE. The overproduction of university diplomas leads to a depreciation of their value (except for a small number of leading universities), both in the eyes of employers and graduates. In this situation, a growing number of experts and employers is speaking out in favor of changing the proportions between university education and SVE in favor of the latter: the existing ratio of 70:30 needs to be reversed to meet labor market demands (Kostenko 2010).

## 2.6. Spending trends

In the 2000–2009 period, spending on education from both public and private sources was growing. From 2000 through 2003, the share of budgetary expenses on education in GDP significantly increased, but later it stabilized in relative terms in spite of their nominal and real growth (Fig. 2.9).

**Figure 2.9. Public and private education expenditure, 2000–2010**



Sources: Rosstat, RF Federal Treasury.



The nominal amount of public resources allocated for education in 2000-2009 increased 8.3 times, while in constant 2000 prices the increase was more moderate though still impressive at 3.5 times. Apart from a considerable increase in the size of funding, the following trends are worth highlighting:

- the steady growth of the share of education expenditures in GDP that was not interrupted by the 2009 financial crisis;
- a considerable role of the federal budget in education funding that emerged in the beginning of the 2000s, and has remained at a relatively high level since 2002 (0.8-1.0% of GDP);
- the main bulk of responsibility for education funding is carried by the regional budgets;
- the share of regional budgets in education financing remained relatively stable (and even increased slightly) throughout the whole decade, despite the expansion of expenditure obligations since 2005 due to a delimitation of budgetary responsibilities in this area<sup>8</sup>;
- starting from 2005, extra-budgetary funds at the federal and regional levels played an increasing role in education funding.

The results of the crisis year of 2009 demonstrated a moderate growth in consolidated current expenditures on education as compared to the growth of overall GG expenditures. Even in real terms (using GDP deflator), consolidated expenditures on education increased from 4.0% GDP in 2008 to 4.6% GDP in 2009, including both the federal budget (from 0.9% to 1.1% of GDP) and consolidated regional budgets (from 3.1% to 3.4% of GDP). At the same time, the budget authority between these two levels of government was somewhat redistributed with the increasing role of the federal government at the expense of regional authorities (Fig. 2.9).

According to 2010 and 2011 budget plans, GG expenditures on education were expected to grow from RUR 1.889 trillion in 2010 to RUR 2.1 trillion in 2011. This constituted a 11% increase in nominal terms which meant that the real volume of expenditures was not supposed to decrease (Fursenko 2010b).

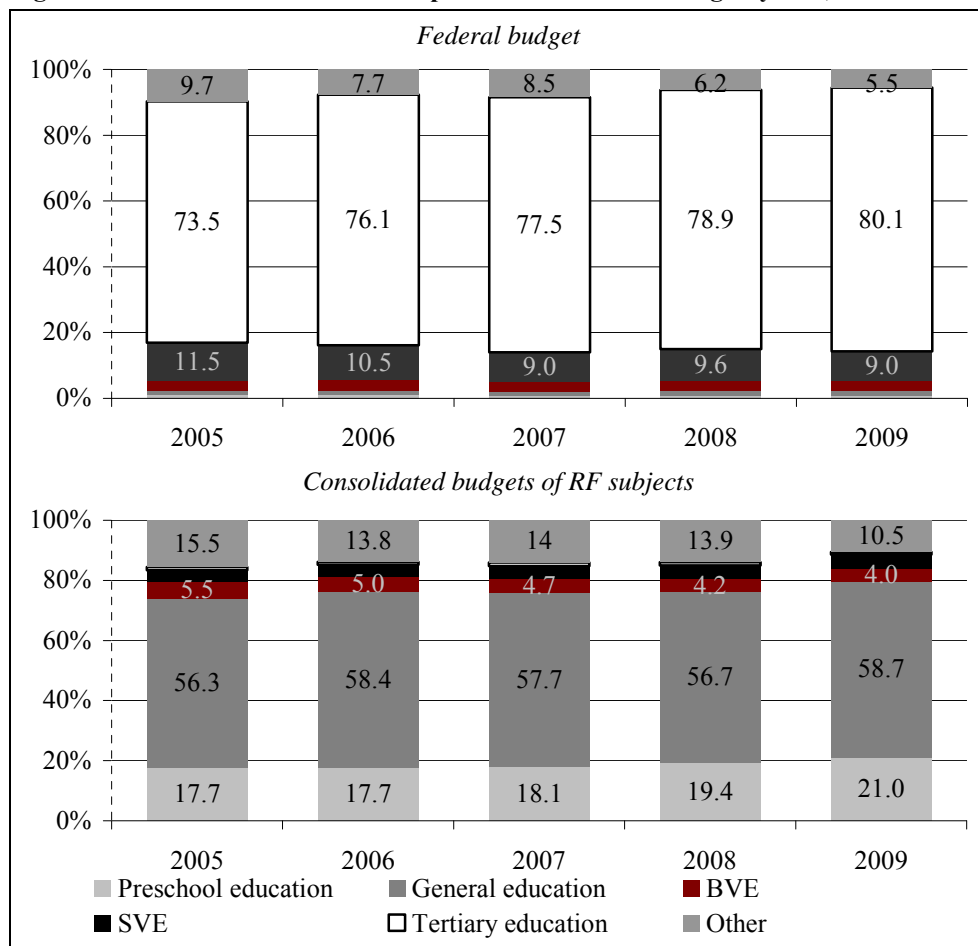
Private expenditures on education are reflected in Russian statistics as the “Volume of fee-based services for education,” including both hidden and informal activities. Both the absolute figures and the proportion of fee-based services to GDP demonstrate a steady growth. The crisis somewhat increased the role of paid

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<sup>8</sup> Major changes in federal legislation concerning the delimitation of competences between federal, regional and local authorities in the education sphere were introduced in 2003–2004 with effective entry into force in 2005-2006.

services: from 0.69% GDP in 2008 to 0.79% GDP in 2009, but in 2010, this proportion returned to 2008 levels (Fig. 2.9).

**Figure 2.10. Structure of education expenditures in the RF budget system, 2005–2009**



Source: Federal Treasury.

A breakdown of budgetary expenses by levels of education in 2003–2009 is presented at Fig. 2.10 and in Table A1.2 (Annex 1). The most rapid growth was demonstrated by public expenditures on tertiary education (5.7 times), followed by secondary vocational education (4.2 times), and preschool education (3.9 times). This resulted in significant changes in the proportions of expenditures on different levels of the education system:

- the share of expenditures on preschool, general education and secondary vocational education in the consolidated education budget remained relatively stable;
- the share of expenditures on basic vocational education was decreasing during the entire period in spite of the declared aim to develop the BVE system. After BVE institutions were transferred to the regional jurisdiction, the proportion of expenditures experienced an abrupt decline (4.9% in 2005 as compared to 6% in 2004);
- the share of expenditures on tertiary education grew from 12.9% to 19.5%;
- in the course of 2009, the share of budgetary expenditures on BVE in the consolidated budget continued to decline down to 3.7%, while the proportions of general education and tertiary education gained one percentage point each.

The new delimitation of budget responsibilities in the education sphere brought about considerable shifts in the structure of federal budget expenditures:

- a reduction of BVE and SVE shares, from 21.5% and 13.1% in 2003 to 3.1% and 9.0% respectively in 2009;
- an increase in the proportion of tertiary education funding, from 56.9% in 2003 to 80.1% in 2009.

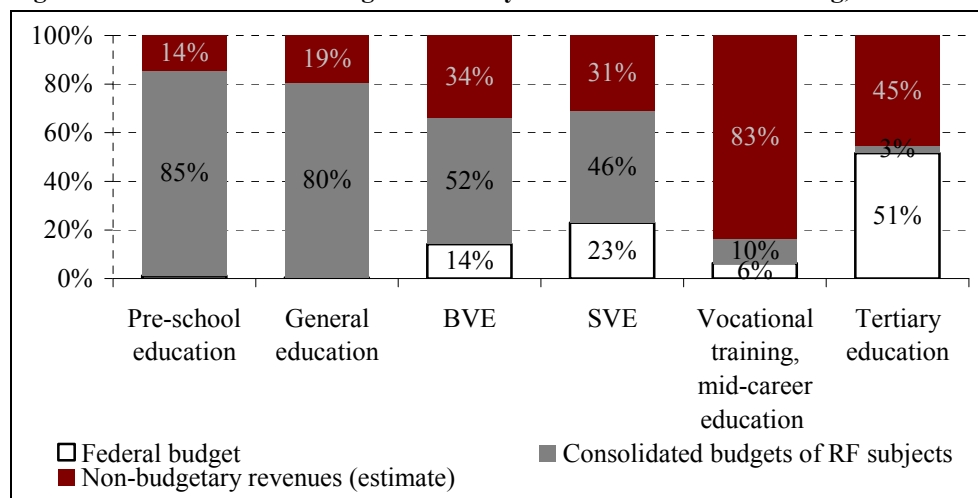
In the regional consolidated budgets, shares of expenditures on BVE and SVE correspondingly increased: from 2.4% and 2.9% in 2003 to 4.0% and 4.8% in 2009. The proportion of spending on preschool education grew from 19% to 21% while spending on tertiary education shrunk from 1.2% to 0.9%. General education expenditures declined relative to other levels' spending at all levels of the RF budget system, e.g. within the regional consolidated budget, their percentage shrunk from 62.7% in 2003 to 58.7% in 2009. This resulted from a decline in the number of pupils and the more rapid growth of other types of education expenditures.

The distribution of responsibilities for education funding between the federal and regional levels is illustrated below (see Fig. 2.11 and Table A1.3, Annex 1). The following conclusions can be drawn:

- The major responsibility for education funding remains with the regional consolidated budgets.
- During the whole 2003-2009 period, the overall federal budget share tended to grow, while the percentage of the regional consolidated budget tended to decline. This trend became especially evident in 2009.

- Despite the evident shifts in responsibility between the federal and regional level in respect to BVE and SVE, the federal budget continues to bear the major responsibility for their financing.

**Figure 2.11. Education financing structure by levels and sources of funding, 2008**



Source: Kuzminov (2009).

Since 2005, education expenditures of the federal extra-budgetary funds and territorial extra-budgetary funds and their specific responsibilities should also be taken into consideration. The overall share of these extra-budgetary funds in education financing amounts to just 1.1% of the total public education funding. Still, these funds play a considerable role in financing youth policy and children's health promotion measures (39.9% of the total amount allocated for this budget item in 2009) and several measures related to vocational training, retraining and mid-career education (Fig. 2.10).

## 2.7. Education funding: Regional differentiation

The *spatial disparities* in the overall per capita financing of education between 83 regional budgets are very high: the variation coefficient ( $K_{\text{var}}$ ) exceeds 82% (2009) compared to e.g. 45.8% for per capita income (Fig. A1.1, Annex 1). However, if adjusted for differentiation in living costs (calculated as a percentage of monthly regional subsistence minima), these disparities shrink by more than half –

down to 42.9% (Fig. A1.2, Annex 1). In both cases, however, the leaders and laggards are essentially the same. The highest per capita spending on education is recorded in the Northern oil and gas okrugs, the two federal cities, several Far Eastern regions (Sakha-Yakutia, Magadan and Sakhalin oblasts, the Kamchatka Territory), the Krasnoyarsk Territory, and – surprisingly – in the low-income republics of Altai and Tyva. The latter is most probably related to the extremely low numbers of pupils per teacher in these areas. The laggards in per capita financing are the three republics of the Northern Caucasus (Ingushetia, Karachay-Cherkessia and Adygeya) and some low-income regions of Central Russia and Mid-Volga (Voronezh, Tambov, Ulyanovsk, Bryansk oblasts and Mordovia).

Several measures were taken prior to the crisis to reduce the gap in education funding. In particular, in 2005, the responsibility for education funding was transferred from local to regional budgets. Since this time, a number of federal school funding programs have been implemented, particularly in rural areas where schools have been provided with computer equipment. However, these measures have not reduced the gap in resourcing: in 2005, the richest 10% of regions spent 1.7 times more money per student than the poorest 10% of regions; in 2008 the gap widened and the former spent 1.8 times more per student than the latter (UNDP 2010).

When analyzing regional funding by levels of education, one should note that regional differentiation tends to increase along with higher education levels: the variation coefficients for pre-school, general and secondary vocational education are 58.9%, 73.2% and 142.5%, correspondingly (Figs. A1.3 – A1.5, Annex 1). In principle, both pre-school and secondary education services are relatively standardized in terms of duration, curricula, etc. The differences in spending are mostly related to school / kindergarten maintenance costs in various climatic zones, the degree of their equipment and the number of pupils per class (Zubarevich 2010).

The obvious laggards in pre-school education funding per one child are the Far Eastern regions (the Primorie<sup>9</sup> and Khabarovsk Territories, Jewish Autonomous and Amur oblasts); the leaders, apart from the obvious ones, include Chechnia and Ingushetia, which is the result of recent massive federal financial transfers to these republics (Fig. A1.3, Annex 1). In basic education funding, the highest values per pupil are generally observed in the regions with the largest per capita education spending; the laggards are also essentially the same, with the addition of Dagestan, Chechnia, the Stavropol Territory, the low-income mid-Volga republics of Mariy El and Chuvashia, and Omsk and Tomsk oblasts in Western Siberia (Fig. A1.4,

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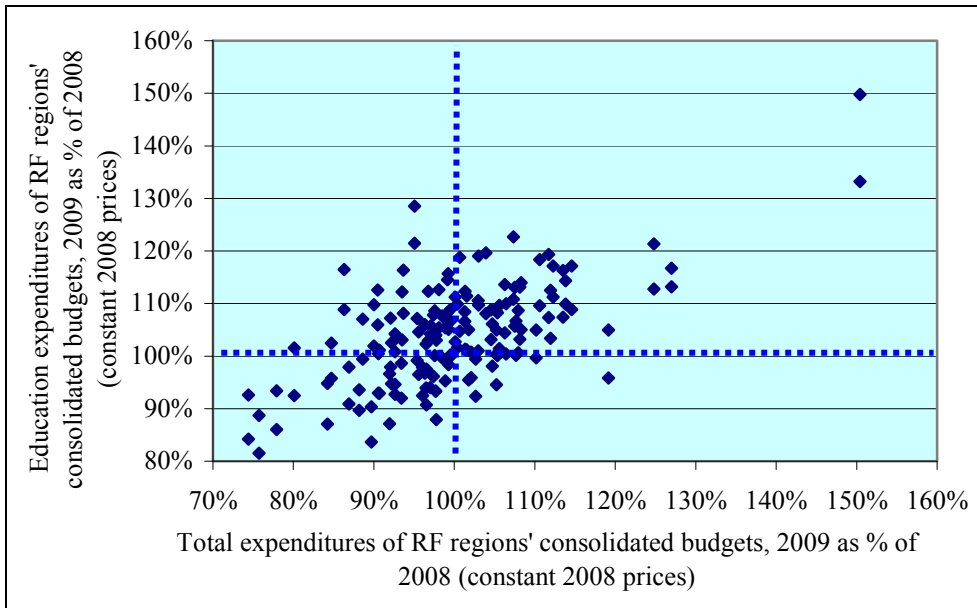
<sup>9</sup> In 2009, the numbers of children attending pre-school institutions in Vladivostok (15351) was almost equal to the number of children waiting ‘in line’ to obtain a place in these institutions (14521) ([http://kprf.ru/rus\\_soc/64992.html](http://kprf.ru/rus_soc/64992.html)).

Annex 1). Otherwise, most RF subjects are fairly close to each other in volumes of general education funding per pupil. The average figure for 2009 was RUR 58.5 thousand; in 51 out of 83 regions this value varied between RUR 43.8 and 73.1 thousand, i.e. the gap in per pupil financing did not exceed 1.5 times. Since about two-thirds of the country's population is concentrated in these regions, one should not overestimate the degree of territorial inequality in school education funding (IISP 2010).

In the 2000s, the prevailing trend was a reduction in the share of capital expenditures with a corresponding growth in the salaries component. As a result, in 65 regions, capital investments account for less than 10% of total expenses on general education; of which, in 35 regions this proportion is below 5%, while in Ingushetia, Tyva, the Altai Territory and Orel oblast it does not exceed 2%. On the other hand, in 17 regions, spending on salaries exceeds 80% of current expenses, and in two regions (Saratov and Chelyabinsk oblasts) this proportion goes beyond 90% (Katanova 2008). Such budgetary policies not only prevent the development of modern educational infrastructure, but result in the outright degradation of major educational material assets.

The *financial crisis* itself did not dramatically affect either the scope or geography of education spending from regional budgets. In the majority of RF regions, education funding continued to grow in line with general budget spending, or even displayed better results: in current prices, education spending increased in 2009, as compared to 2008, in 71 subjects of the Federation. However, in most cases, this nominal growth did not compensate for inflation: in constant prices, only about half of the regions (42) recorded growth (Fig. 2.12).

The trend was differentiated: in some regions, public education spending grew at a slower rate (or decreased more rapidly) compared to overall spending performance. In the Primorie Territory, where total budget spending increased almost 20% in 2008 prices (due to massive federal transfers for the preparation for the Asia-Pacific Economic Cooperation Summit in 2012), education spending declined by 4.2%. In Ingushetia, Dagestan and Adygeya, where the consequences of the crisis were not felt, and regional spending has grown by 25-50% in constant prices (also due to federal transfers), education funding increased at a much slower rate (12 to 17 percentage points), reflecting the real priorities of the regional authorities. Chukotka, which managed to maintain overall spending (in real terms) almost at 2008 levels, due to an eight-fold increase in receipts from profits tax, decreased education spending by 12%. Similar trends were characteristic also for the Krasnoyarsk Territory, Pskov and Kostroma oblasts, and a few other regions.

**Figure 2.12. Changes in total and education expenditures of RF regions, 2008-09**

Source: RF Treasury.

On the other hand, quite a few regions demonstrated the opposite trend: maintaining (or slightly reducing) education spending even under falling revenues and declining general spending. These regions include, first of all, “the big spenders” – federal cities, Tyumen oblast and ‘oil and gas’ okrugs – which experienced a large fall in profit tax receipts in 2009, resulting in declining budget expenditures (by 12-25%). Moreover, some of the low-income regions even managed to significantly raise education spending despite declining total budget expenditures. Astrakhan oblast, for example, raised its education spending in 2009 by almost 9% in real terms after winning a federal competition among regions for introducing comprehensive reforms in education modernization for which the oblast obtained a federal grant of RUR 440 million. Positive trends in education financing were also observed in Chuvashia, Ulyanovsk, Orenburg and Belgorod oblasts (see Fig. A1.6. Annex 1).

Analyzing the crisis’ impact on the funding of various levels of education, pre-school education suffered the least. Only 12 regions recorded a reduction in pre-school funding in real terms, and only five of them (Irkutsk, Novosibirsk, Tyumen and Moscow oblasts and the Khanty-Mansi AO) reduced spending by more than 10% (Fig. A1.7, Annex 1). On the other end of the spectrum, 7 regions (Ingushetia, Chechen Republic, Dagestan, Archangelsk, Kurgan, Astrakhan and Sakhalin oblasts) increased their spending by more than 20%. In addition, 20 regions, in-

cluding the Stavropol Territory, St. Petersburg and the Yamal-Nenets AO, increased their pre-school education financing in the range of 10% to 20%.

A similar picture can be seen in general education (Fig. A1.8, Annex 1): 40 regions decreased and 43 regions increased their secondary education funding in real terms in 2009. Seven regions demonstrated the worst results (a decrease of more than 10%) – Tatarstan, the Khanty-Mansi and Chukotka okrugs, as well as Archangelsk, Irkutsk, Sverdlovsk and Moscow oblasts. Among the six regions that raised their funding by more than 10% are four North Caucasian republics (Ingushetia, Northern Ossetia, Adygeya and Dagestan), as well as Tyva and Saratov oblasts.

The economic crisis negatively affected the implementation (since 2007) of the Integrated program of education modernization (IPEM), which included the introduction new wage systems for teachers.

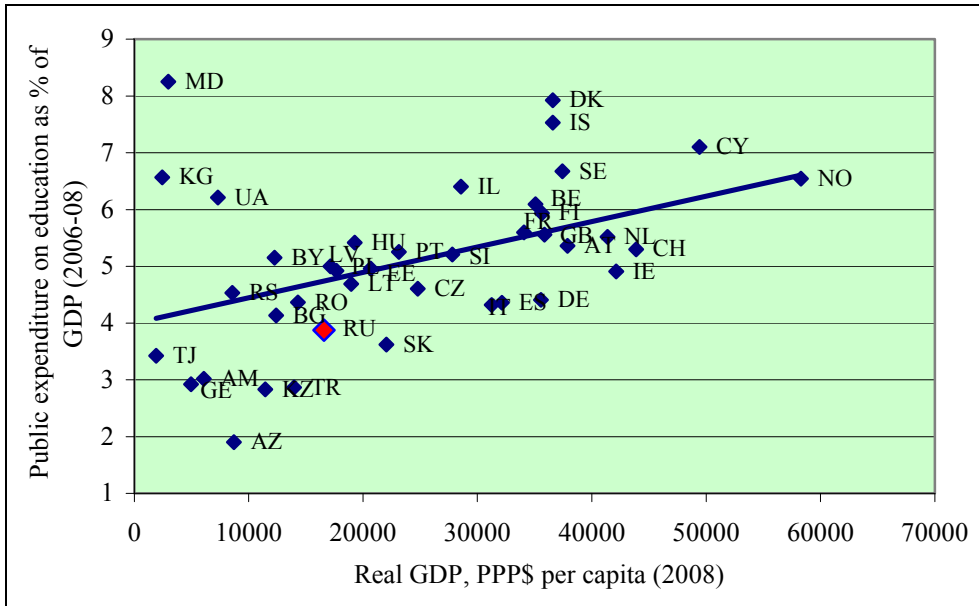
Both SVE and vocational training and retraining demonstrated more ‘polarized’ patterns, with many regions either raising or decreasing their budget spending by considerable percentages (Figs. A1.9 – A1.10, Annex 1). For SVE, 31 regions decreased their spending in real terms (of these, 13 regions by more than 10%) and 52 regions raised it (including 14 regions with increases over 20%). The absolute leaders were Tatarstan with a 75% increase in 2008 prices, along with Mordovia and Kamchatka with increases of about 51%. Vocational training and retraining seems to have suffered the most, with 52 regions reducing their spending on this item, including 29 regions with a fall of over 10% and 11 where spending was cut by more than 20%. Notably, the latter list includes almost exclusively the regions with the largest output decline and the worst situation on the labor market – e.g. Lipetsk, Bryansk, Tula, Tambov and Ryazan oblasts, as well as the Chechen Republic.

## **2.8. Efficiency of education spending**

The efficiency of public spending, and education spending in particular, can be best assessed using international comparisons. The baseline indicator is the level of public education expenditure relative to GDP. As can be seen from Fig. 2.13, Russia represents a below-average level of public education expenditures (relative to other countries with a comparable per capita GDP). The absolute majority of both developed European countries and transition economies (including those with a lower per capita income) are noticeably ahead of Russia in this regard.



**Figure 2.13. Public expenditures on education and real GDP per capita: International comparison**

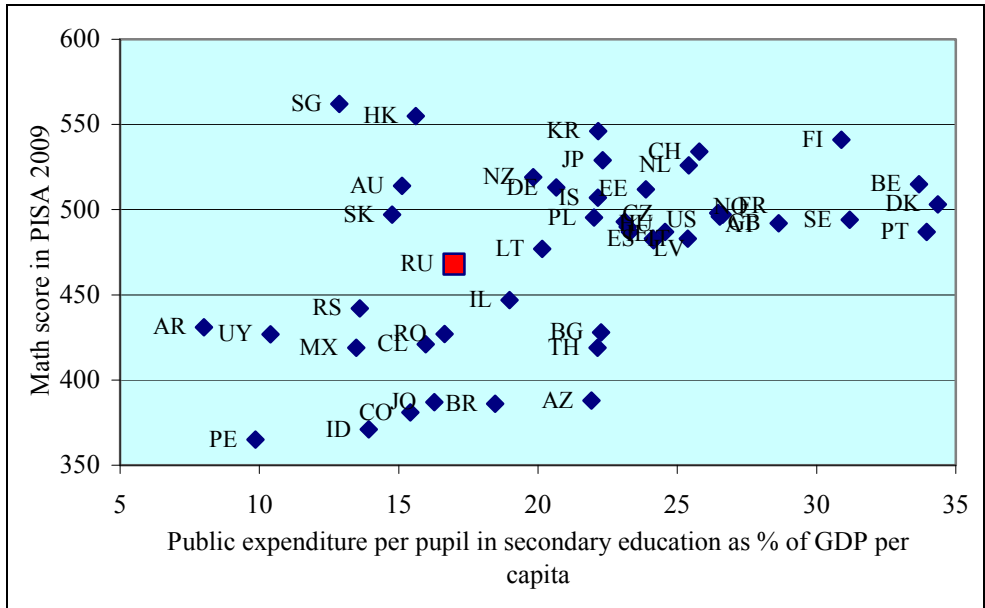


Sources: IMF World Economic Outlook database, UNESCO Institute for Statistics.

To estimate the efficiency of *general education*, the ratings provided by the Program for International Student Assessment (PISA) are particularly valuable. PISA is a worldwide evaluation of 15-year-old school pupils' scholastic performance. It was first administered in 2000 and is repeated every three years. It is coordinated by the OECD, with a view to improving educational policies and outcomes (OECD 2010a). Mathematics performance is usually considered a universal measurement of overall scholastic performance. In 2009, Russia demonstrated no change in PISA performance as compared to 2003, but considerably reduced its score (by 8 points) compared to its 2006. Overall RF performance (using the score of mathematical literacy) relative to the level of secondary education expenditures can be characterized as medium or below average: the majority of participating countries achieved better results, albeit at noticeably larger costs, while a few best-performing countries demonstrated outstanding outcomes with moderate economic resources but in a diverse social context (see Fig. 2.14).

Moreover, judging by other educational outcomes (student performance in reading, science and problem solving) derived from PISA 2003 - 2009, the differences between the OECD average and respective scores for Russia do not tend to decrease (Table A1.4, Annex 1). Besides, there is a growing lag in the cognitive competencies to understand, use, and reflect on textual information.

**Figure 2.14. Public expenditures per pupil in secondary education and math scores in PISA 2009**



Source: OECD (2010a).

This is an indication of a fundamental weakness of the Russian education system, namely its focus on memorizing factual and procedural knowledge to the detriment of developing learning skills. This includes lags (as compared to OECD averages) in students' performance across three reading subscales: (1) the ability to access and retrieve information from what they read (26 score points in 2009); (2) the ability to integrate and interpret what they read (26 score points); and (3) the ability to reflect on and evaluate what they read (53 score points) (OECD 2010a).

The quality of Russian *tertiary education* is also a source of concern. There are no tools of comparative quality assessment, so it can be only measured by indirect indicators such as the number of foreign students studying in Russia, which is currently less than 2% of the total number of foreign students in the world and there is a noticeable downward trend (UNDP 2010).

The most reliable measure of the efficiency of tertiary education is its international competitiveness; the latter can be indirectly assessed based on the international ratings of the country's leading universities and other tertiary education institutions. The Times Higher Education World University index<sup>10</sup> ranks (since 2004) the top 200 institutions across the globe according to 13 performance indi-

<sup>10</sup> <http://www.timeshighereducation.co.uk/world-university-rankings/2010-2011/top-200.html>.

cators capturing the full range of university activities, from teaching to research to knowledge transfer. These 13 elements are brought together into five categories, which are: 1) Teaching — the learning environment (worth 30% of the overall ranking score); 2) Research — volume, income and reputation (worth 30%); 3) Citations — research influence (worth 32.5%); 4) International mix — staff and students (worth 5%), and 5) Industry income — innovation (worth 2.5%). As of today, none of the Russian universities have been included into the Times Higher Education rankings.

At the same time, another well-established leader of the world university ranking industry, QS World University Rankings<sup>11</sup>, tries to capture everything that makes a university noteworthy in the world, including teaching, research, and international commitment, proceeding primarily from its own academic review process involving over 9,000 people across the globe. In its latest (2010) rating, Lomonosov Moscow State University ranks 93rd in the world, having moved up 8 positions since 2009. Other Russian universities on the list include St. Petersburg University (210th in 2010, moving down from 168th in 2009), Novosibirsk State University (375th in 2010 as compared to 312th in 2009), and Tomsk State University (that moved upwards to a group of 400 – 450).

## **2.9. Education sector mid-term outlook**

A mid-term outlook for the development of the education sector was presented in the “Concept of Long-Term Socio-Economic Development of the Russian Federation in the Period through to 2020”, which was developed and made public on the eve of the economic crisis (RF Government 2008). At the moment of writing, the preparation of a new long-term concept for RF socio-economic development up to 2020 has been initiated.

The implementation of the innovation scenario of economic development implied an increase in total (government and private) education spending up to 5.5 – 5.7% of GDP at the first stage (by 2012). At the second stage (2013 – 2020), overall education expenditures were expected to increase up to 6.5 – 7% of GDP, including a growth in budgetary expenditures for education up to 5.5 – 6% of GDP.

The major aims in the area of education included the following: the attainment of 60 to 70% of population coverage by tertiary and secondary vocational education (which was about 50% in 2007), a transition to customized life-long learning

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<sup>11</sup><http://www.topuniversities.com/university-rankings/world-university-rankings/home>.

available to all citizens, the introduction of innovative technologies with corresponding professional support, an increase in accessibility and quality of education services, a reduction of informal payments, etc.

The Concept envisaged that by **2012**:

- all general education institutions and no less than 50% of vocational education institutions will introduce per capita financing and develop financing standards and criteria for all areas of training;
- the proportion of non-budgetary funding of investments into vocational education would increase (by no less than 25%);
- the proportion of pupils studying in accordance with up-to-date educational standards (including the organization of education process) would grow by no less than 70%;
- the development of specialized educational programs in upper secondary education;
- pre-school education services would be available to all children in the corresponding age group.

By **2013-2017**:

- the achievement of results sufficient for moving Russia to the upper third of international rating lists for all general education quality indicators;
- ensuring the participation of no less than 20 – 25% of the employed population in retraining and mid-career education programs;
- the establishment of applied Bachelor's programs (in no less than 15 training areas), ensuring up-to-date qualifications for specialists in the innovative economy sphere.

By **2018-2020**:

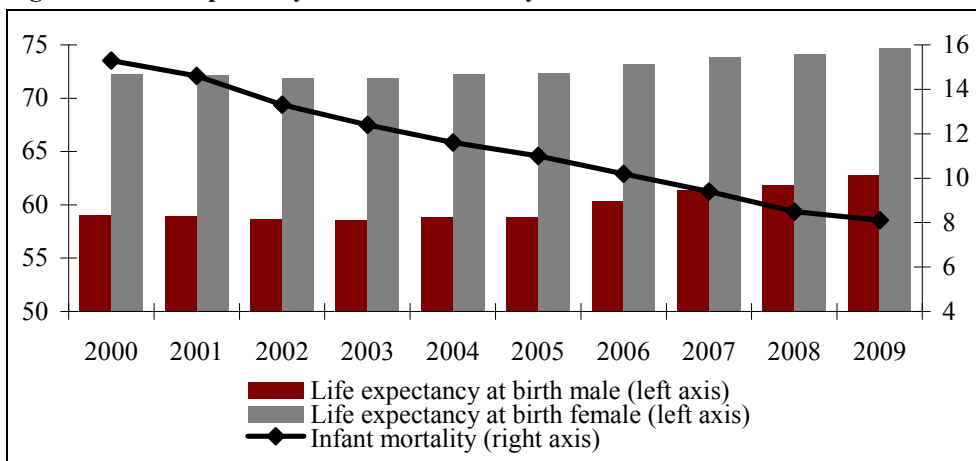
- the establishment of no less than 10 – 12 world-level academic and educational complexes;
- the percentage of research funding in educational institutions would account for no less than 30% of total research funding;
- the creation of conditions for engaging younger professors in the tertiary education system and the attainment of average professors' age at the level of other OECD countries;
- the establishment of a full-scale system of lifelong education with a coverage of no less than 50% of the working-age population;
- an increase in the proportion of enterprises and organizations that have retraining and mid-career education programs to no less than 20%.

## 3. Healthcare

### 3.1. Key sector indicators

Since the mid-1990s until recently, the *health and mortality situation* in Russia has been deteriorating continuously (See Fig. 3.1. ). Both infant and child (ages 1 – 15) mortality also remain relatively high but the trends are positive, with both indicators declining, albeit slowly.

**Figure 3.1. Life expectancy and infant mortality**



Source: WHO (2010).

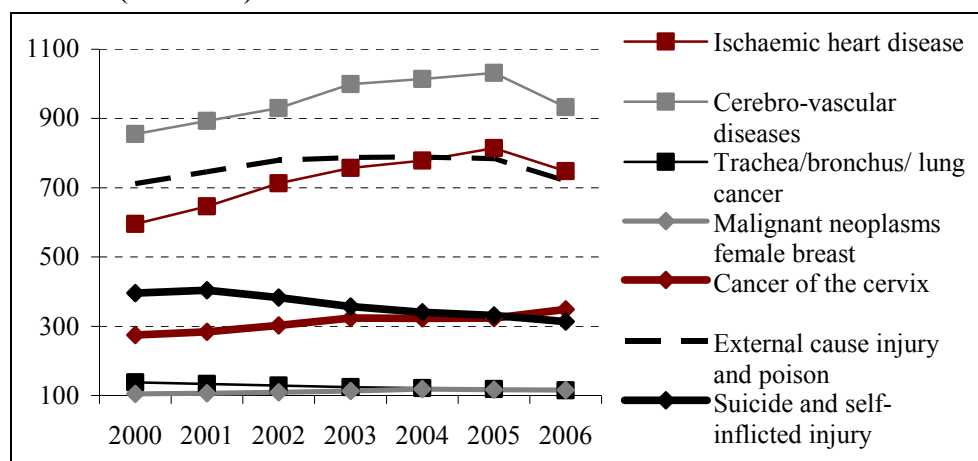
Some decline in mortality rates has been seen since 2006. The government attributes this to its efforts in the field of public health, including its growing funding and the implementation of the National Priority Project “Health”. It is true that the expansion of government programs in the field of public health most likely did have a positive impact on demographic indicators.

At the same time, most developed countries recorded tremendous progress in the reduction of the mortality rates (of the adult population in particular). Whereas in the mid-1960s, there were only small differences between life expectancy of the adult population in Russia and in OECD countries, by the early 2000s, the gap increased several times. For example, in 1965, the gap in adult life expectancy between the US

and Russia was less than one year; By 2005 it exceeded 11 years (Vishnevsky et al. 2006). High mortality affects the working-age population as a result of both its poor health status and “external” factors such as the significant number of deaths caused by accidental alcohol poisoning, traffic accidents, etc.

To compare mortality factors for the working-age population in various countries, we used imputed standardized SDR coefficients<sup>12</sup>. The available data also allow us to observe the evolution of these factors over time. Fig. 3.2 demonstrates that Russia faces high mortality rates caused by circulatory system diseases and ischemic heart disease (seven times higher than the EU-15 in 2006). The same is true for cervical cancer (the rate is nearly 3.5 times higher) and cerebrovascular diseases (more than 9 times higher). The roles of “external” causes of death, such as injury and poison (7 times higher), suicide and self-inflicted injury (three times), and homicide and intentional injury (25 times higher) are also of high importance.

**Figure 3.2. The age-standardized death rate (0-64 years per 100,000) by causes of death in Russia (EU15=100)**



Source: WHO (2010).

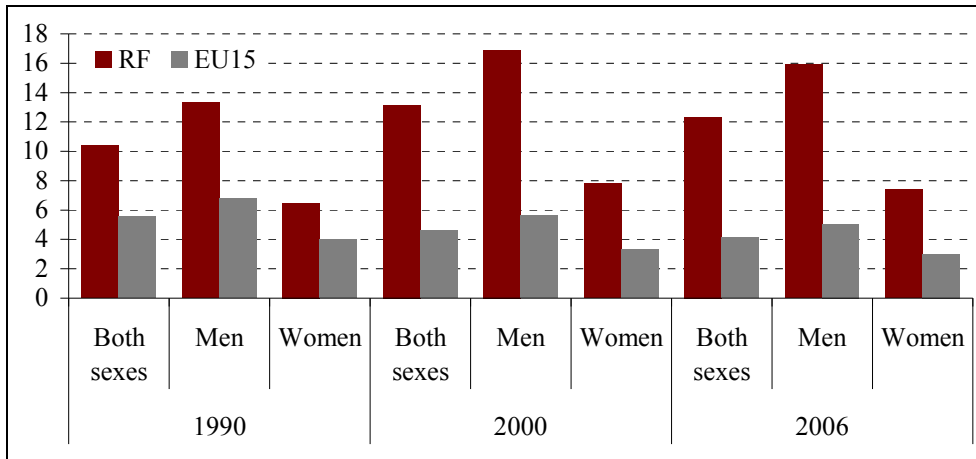
One useful measure of premature mortality used by the WHO is a reduction or loss of life expectancy from death at the age of less than 65<sup>13</sup>. Fig. 3.3 shows that

<sup>12</sup> SDR is the age-standardized death rate calculated using the direct method, i.e. representing what the crude rate would have been if the population had the same age distribution as the standard European population.

<sup>13</sup> Reduction of life expectancy through death before 65 years is a hypothetical increase in life expectancy if all mortality in the 0-64 age group is set to zero, calculated as  $LE\ at\ 65 + 65 - LE\ at\ birth$ .

the number of years of life lost due to premature death have been decreasing steadily in the European Region, while the gap between Russia and developed countries kept widening during the 2000s.

**Figure 3.3. Years of life expectancy lost as the result of death before 65 years of age**



Source: WHO (2010).

Lately, a trend toward a reduction in the number of deaths from cardio-vascular diseases became apparent. In 2009, this indicator declined by 56,000 (from 1,186 thousand in 2008 to 1,130 thousand), thus making a major contribution to the decline of the mortality rate in 2009. If, however, we look at the relative importance of specific causes of declining mortality in 2009, two major changes come to the forefront: a reduction in the number of deaths from accidental alcohol poisoning (down by 32% as compared to 2008) and from road accidents (down by 15%). These results could be attributed to measures implemented by the government related to control over alcohol production, as well as to the strengthened administrative responsibility for violating traffic regulations (since 2009). At the same time, the number of deaths from malignant neoplasms (the second in importance after cardio-vascular diseases) went up by 2%, despite the introduction of specific measures aimed at the improvement of medical assistance to oncologic patients (IET 2010).

In 2000s, *infant mortality* decreased significantly in all Russian regions. In 2000-2002, there were no regions with infant mortality below 8 per 1,000 live births; in 2006-08<sup>14</sup>, it was observed in every fifth region. The lowest figures are

<sup>14</sup> The data for each single year are unstable, therefore we are using averages for three-year spans.

invariably characteristic for St. Petersburg (below 5), the Khanty-Mansi okrug, and the Belgorod oblast (6 – 6.5). The regions with low infant mortality have modern prenatal centers, high per capita public health expenditures and good territorial accessibility of health care facilities. In Moscow, infant mortality is higher (about 7) due to megalopolis-induced stresses, an unfavorable natural environment and a high concentration of low-income migrants. For many years, the highest infant mortality was observed in the less-developed republics of the Northern Caucasus and Southern Siberia (22 in Ingushetia, 17 in Chechnia, 14-15 in Altai and Tyva in 2006-08); high rates are also typical for ethnic minorities in the Northern regions (14-17 in Chukotka and the Nenets AO). Overall, infant mortality problems are more severe in faraway regions with a low population density and inferior access to medical services, i.e. in the North and the Far East (Fig. A2.1, Annex 2).

The greatest progress in reducing infant mortality (by about 50%) in the 2000s was achieved in the regions which are far from being the most economically successful: Kaliningrad, Ivanovo, Chita and Tambov oblasts, and Karachai-Cherkessia. The regions with the lowest infant mortality reduction are even more heterogeneous, including less developed republics (Dagestan, Northern Ossetia, Kalmykia – 15 – 20% reduction), the resource-rich Yamal-Nenets okrug (16%), and the Far Eastern regions with heavy out-migration (Magadan oblast – 7%) (Fig. A2.2, Annex 2). Each of these regions has its own set of problems which hinder a further reduction of infant mortality rates, including the marginalization of some groups of the population (including ethnic minorities in the North), low incomes, increased poverty levels, non-modernized lifestyles, etc.

The highest *life expectancy* is typical for the regions of the Northern Caucasus (71-80 years in 2008), a result of a favorable climate and the low rate of alcoholism. One should take into account, however, the under-reporting of infant mortality, particularly in Ingushetia, Chechen Republic and Dagestan, which leads to some overestimation of life expectancy in these regions. Moscow, with the highest per capita income and a well-developed health system, is also among the leaders (72.8 years). Close to these leaders are other regions with high per capita incomes (St. Petersburg and the “oil and gas” okrugs of Tyumen oblast, as well as regions where a favorable climate is combined with low costs of living and higher than average per capita incomes (Tatarstan, Belgorod oblast, the Stavropol and Krasnodar Territories with 69 – 70 years) (Fig. A2.3, Annex 2). It is worth noting, however, that these figures are still 7 to 9 years lower than in OECD countries.

The most handicapped regions in terms of life expectancy are located in the East and Far North of the country (60 years in Chukotka and Tyva). Here, the major problem is low life expectancy among aboriginal peoples, in some areas approaching 50-51 years. In the Far Eastern areas with a predominantly Russian population, life expectancy figures are higher by only a small margin (63-64 years



for the total population in the Zabaikalye Territory, Amur and Magadan oblasts). Equally problematic are the Non-Black Soil Zone areas in European Russia (Pskov, Novgorod, Tver, Smolensk, Vladimir oblasts), where life expectancy among rural males is just 53-54 years, similar to Tyva, due to a heavy degradation of social environment and widespread alcoholism (IISP 2010).

Russia possesses a high and even excessive level of *healthcare infrastructure*, as compared to developed economies and countries with similar per capita income. WHO statistics indicate a noticeable hypertrophy of the specialized sector (both in terms of infrastructure availability and its utilization) concurrently with a sparse (and deteriorating) network of primary health care units. The level of hospitalization in the Russian healthcare system, and particularly the duration of stays in hospital (an integrated indicator is the number of bed-days per capita), is significantly higher as compared to European countries (see Table 3.1).

**Table 3.1. Availability of healthcare infrastructure (2006)**

	Hospitals per 100,000	Acute care hospital beds per 100,000	Hospital beds per 100,000	Average length of stay, all hospitals	Average length of stay, acute care hospitals only	Primary health care units per 100,000
Russian Federation	4.50	931.27	965.85	13.60	11.50	8.99
European Region	3.48	493.64	668.64	9.85	7.95	32.95
EU-15 (members before May 2004)	2.74	372.7	554.16	9.18	6.83	...
EU-12 (members since 2004 or 2007)	2.56	481.92	683.23	7.81	7.09	61.13
CIS	4.94	799.58	850.56	12.76	11.04	18.86

Source: WHO (2010).

A consistent pattern can be observed on the global scale: the higher the proportion of physicians at primary healthcare units (or the lower the percentage of narrow specialists), the less funding is required to attain the end results of the healthcare system. In Russia, the share of physicians in primary health care does not exceed 25%, as compared to 45-55% in developed economies (Vishnevsky et al. 2006). The number of general practitioners per 100,000 population in Russia in 2006 was less than 32% of the corresponding figure in the EU-27 and about 15% of that of the EU-15. Thus, having less resources than developed countries, Russia channels them to the most costly healthcare subsector, which reduces the efficiency of their utilization (see below).

An analysis of public **health services accessibility** for individual groups of the population should take into consideration various dimensions and factors. First, the large size of the country coupled with regional differentiation in healthcare funding implies a huge variation in the availability of infrastructure and the density of medical personnel. Second, like in many other middle-income countries, there are disparities in health services availability between the urban and rural population, the population of large cities and small towns, etc.

On the other hand, similar to other economies with relatively low health funding from public sources, Russia has developed a wide network of fee-based medical services, supplemented by official and unofficial out-of-pocket payments that negatively affect the accessibility of higher quality medical care for low- and middle-income households.

A tenfold growth in public health funding during 2000-2008 (in current prices) turned out to be insufficient for meeting the demand for medical assistance and did not ensure the required accessibility of health care. During the same period, the volume of fee-based medical services has grown sevenfold, while household expenses on medication increased almost six times. This spending behavior suggests that the needs for free medical services, including those rendered within the framework of state guarantees, are satisfied to only a small extent.

Besides, a number of factors, including a high differentiation of household income, the fact that a substantial proportion of households has incomes below or close to subsistence minimum<sup>15</sup>, the increase in the number of fee-based medical services and their prices, as well as growing prices for medication, quite often make quality health services inaccessible for significant segments of the population. The surveys of household expenditures on health services made in mid-2000s demonstrate that these expenses accounted for 40% to 45% of total health spending (both government and private). Over 50% of patients paid for hospital care, 30% paid for outpatient care, and 65% paid for dental care. Formal and informal payments for health care are particularly burdensome for low-income households. In popular consciousness, poverty is, to an increasing degree, associated with the inability to obtain medical assistance (Vishnevsky et al. 2006).

According to a sample survey of household budgets conducted in 2008, monetary expenses for paid medical services (per one household member) in the “richest” and “poorest” decile groups varied by a factor of 45 (whereas overall expenses for paid services in the same groups varied “only” by a factor of 7). At the same time, the proportion of spending for paid health services in the first decile group,

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<sup>15</sup> According to Rosstat, the number of people with monthly per capita incomes below the subsistence minimum (RUR 5625) was 19.1 million (13.6%) in the 1<sup>st</sup> half of 2010.

with the lowest disposable income, accounted for merely 1.2% of the total spending for paid services, whereas the same proportion in the tenth group (with the highest disposable income) amounted to 6.7% (Rosstat 2009). These data suggest an extremely high dependence of well-off households on higher-quality, fee-based health care on the one hand, and the very limited accessibility of similar services for poor households.

At the same time, access to free, public services is also highly differentiated for a number of reasons. One of these is high regional differentiation in public healthcare financing (see below). The gap between the “richest” and the “poorest” regions in this regard amounts to 10 – 12 times (if adjusted for variations in living costs, wages and utilities expenses, it is reduced to 4 – 5 times) (Shishkin 2008).

Other factors affecting accessibility could be of importance as well. The density of *physicians* depends not only on financing and development levels, but also on regional settlement systems and demographic situations; as a result, the differentials across RF subjects amount to 3.5 times, with  $K_{var} = 24.2$  (Fig. A2.4, Annex 2). The figures for Moscow and St. Petersburg are 1.6 times higher compared to the national average (79-84 physicians per 10,000), while in several less developed regions, the figures are 1.6 – 2.0 times lower than average (e.g. 24.5 in Chechen Republic and Ingushetia). Higher density is typical, as a rule, for more urbanized Northern regions compared to Southern areas; this is particularly noticeable in the Urals, Siberia and the Far East. In the majority of ‘aging’ regions in the European Central and North-West regions, density is lower due to the contraction of health care facilities networks and physicians’ wages in de-populating villages and small cities (IISP 2010).

Regional variations in the density of *nursing personnel* are generally less significant, with the exception of the least developed regions like Ingushetia ( $K_{var} = 15.7$ ); in fact, in less developed regions this density is, as a rule, somewhat higher, since even modestly paid positions and vacancies in the budget sphere in these areas are usually occupied (IISP 2010). As regards the capacity of *outpatient facilities*, of particular interest are the data on the analysis of proportions between the actual volume of outpatient services delivered across RF regions in 2009, and the need for such services calculated on the basis of general morbidity rates in the same year (RF Ministry of Health 2010). The analysis demonstrates that de facto volumes of services delivered corresponded to (or exceeded) the estimated needs in only 25 regions with no clear-cut geographic pattern, including, but not limited to, most of the higher income areas (Fig. A2.5, Annex 2). In the majority of RF subjects, the total services delivered lagged behind the estimated demand, while in 24 regions, this lag exceeded 10%. The latter included not only the republics of the Northern Caucasus and almost all of the Russian Non-Black-Soil belt, but also relatively successful regions (like St. Petersburg, Tatarstan and Samara oblasts).

Variations in the density of *hospital beds* across regions depend mostly on settlement patterns (Fig. A2.6, Annex 2); the maximum figures are therefore typical for the Non-Black-Soil regions, which are characterized by dense networks of small rural settlements and small local hospitals, as well as for the Northern and Far Eastern regions which have significant out-migration flows, due to the inertial retention of hospital infrastructure. The number of *patient days* spent in hospital (per capita) varied in 2009 from 1.260 in Ingushetia to 4.655 in the Archangel oblast, i.e. 3.7 times; not surprisingly, the geography of this indicator is roughly similar to the density of hospital beds (Fig. A2.7, Annex 2).

The indicator of public satisfaction with the delivery of such services can be used as a measure of the quality of healthcare services. With an average nationwide satisfaction level of 34.7%, this indicator varied in 2009 from the level exceeding or close to 50% (in Chukotka, the three Northern “oil and gas” okrugs, Ingushetia<sup>16</sup> (!), Mordovia, and Tatarstan) to less than 25% in Kaliningrad, Tver and Kirov oblasts, Kamchatka, Udmurtia, Northern Ossetia and Karachai-Cherkessia) (Fig. A2.8, Annex 2) (RF Ministry of Health 2010). While seemingly chaotic, the geography of public satisfaction closely correlates with the per capita financing of healthcare services.

### **3.2. Policy reforms in the healthcare sector**

The system of health care in the RF is organized as a mix of several models:

- in terms of the organization of healthcare services provision, it bears individual characteristics of the N. Semashko model that existed in the Soviet Union;
- in terms of mode of funding, a mix of budget-funded and insurance-based models has emerged;
- in terms of way of administration, it is divided between three levels (federal, regional and municipal ones);
- in terms of the pattern of ownership of healthcare facilities, three types could be identified: government (federal and regional), municipal, and private. Industry-sponsored medical services either remained under federal ownership (e.g. Ministry of Defense), or turned private due to

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<sup>16</sup> In Ingushetia, the high degree of public satisfaction is most probably related to high federal transfers for health protection in 2009.

a change of the industry form of ownership (e.g. OAO “RZhD” - Russian Railroads).

After fifteen years of reforms, the Russian healthcare system still suffers from low efficiency and rising costs. The territorial model of financing adopted under the CMI system led to increased inequality in access to medical services by making their quality dependent upon the place of residence. As a result, the insurers are interested in curbing treatment costs, while practitioners are more concerned with raising them, which runs contrary to the interests of patients. Widespread corruption aggravates the problem (Council of Federation 2010).

The basic government *policy goals* in the sphere of health care include (HSE 2008):

1. Enhancing the role of disease prevention and promotion of healthy lifestyles;
2. Developing up-to-date medical technologies and enhancing their accessibility;
3. Improving financing the state guarantees for free medical assistance;
4. Smoothing out inequalities in the access to healthcare for various population groups;
5. Extending citizens’ capabilities to affect the healthcare system;
6. Overcoming structural imbalances in healthcare system;
7. Promoting competitive markets for medical services; extending the ability to choose among multiple healthcare providers;
8. Enhancing the professional and economic motivation of medical personnel to improve the quality and efficiency of health care;
9. Enhancing the positive impact of health insurance upon health system performance;
10. Developing public-private partnerships to resolve healthcare problems.

The existing healthcare system, however, is hardly able to adequately meet these challenges. This is mostly due to existing disproportions between declared state guarantees and the amount of public resources available to back them. The resulting trend is an increase in the proportion of paid services and growing inequality in terms of access to health care (HSE 2008).

Since 1998, the RF Government annually adopts a Program of *state guarantees* for the provision of free medical assistance to RF citizens. The Program is financed from all major levels of the RF budget system: in 2009, 28.4% of the Program’s funding came from the federal budget, 34.9% originated from regional consolidated budgets, and 36.7% came from CMI funds (RF Ministry of Health

2010). Since 2005, the government has annually set normative standards for per capita financing of medical assistance.

In practice, however, these guarantees are violated, since the annually established per capita norms of financing are insufficient for satisfying the demand for healthcare services – across all spending items and from any public funding sources (Vishnevsky et al. 2008). For example, in 2008, the government established per capita standards for financing the State program as a whole and the Base program of compulsory medical insurance (CMI) at the level of RUR 4503 and 2201.1, correspondingly. Even if the actual values were somewhat higher (see Table A2.1, Annex 2), they were very modest in absolute terms, exceeding the monthly subsistence minimum by just 35%. At the same time, these funds were used not only for financing a wide spectrum of medical services but also for covering the utility costs at medical institutions, financing the value increase of basic assets, provision of medication at hospitals, etc.

Inter-regional differences in health care funding result, to a great extent, from inequalities in the per capita financing of Territorial Programs of State Guarantees (TPSG). Among the regions, the gap is 19.4 times. In 52 regions, funding was smaller compared to the country average. In 49 regions, state funding of TPSG (spending from consolidated regional budgets plus from CMI funds) was lower compared to the estimated Program costs. The funding deficit amounted to RUR 42.8 bn (3.6% of the Program cost); in 28 regions, this deficit exceeded 10% and in 11 regions it went beyond 20%. In the majority of these regions, the under-financed items included, most often, emergency assistance and day patient care.

In many regions, even regionally adopted standards are not complied with. According to data from the Ministry of Public Health and Social Development, the complex assessment of TPSG performance in 2008 demonstrated that only nine regions, i.e., 10,7% of the total, implemented TPSG normative standards (Belgorod, Lipetsk, Moscow, Samara and Sverdlovsk oblasts, republics of Tatarstan and Chuvashia, the Perm Territory, and Khanty-Mansi AO) (Ministry of Health 2008). These standards were met in less than 70% of the remaining regions, and in eleven regions, the TPSG implementation level did not exceed 40%. The laggards included Kursk, Archangel, Kaliningrad, Kirov, Kurgan and Kamchatka oblasts, the republics of Ingushetia, Kabardino-Balkaria and Northern Ossetia, as well as the Altai and Krasnoyarsk territories.

Given the shortages in public funding, fee-based services often replace those which are formally guaranteed by the government as free of charge. On the other hand, the scope of paid healthcare services depends, in many instances, on the fuzziness of free medical assistance guarantees provision. Besides, household payments (especially informal ones) bear no relation to the public priorities in

health care development. These payments do not, as a rule, support neighborhood doctors or the development of general medical practices; on the contrary, they are usually channeled to specialized practice, in many instances artificially supporting the excess capacities of medical institutions. In fact, a latent commercialization or, sometimes, de facto privatization of the most popular medical institutions and services is underway.

In other words, the existing system of guarantees with blurred boundaries between free and fee-based services does not ensure efficient utilization of public funds, preserves barriers to healthcare access for the poor and part of the middle-class households, and increases dissatisfaction with the healthcare system functioning, and therefore requires modernization. This system cannot serve as a basis for developing health insurance, remuneration of health care providers in accordance with their performance, raising the motivation of health care professionals, and shaping a reasonable combination of public and private health care funding (HSE 2008).

A discussion on essential *healthcare reforms* has been underway since the beginning of the 2000s. In May 2004, the Presidential Address to the Parliament and Government suggested making state guarantees of medical care more specific, moving from funding based on cost estimates to funding based on performance and quality, and introducing insurance principles.

After an attempt to “monetize” in-kind social benefits in early 2005, the paradigm of healthcare policy shifted significantly: the focus was now on mitigating the most acute sectoral problems through a substantial increase in public funding. Reforms in the organization, management and financing of the health care system were suspended. Since 2006, government policy has become focused on the implementation of PNP “Health,” which was initially planned for two years (2006-2007) but later extended up to 2012.

The major goal of the “Health” PNP was to upgrade the technical basis of the healthcare sector and to enhance the qualification of the medical personnel, thus creating conditions for the improvement of health indicators. The project is financed from the federal budget and extra-budgetary funds: the Federal Fund of Compulsory Medical Insurance and the Fund of Social Insurance. Initially, the federal budget allocated substantial funds for raising the salaries of district physicians and nurses, rehabilitating outpatient clinics, constructing healthcare centers, etc. (Table A2.2, Annex 2).

The project implementation contributed to a substantial increase of total budget appropriations for health care, raising them annually by 10%. Despite the economic crisis and the associated contraction of government expenditures, the outlays for the National Project in 2009 were increased by 20.2% as compared to 2008, with

project funding amounting to 13.7% of overall public expenditures on health care. Still, as Table A2.2 (Annex 2) demonstrates, the project's importance reached its peak in 2007 when, funding amounted to 0.42% GDP. In 2008, this ratio declined to 0.29% GDP.

In 2009, the Project's funding structure underwent a series of adjustments. It was supplemented by measures aimed at enhancing healthy lifestyles, tuberculosis screening, preventive control aimed at improving medical assistance to oncological patients, improving the network of prenatal centers, prophylactic medical examinations for orphans and children residing in difficult conditions, etc.

Expenditures on basic medical and sanitary aid and disease prevention fell substantially, both in absolute and relative terms: the proportion of this component in the Project funding decreased from 54.5% to 38.4%. During the first year of the Project's implementation (2006), this component played a leading role: it accounted for 82.6% of the overall expenditure. Instead, the Ministry of Public Health and Social Development focused its efforts on upgrading the technical basis of medical assistance. The percentage of funding for this item went up from 16.5% in 2006 to 42% in 2009. Expenditures on the improvement of medical assistance to mothers and children also increased noticeably, from 11.9% to 17.4% of the total. In 2010, funding for the national project as a whole remained at approximately the same level as in the previous year.

Despite tangible accomplishments achieved in the course of the project's implementation, it does not exclude the need for a comprehensive health care system reform (Sheiman & Shishkin 2009). Due to its design, the national project was unable to ensure significant progress in meeting the key challenges the Russian public health system is facing, i.e., the declaratory and obscure character of guarantees of free medical assistance, the low efficiency of the chosen model for compulsory medical insurance, insufficient protection of individuals from the necessity to pay for medical treatment, inequality in access to medical assistance among different social and territorial groups, the low structural efficiency of the health care system, weak medical staff motivation, etc.

The National Project did not have enough resources to accomplish even the proclaimed goals and it did not envisage any major institutional changes. While the National Project has cleared the road for these reforms, in reality they have not started yet. Whereas the Project included the implementation of a pilot program of new public financial instruments in 19 regions in 2007-2008, there were no major institutional breakthroughs affecting the entire public health system, and none are envisaged for the future (IET 2010).



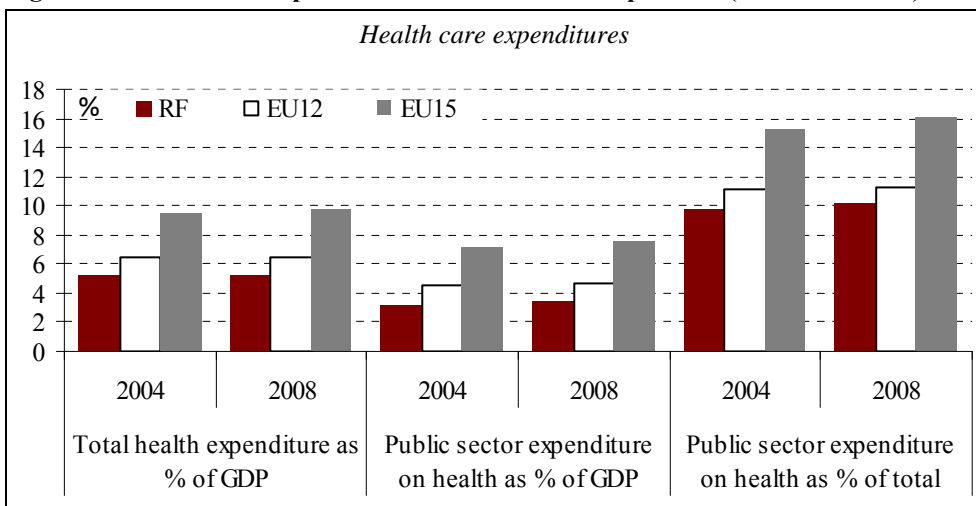
### 3.3. Spending trends

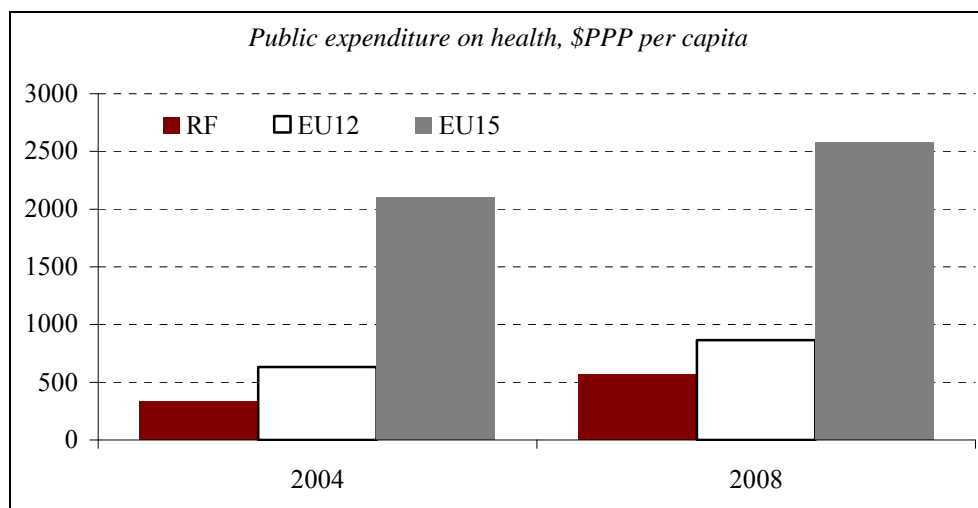
National statistical data demonstrate the stable growth of public healthcare funding in current prices: between 2005 and 2009, it more than doubled (Table A2.3, Annex 2), even if it often lagged behind the increase in total GG expenditures. As a result, the healthcare share in total GG expenditures has somewhat decreased. At the same time, the share of this spending item in the federal budget has grown, whereas it declined in regional consolidated budgets.

The substantial increase of the federal budget role in healthcare financing – from 11% in 2000 to 18% in 2008 and 21.3% in 2009 – was primarily caused by the implementation of the National Project “Health”. Simultaneously, the relative significance of regional budgets was declining – from 89% in 2000 to 45% in 2009. According to the Federal Treasury, the financing by CMI TFs accounted for about 33% in 2009 (Table A2.3, Annex 2, and Fig. 3.5).

Due to the GDP decline in 2009, the percentage of public healthcare spending in GDP increased as compared to 2008 (from 3.7% GDP to 4.2% GDP), but it remained modest in absolute terms by international comparison (see Fig. 3.4). Moreover, in real terms, public healthcare spending from all sources has not yet achieved the level of 1991 (IET 2010).

**Figure 3.4. Health care expenditures: International comparisons (WHO estimates)**



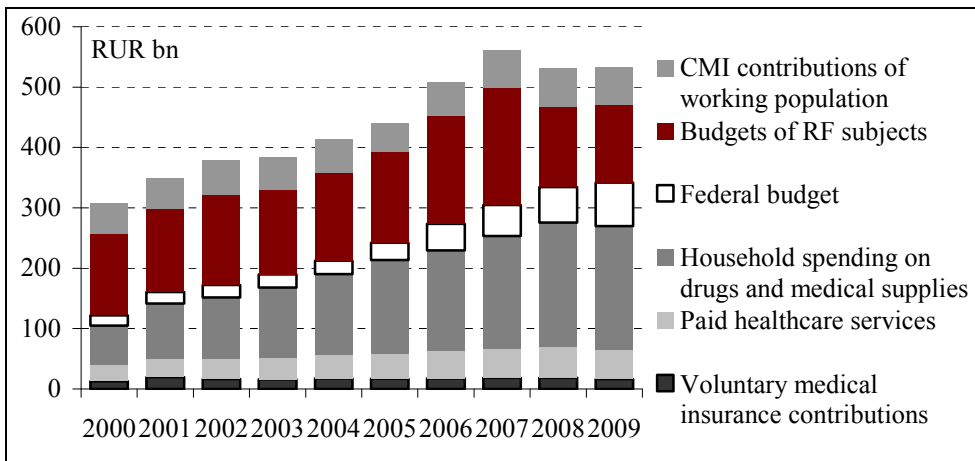


Source: WHO (2010).

The available statistical data does not allow us to trace the changes that occurred in the structure of public health care expenditures over time. We can, however provide a comparison between the relative importance of funding for various health care components for the two crisis years – 2008 and 2009. Table A2.4 (Annex 2) demonstrates the relative significance of specific areas of funding across the various levels of the RF budget system, whereas Table A2.5 (Annex 2) exhibits the breakdown of responsibilities among various levels of government for financing specific health care funding items.

Almost half of the federal healthcare budget is spent on hospital care; the situation is roughly the same with consolidated regional budgets. At the same time, almost two-thirds of hospital care financing originates from local budgets. Outpatient (ambulatory) care accounts for a much smaller proportion at both budget levels. i.e. approximately 14 -15% of their health budgets. This fact tends to confirm the major imbalance described above – the excessive specialized hospital facilities which take resources away from primary prophylactic and ambulatory medical care.

Although the relative importance of fee-based medical services (as % of GDP) has somewhat declined recently, their overall value is substantial, comparable to the volume of public capital investments into health care development. The real decrease in the volume of fee-based services in 2008-09 can be explained by the declining ability of households to pay for them. However, households' expenses on drugs and medication demonstrated continuous growth even in the crisis year of 2009 (IET 2010) (see Fig. 3.5).

**Figure 3.5. Public & private health care spending (2000 prices)**

Sources: Rosstat, RF Ministry of Public Health & Social Development, Shishkin & Sheiman (2010).

The *spatial inequality* in the overall per capita financing of the “Health care and sports” item from regional budgets is somewhat smaller compared to that in education ( $Kvar=60.1\%$ ) but still substantially exceeds differentials in per capita income (Fig. A2.9, Annex 2). If adjusted for variation in the living costs, however, this coefficient falls to below 30% (Fig. A2.10, Annex 2). The highest per capita funding in 2009 was recorded by the “rich” regions, including the “oil and gas” okrugs and the two federal cities, in several Northern and Far Eastern regions with severe climatic conditions and low population density – Chukotka, Kamchatka, Yakutia, Komi Republic, Magadan and Sakhalin oblasts, as well as in the Chechen Republic, thanks to recent cash infusions from the federal government. The laggards (with a fivefold gap) included four North Caucasian republics (Ingushetia, Kabardino-Balkaria, Dagestan and Northern Ossetia), as well as most of Central Russian oblasts (Kostroma, Ivanovo, Smolensk, Vladimir, Bryansk, Tambov, etc.).

Regional differentiation in budget spending for specific healthcare components displays a similar pattern but with some notable differences (Figs. A2.11 – A2.14, Annex 2). The gaps between the leaders and laggards are several times higher than in the overall health funding: 18.6 times for hospital care, 16.6 times for outpatient and day patient care, and 17.4 times for emergency service. The composition of leaders and laggards also displays some specificity: the two Volga republics of Mordovia and Chuvashia appear among the leaders in funding for outpatient care. Tomsk oblast and Udmurtia display, along with Vladimir oblast, the smallest funding of hospital care; the Krasnodar Territory and Rostov oblast are among the laggards in funding of outpatient care; the Chechen Republic has the smallest per

capita funding for ambulance emergency care – RUR 73. Tatarstan, with its high ranking in the overall health and sports funding and close to minimal per capita values in all three major health care components, represents a special case: miscellaneous items account for about half of the total, and over a third is spent on sports – a result of federal transfers for the preparation for the 2013 World Summer *Universiade* in Kazan.

### **3.4. Developments during the crisis**

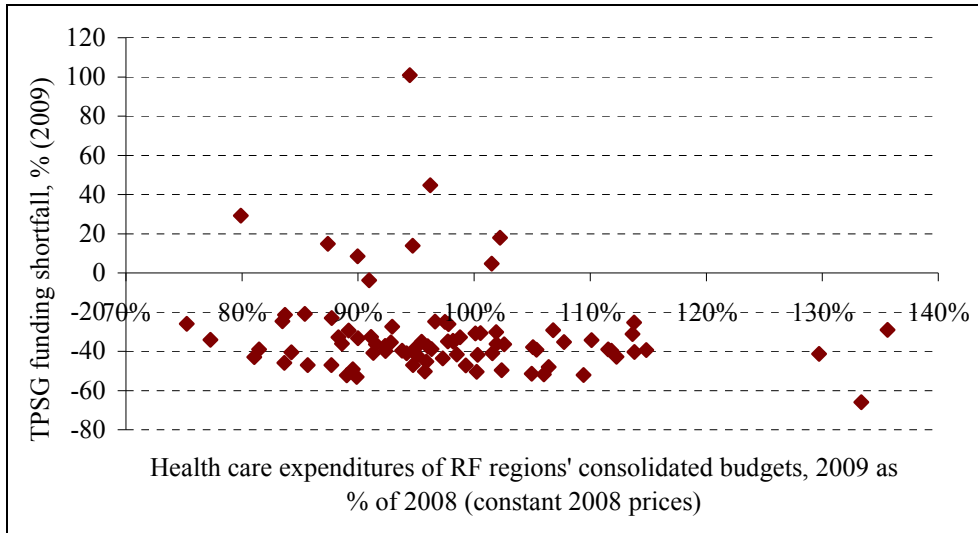
The financial crisis barely affected the 2009 federal budget spending on health care. Although its growth rate somewhat declined, it still remained high both in nominal (26.6%) and even real (23.6%) terms (using GDP deflator). On the other hand, the health care expenditures of consolidated regional budgets plummeted during 2009 both in current (-3.3%) and in constant (- 5.6%) prices (see Table A2.3, Annex 2, and Fig. 3.5).

The Program of state guarantees for the provision of free medical assistance for 2009 approved in December 2008 demonstrated the excessive optimism of the federal government regarding the financial capacities of regional budgets and employers' CMI payments. The per capita annual normative cost of provision of free medical assistance was increased 1.7 times - from RUR 4,500 in 2008 to RUR 7,633.4 in 2009, including the funding of the basic program through CMI – RUR 4059.6 (RF Government 2008b). Such a rise in normative costs over just one year could hardly be justified even in a favorable economic situation, let alone during a financial crisis. As a result, the financial deficit of the Program in 75 regions amounted to RUR 384.6 bn at the end of 2009 (23.3% of GG healthcare funding for this year). Consequently, normative standards for all categories of free medical assistance were substantially under-financed in the majority of regions (RF Ministry of Health 2010) (see Fig. 3.6).

Compared to education, regional health care spending suffered noticeably more from the financial crisis, even despite the fact that spending from consolidated regional budgets was supplemented by CMI TFs' expenditures. In 2008 prices, 53 regions, almost two-thirds of the total, had to cut their total health spending in 2009 compared to 2008; of these, 20 regions decreased their expenditures by over 10%. In the areas most heavily affected by the crisis (Sverdlovsk, Chelyabinsk, Samara oblasts, the Khabarovsk Territory), this reduction amounted to 20 – 25%. On the other hand, only 11 regions increased their health spending by more than 10%, predominantly due to federal transfers: these included less developed peripheral republics

such as Chechnia, Ingushetia, Karachai-Cherkessia, Adygeya and Tyva, the Far Eastern regions (Kamchatka and Amur oblast), and Tatarstan (Fig. A2.15, Annex 2).

**Figure 3.6. Funding shortfalls of Territorial programs of state guarantees for the provision of free medical assistance, % (2009)**



Sources: RF Ministry of Health (2008); RF Ministry of Health (2010).

In most regions, health spending was reduced (or increased) more or less in proportion to general spending cuts (increases). Quite a few regions, however, demonstrated specific trends of declining (in real terms) health expenditures against growing total budget spending – due mostly to massive federal targeted transfers: the Primorie Territory (in preparation for the APEC summit in 2013), Yaroslavl oblast (1,000th anniversary of the city in 2010), Kaliningrad oblast (regional airline support), Ivanovo oblast (support for the labor market), etc. On the other hand, as in the case of education, a few regions displayed the reverse tendency: noticeably rising health spending against a general trend of expenditure reduction (Archangel and Ulyanovsk oblasts, Komi Republic). Both federal cities and Tyumen oblast experienced a very significant (15-25%) decline in overall budget spending in 2009, but managed to maintain (or reduce insignificantly) health expenditures in real terms.

During the crisis, the financing of various components of the healthcare system differed across regions. Generally, spending on hospital care, especially outpatient care, was reduced at a greater rate compared to average, while spending on emergency services increased in the majority of regions. Hospital care expenditures decreased in real terms in 56 regions; of these, 15 regions (mostly in Central Rus-

sia) saw a reduction of over 30% – e.g. 40% in Udmurtia, Ulyanovsk and the almost bankrupt Moscow oblast, 45% in Kaliningrad oblast, and 54% in Smolensk oblast. At the other extreme, Tver oblast increased its hospital care spending by 72.5% (Fig. A2.16, Annex 2).

Outpatient (and day patient) care in the regions became the most under-financed item. In 2009, 66 regions reduced their funding for this item in real terms; of these, in 18 regions, funding volumes were less than 70% as compared to the previous year, and in four regions (Smolensk and Lipetsk oblasts, Ingushetia and Chechnia) they declined more than twice (Fig. A2.17, Annex 2). On the other hand, Archangel oblast and Mordovia increased their spending for outpatient care more than 2.5 times, thus raising its values from the lowest to about mid-country level. Contrary to outpatient care, funding of emergency assistance increased in real terms in the majority (53) of regions, including eight RF subjects where this increase exceeded 1.5 times. Still, in seven regions, funding for this item declined significantly (by more than 20%) (see Fig. A2.18, Annex 2).

A comparison of health care funding and health indicators across the regions suggests no correlation between the two sets of figures. First, a significant proportion of health spending supports aging health infrastructure and medical personnel salaries. Second, even if healthcare expenditures of GG increased 2.3 times in real terms between 2000 and 2009, one could hardly call them sufficient, especially when compared to other European countries (see Section 3.6). These are, along with a low efficiency of health care spending, the major obstacles to the improvement of health indicators in Russia. As a result, regional differences in health indicators are influenced by other factors, namely climate and lifestyles (IISP 2010).

### **3.5. Compulsory health insurance system**

A system of compulsory medical insurance (CMI) was established in Russia in 1993 to complement the budget-financed system; as a result, a new combined budgetary-insurance model of public health care funding emerged.

By January 1<sup>st</sup> 2010, the CMI system included the Federal CMI Fund (FF CMI) and 84 territorial CMI funds (CMI TF), including CMI TF for the city of Baikonur, 106 medical insurance organizations with legal entity status and 246 branches of medical insurance organizations. These organizations executed compulsory medical insurance in 82 out of 83 Federation subjects (except the Chukotka autonomous okrug) and in Baikonur. In 2009, medical assistance within the CMI system was provided by 8,142 health care facilities (52 more than in 2008). The expendi-

tures of the CMI system (as a source of funding for TF CMI) more than doubled during 2006-2009, and in 2009, the expenditures exceeded the healthcare spending of regional consolidated budgets.

CMI TF revenues are comprised of transfers from FF CMI, employers' contributions for employees (58.8 mln people in 2009), and transfers from the regional budgets for the inactive population (83.4 mln people). The respective shares of revenue sources in 2009 were shaped as follows: about 38% - employers and other contributions, 36% - transfers from the regional budgets for the inactive population and about 17% - transfers from FF CMI. These revenues are supplemented by non-repayable income from various sources (about 15%), including subsidies and subventions from the federal fund (about 4% of the overall revenues). In 2009, the only growing revenue items were insurance contributions for the inactive population (a 12% growth) and transfers from FF CMI (28.5%). The overall result was a moderate (2.7%) nominal growth. CMI TF revenue collection looked very differentiated across regions as a result of differences in shares of the inactive population, the depth of the recession and the sustainability of regional budgets. In real terms, the CMI system revenues in 2009 remained unchanged (see Table A2.6, Annex 2).

The CMI has funded primary medical care, emergency medical assistance and specialized (excluding high-tech) care provided at outpatient clinics, at hospitals and day patient facilities of all types. However, in individual regions, funding proportions have differed. In some regions, CMI has also funded medical assistance in the case of socially significant diseases, high-tech and emergency medical assistance, as well as ancillary funding items, such as maintenance of medical facilities, acquisition of equipment, capital repairs, etc.

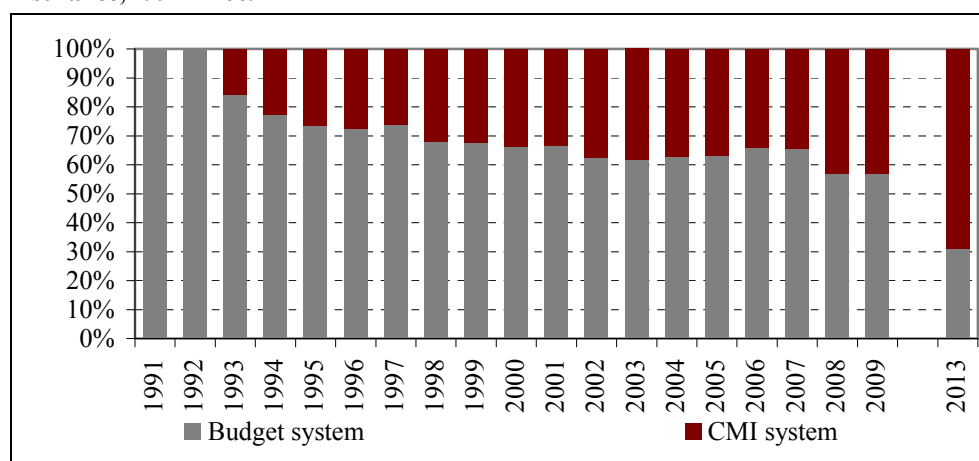
Between 2001 – 2009, the share of CMI funds in financing Territorial programs of state guarantees for the provision of free medical assistance (TPSG) gradually increased. Lately, however, this trend has stopped which is the result of the increasing role of the PNP "Health" (IET 2010).

In 2009, the share of CMI funds in the overall TPSG financing amounted to 52.0%; in 2008, it declined to 46.7%. This proportion varied from 86.8% in Kaliningrad oblast to 21.9% in the Khanty-Mansi autonomous okrug. In 40 regions, the share of CMI funds exceeds the share recommended by the RF Ministry of Public Health and Social Development, i.e. 55% (Federal Fund 2010).

Overall, a transition to a CMI-based health funding system has not brought about the expected results because of, first, inadequate financing and, second, the inconsistency of reforms. The reform was started, but not completed: an old budget-based system was only partially replaced by an insurance-based one (see Fig. 3.7). An eclectic combination of a budget- and insurance-based system gave rise to a new malady – unclear responsibility for the system's funding. The CMI system

suffered from many other flaws as well. The insurance mechanisms for the unemployed were not developed. Quality control and protection of patients' rights remain virtually non-existent. The choice of insurer is made by employers and by local authorities rather than by insured individuals themselves. Despite expectations, multiple insurers have not become informed buyers of healthcare services in the interests of the insured and have not noticeably contributed to improving the performance of the healthcare system (Vishnevsky et al. 2006).

**Figure 3.7. Proportions in health care funding: budget sources and compulsory medical insurance, 1991 – 2009**



Source: Shishkin & Sheiman (2010).

The CMI system, contrary to expectations, has spurred the unjustified growth of hospital care instead of constraining it. The insurers have learned how to pay for the actual scope of health services provided, but they are not motivated to streamline the forms of these services, and cannot plan for the delivery of such services to the insured. As the insurance companies seem to lose little from the existing imbalances, the inefficiency of the system is paid for by the patients themselves (Vishnevsky et al. 2006).

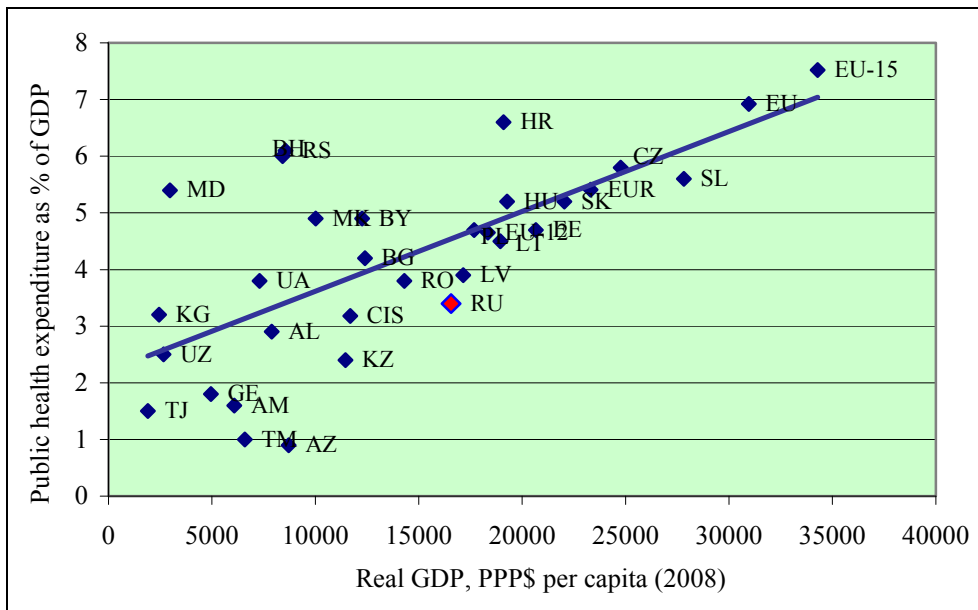
### 3.6. Efficiency of health care spending

Among many factors affecting the low efficiency of public healthcare spending in Russia, a pivotal role is played by chronic underfunding of the government's ambiguous goals.



According to WHO estimates, Russia's total and public healthcare expenditures per capita (in US\$ PPP) lag far behind not only Western Europe but all of Central and Eastern Europe as well (despite the fact that the latter faced similar starting conditions some twenty years ago) and this gap tends to widen (see Fig. 3.4). Even among FSU countries, Russia is outstripped by Belarus, Ukraine and Moldova in per capita public expenditure on health care (2008)<sup>17</sup>. Many less developed (compared to Russia) countries - e.g. Ukraine, Belarus, Moldova, Romania and Bulgaria, Serbia, Bosnia and Herzegovina - spend a comparable or larger part of their GDP on health care (see Fig. 3.8).

**Figure 3.8. Per capita public health care expenditures relative to per capita GDP (SPPP): International comparison (European region)**



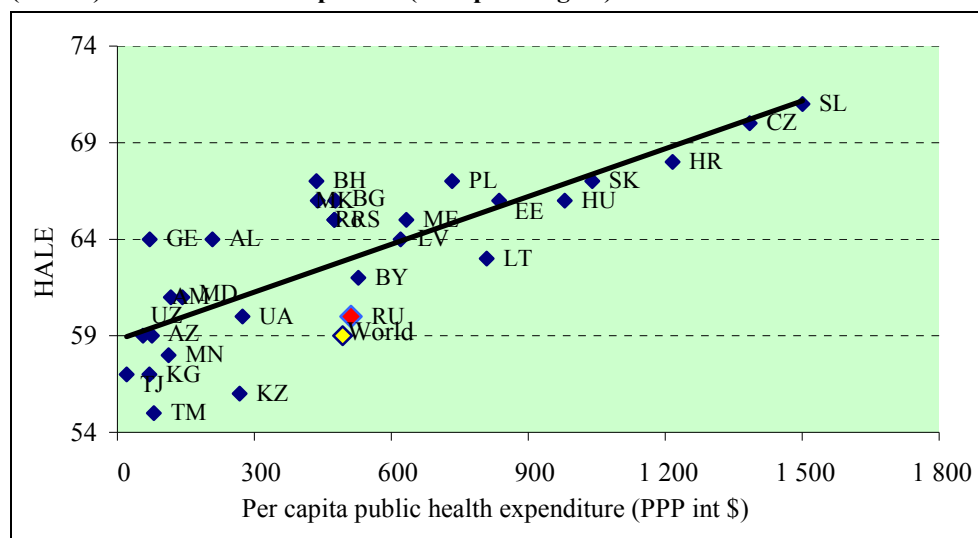
Source: WHO (2010).

The efficiency of public health care expenditures relative to outcomes could be demonstrated by plotting per capita health spending against an indicator of healthy life expectancy (HALE), a unified criterion developed by the WHO which is defined as the average number of years that a person can expect to live in full health by taking into account years lived in less than full health due to disease and/or

<sup>17</sup> The figures in the graph are based on WHO imputed estimates and may significantly differ from those supplied by national statistics; at the same time, only WHO data allow for correct international comparisons.

injury. Fig. 3.9 indicates that relative to its per capita healthcare spending, Russia's HALE is one of the lowest in the WHO European region and just slightly exceeds the world average. At the same time, in many countries with substantially lower per capita health expenditures, the HALE value is noticeably higher than Russia's (Armenia, Moldova, Albania, Georgia, Bosnia and Herzegovina, Macedonia, etc.). This indicates that it is not just the absolute amount of funds that matters, but the rationality of their utilization as well.

**Figure 3.9. Per capita public health care expenditures relative to healthy life expectancy (HALE): International comparison (European region)**



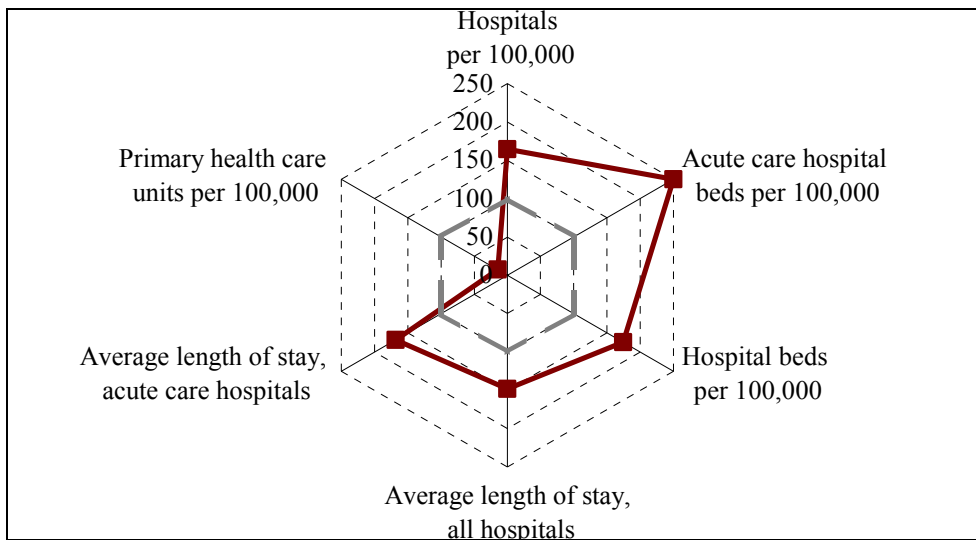
Source: WHO (2010).

These findings are corroborated by the IMF study aimed at benchmarking the efficiency of social public spending in Russia (Hauner 2007). It demonstrated that the health status of the population in Russia is roughly equivalent to that of countries with per capita health expenses that are 30% to 40% lower, suggesting the low efficiency of the Russian healthcare system. In turn, the inefficiency is caused by continuous distortions in the healthcare system – an inefficient structure of medical services provision and the system's inability to respond adequately to patients' needs (Vishnevsky et al. 2006).

In an international perspective, Russia spends a relatively higher share of financial resources on inpatient treatments compared to primary care and outpatient treatments. As a result, it uses far more physical resources per patient than other countries. The number of hospital beds and medical staff per patient in Russia far exceed the levels observed in EU countries (Fig. 3.10). As a reflection of this,

around 6% of Russian physicians work as general practitioners compared to 30% among EU15 countries. Furthermore, the share of auxiliary personal in health facilities is around 40%, which is higher than international standards. Overall, the Russian health sector has an excessive number of employees per capita (World Bank 2011).

**Figure 3.10. Availability of healthcare infrastructure (2006, EU15=100)**



Source: WHO (2010).

Unfortunately, efficiency improvements in social spending are mostly understood by both federal and regional governments as spending less budget money, although social modernization depends on the steady growth of government investments in the most efficient human development instruments (UNDP 2010).

A comprehensive regional assessment of TPSG efficiency conducted in 2009 by the RF Ministry of Public Health and Social Development employed 14 indicators, including health status, medical assistance quality and accessibility. The results of this assessment allow us to divide all of the regions into four groups. The first one, with a high level of TPSG implementation, includes 9 regions (10.8% of the total): Bashkortostan and Tatarstan, the Krasnodar Territory, the Khanty-Mansi AO, as well as Belgorod, Voronezh, Moscow, Sverdlovsk and Tyumen oblasts. At the other pole there are 20 regions (24.1%) with a low level of program implementation, including almost all the republics of Northern Caucasus (Dagestan, Ingushetia, Chechnia, Kabardino-Balkaria, Karachai-Cherkessia and Northern Ossetia), a large part of the Far East (Kamchatka, Chukotka, Magadan, Sakhalin and Amur oblasts and the Jewish AO), the republics of Komi, Kalmykia and Tyva, the three

Central Russia oblasts (Smolensk, Tver and Pskov), as well as Kaliningrad and Volgograd oblasts.

### **3.7. Mid-term outlook for the health care sector**

The mid-term goals for the Russian health care system were formulated in the RF Concept of Long-Term Socio-Economic Development until 2020, adopted in 2008 (RF Government 2008a). It sets the following targets in respect to health care system funding:

- at the first stage, by 2012, total (public and private) health care expenditures are to be increased to 5.2 – 5.4% of GDP;
- at the second stage, by 2020, an introduction of innovative technologies into health care would require raising total health expenditures to 6.7 – 7.0% of GDP, and raising public health care funding to no less than 5.2 – 5.5% of GDP.

Apart from declaratory statements, the Concept sets several specific goals with regard to health care by 2020:

- to reduce mortality from circulatory system diseases by no less than 1.4 times, and that from externally caused injuries and poisonings by approximately half;
- to reduce infant and maternal mortality to the level typical for developed countries;
- to reduce the incidence of socially significant diseases by a factor of 1.5;
- to increase the scope of ambulatory, particularly prophylactic, assistance approximately 1.3 times; to significantly raise the efficiency of hospital stock use.

In February 2008, the RF Ministry of Public Health and Social Development established a commission with the mandate to design a Concept of Health Care Development through 2020. In January 2009 (in the middle of the crisis), after an extensive discussion, the draft Concept was submitted to the RF Government. At the time of writing, in October 2010, it was not yet approved. The draft Concept set the following primary goals:

- reversing, by 2011, the decline of the population of the Russian Federation and increasing it up to 145 million people by 2020;

- bringing average life expectancy to 75 years;
- reducing the crude mortality rate to 10 (i.e. 1.5 times as compared to 2007);
- reducing the infant mortality rate to 7.5 per 1,000 live births (by 20% compared to 2007);
- bringing maternal mortality down to 18.6 per 100,000 live births (by 15.7% compared to 2007);
- shaping healthy lifestyles, including reducing the prevalence of tobacco use down to 25%, and reducing alcohol consumption to 9 liters per capita annually;
- raising the quality and accessibility of health services, as guaranteed to the citizens of the Russian Federation.

## **4. Conclusions and recommendations**

- 1.1. The years of favorable external environment helped to build the highly centralized budgetary system in Russia. Its major components were a strong federal budget fed by increasing revenues from energy exports (and insured against oil price fluctuation through the system of reserve funds) and highly differentiated, in size as well as in capacity, regional budgets. Support to weaker regional budgets was accomplished through the system of inter-budgetary transfers.
- 1.2. In the pre-crisis period, the delimitation of expenditure mandates among the tiers of government tended to transfer the larger part of responsibilities (especially with respect to social services and social policy) to the regional level. As a result, a mismatch between revenue sources and expenditure obligations emerged at all tiers of the budgetary system. This concerned the relationship between the federal budget and consolidated regional budgets and, even more so, the relationship between regional and municipal budgets. Thus, the execution of expenditure mandates at the regional level relied upon the system of inter-budgetary transfers.
- 1.3. In Russia, similar to other centralized federations, the problem of so-called unfunded federal mandates arises, when funding is to be provided by regional budgets to implement decisions made at the federal level. International experience suggests that the central government should play a more active role in resolving these kinds of systemic imbalances. Otherwise it leads to a distortion in regional spending policies.
- 1.4. The large size of inter-budgetary transfers results in the low level of transparency of regional and local budgets, while increased participation of the higher tiers of government in funding the spending obligations of the lower ones has a detrimental effect on their accountability.
- 1.5. At the beginning of the crisis, the reform of the social insurance system (including pension and medical insurance) was far from complete. The basic parameters of the reform and the schedule of its implementation were revised several times. In addition, the new systems remained under-financed, requiring additional transfers from the federal budget.

- 2.1. The policy reaction to the crisis was based on spending the reserve funds that were accumulated during the period of favorable economic conditions. The decline in GDP and in budget revenues was accompanied by an increase in budget expenditures and even by costly pension increases. Simultaneously, a further centralization of the already centralized revenue and expenditure redistribution was observed.
- 2.2. The anti-crisis measures (programs) focused mostly on supporting the largest corporations and not all of them were implemented in a timely manner. Some of them indirectly disturbed the incentives of economic agents to behave in a responsible way and to adequately assess risks. The system of regional anti-crisis measures had an emergency, one-off character. Nevertheless, this plan worked in 2009, due to the sufficient size of financial reserves in the federal budget. As a result, the crisis has not played the traditional role of “purgatory”; it did not push forward the restructuring of the budget sector and did not lead to expenditure streamlining.
- 2.3. As a result of the crisis, the role of the federal budget in financing social services increased considerably. This meant that the trend towards a devolution of expenditure obligations in education and healthcare from the centre to the regions was temporarily discontinued.
- 3.1. During the crisis, the growing imbalances of regional budgets increased pressure on the system of inter-budgetary transfers and caused a build-up of indebtedness in the regions.
- 3.2. The crisis damaged the existing (albeit flawed) system of inter-government fiscal relations, making a large part of transfers subject to arbitrary decisions that increased the proportion of "bargained" transfers. The crisis revealed the bottlenecks in the established inter-budgetary transfer system, including: (1) the insufficient size of the Regions' Financial Support Fund and the low proportion of grants in the total amount of inter-budgetary transfers, (2) the huge number of subventions (including small-sized ones), challenging the effectiveness of the existing division of expenditure obligations between the various tiers of government, (3) the excessive amount of subsidies, coupled with a non-transparent and inefficient distribution system.
- 3.3. A high level of fiscal centralization does not create incentives for the development of the regions as it pushes them to lobby for transfers from the federal budget that were decided arbitrarily. Under these circumstances, the crisis brought neither cost optimization nor an improvement in financial management at the regional level.
- 3.4. During the crisis, the federal government took steps aimed at stimulating expenditures reduction at the regional level and the creation of additional

financial reserves. Unfortunately, these measures failed to produce the desired effect, resulting in increasing the regional deficits despite the growth of inter-budgetary transfers.

- 3.5. Regional budgets weathered the crisis relatively painlessly. This was mostly due to the growth in federal budget loans that went to the most affected regions as part of an anti-crisis assistance package (credit markets for the regions were essentially closed). For the regions, these were the only source of refinancing their debts or simply covering budget deficits.
- 4.1. In the medium term, the overall fiscal situation will remain volatile and far from the good shape it was in prior to the crisis. The incompleteness of expenditure reform at all tiers of the budget system plays a significant role here. The situation is aggravated by the running down of the Reserve Fund and an inevitable transition to external borrowing.
- 4.2. Fiscal policy has not adjusted yet to the new post-crisis environment. In particular:
- the crisis has not contributed to expenditure rationalization and its adjustment to declining revenues at any of the tiers of the budget system;
  - a systemic imbalance remains between revenue potential and expenditure commitments throughout the entire budget system, which presently also includes the federal level at which the additional expenditure obligations emerged, for example, increasing transfers to the regions, balancing the budget deficit, funding the pension system, etc.;
  - the continuous systemic shortcomings of inter-budgetary transfers also impede the effective use of these resources at the regional level.
- 4.3. The problem of how to balance the regional budgets in the medium term remains unresolved. For 2011-2013, the potential to increase federal transfers will be limited. Under these circumstances, the regional spending commitments can be fulfilled only at the expense of further increasing the regions' debt. The peak of servicing debt generated in 2009 (in the form of budget loans) will come in 2012. However, the budgetary situation in many regions will most probably not improve, given the slow economic growth and weak tax base. As a result, the write-off, rollover or refinancing of budget loans is highly probable, which in any case will have to be financed by the federal budget.
- 4.4. Low tax autonomy, and, consequently, limited flexibility in expenditure policy at the regional level will not change in the mid-term. Consequently, the incentives for optimizing regional spending will remain weak. The discretionary system of resource allocation that has been developed during the crisis period encourages regions to bargain and negotiate rather than mod-



- ernize and reform. In the longer term, this may lead to a crisis of the Russian fiscal federalism system that developed during the period of budget surpluses. Standard & Poor's suggests that serious problems with regional deficits will be seen as early as 2012.
- 4.5. The crisis' impact on the delivery of education and health services appears to be delayed. The major consequences are yet to come as the resources reserved during the pre-crisis times are exhausted; the situation can worsen in the case of a new adverse external shock. The 2010 provisional results have already registered the growth of the debt burden accompanied by a reduction in spending on the "National economy" and investment programs related to modernization, as well as a reduction in social expenditures, including healthcare and sports.
  - 5.1. The rationalization of the Russian educational network has to address several problems: the declining school-age cohorts, the settlement structure (e.g. ungraded schools in villages and small towns), increasing migration (from rural areas, small towns, other RF regions) and others. The number of pupils per teacher is growing but remains 30 to 40% lower than in developed European countries. While the student population in primary and secondary education continues to fall, the number of teachers has not followed the same trend. Local governments which manage basic education generally lack incentives to quickly adjust the teaching labor force to demographic changes by consolidating schools and classrooms.
  - 5.2. The crisis revealed problems in the education system that had been accumulating for a long time, but in the absence of hard budget constraints, they had not been explicitly identified. These problems are related primarily to the excessive rigidity of the public services delivery system which is unable to effectively adjust neither to growth in demand (which occurs, for example, in pre-school education) nor to decline (both in general and tertiary education). This problem is impossible to resolve within a budget-financed and inflexible service network. It clearly calls for serious institutional reforms, beginning with major changes in federal legislation.
  - 5.3. Between 2005 and 2009, spending obligations in the education sphere were decentralized. However, this process is far from complete: e.g. a relatively high proportion of financing for primary and secondary vocational education has remained a federal responsibility.
  - 5.4. In 2009, expenditures on education did not fall but even increased, as did the share of education spending in the federal budget. However, many regions experienced difficulties with financing state guarantees, which affected both the volume and the quality of the provided services. Reforms at the

regional level performed in the framework of pilot projects slowed down in 2009 due to a lack of funds.

- 5.5. In the medium term, educational funding will be growing in current prices, but below the inflation rate; that may further exacerbate the problems of funding the state guaranteed provisions at the regional level. As a result, the education sector's dependence on funds received within the regional budget equalization schemes will be growing.
- 6.1. The gap between public health care systems in Russia and in Western countries is much wider than in most other sectors of the economy, and the insufficient (relative to GDP) funding of health care is not the primary reason for this (HSE 2008). The most important problems of the Russian public health care system relate to:
- serious structural imbalances in the infrastructure networks providing medical services (poor development of primary care, dominance of hospitals in the system, excess capacities of healthcare facilities, etc.);
  - low efficiency of medical aid associated with autonomous systems of provision of primary, specialized outpatient, and stationary aid; lack of comprehensiveness in the treatment and diagnostic process; poorly coordinated programs of combating individual diseases;
  - understaffing of primary care (general practitioners) that should provide the major part of specialized medical services in outpatient and inpatient clinics;
  - low levels of material and technical equipment at health care facilities and insufficient qualifications of a significant part of the medical staff;
  - weak economic motivation of personnel and an expansion of informal fees in health care facilities.
- 6.2. In recent years, the proportion of CMI funds in regional public health care financing has grown considerably with high differentiation among regions. The efficiency of the current CMI system is modest, since financing of several types of major medical services is clearly insufficient. In addition, it does not include a drug insurance system, which seriously increases the costs of treatment and is particularly painful for less prosperous households.
- 6.3. The crisis had a strong negative impact on the planned transition to single-channel financing of health care facilities through the territorial CMI funds, including:

- a decrease in employer contributions to the CMI and an inadequate amount of federal aid to fund the normative financial standards for CMI programs;
  - a dramatic increase in the federal CMI annual normative cost of provision of free medical assistance. The absence of appropriate federal funding turned this increase, in fact, into an unfunded federal mandate. As a result, only a limited number of regions could balance programs of state guarantees in 2009;
  - a formal prohibition in 2009 to include additional costs into the CMI tariffs for the regions with an unbalanced program of state guarantees, even when these costs were financed by additional funds from the regional budgets.
- 6.4. The major problems in implementing free medical care guarantees are the following:
- insufficient financial support to the state guarantees program, and, as a consequence, an underfunding of the normative unit costs across all types of medical care in the majority of regions;
  - a mismatch between the needs of the population and the volumes of ambulatory care actually delivered;
  - a significant shortage of physicians and other medical personnel needed to provide outpatient and emergency services under regional programs, as well as disparities in the provision of hospital beds across major types of hospital departments;
  - large differences between regions in implementation of the territorial programs of state free medical care guarantees;
  - fragmentation of health care funding sources, preventing a full-scale introduction of the CMI system.
- 6.5. The economic crisis has not resulted in a reduction of the total amount of health care financing. Yet problems with the funding of state guarantees emerged at full scale in 2009 in the majority of regions. Territorial healthcare systems differ significantly both in terms of their levels of development and in the real implementation of public guarantees, while the system of public transfers reduces this differentiation only to a small extent.
- 6.6. The current system of state guarantees requires modernization. The existing mismatch between declared guarantees and their actual financing leads to increasing charges for health services, often including those that are formally guaranteed by the government. This is a direct consequence of the limited role played by insurance organizations in financing services, which reduces

the effectiveness of the utilization of public funds. Its negative social effect is the emergence of barriers to access to health care for the poor and a part of the middle class. The current system of state guarantees can hardly serve as a basis for developing health insurance, for remunerating health care providers in accordance with their performance, for increasing the motivation of health care professionals, and for shaping a reasonable combination of public and private health care funding.

- 6.7. Thus, the efficiency of the present healthcare system is severely hindered by the burden of long lasting unsettled problems, driven by the lack of coherent sector reforms and de facto by the persistence of the model of fragmented healthcare. The public and private systems of medical services delivery practically do not interact. In the nearest future this can lead to the emergence of a model of socially differentiated health care, with the two coexisting relatively independent systems, public and private, each oriented towards different social strata and providing a full spectrum of services.

### **Selected recommendations**

- 7.1. The crisis revealed an urgent need for a transition to the principles of performance-oriented budgeting (including the stage of preparation, drafting and executing budget expenditures) as opposed to the current department-based scheme. This transition has been started but it remains at the conceptual stage.
- 7.2. Adjustments in the regional co-financing mechanisms are required. This concerns, first, an optimization of the size of grants transferred to regions, and, second, a consolidation of federal transfers to regional budgets. A plausible method is the introduction of block grants to support an entire sector or group of industries (health, education), social and engineering infrastructure, etc. This measure could help regions to autonomously determine the optimal spending mix. The block grants should be allocated with due regard to regional specifics – the quantity and quality of regional infrastructure, the index of regional budget sufficiency, etc.
- 7.3. Currently, one of the major issues in budgetary policy is the inadequacy of existing methods of calculating regional budget sufficiency. They were tailored for the period of economic growth and function poorly in the time of crisis. Taking into consideration the perspective of moderate economic growth, the limited capacities of the federal budget to provide support to re-

gions, and an increase in regional deficits and indebtedness, these methods should allow policymakers to assess the needs of additional funding for social service sectors.

- 7.4. Under the conditions of a contracting regional revenue base, to avoid the growth of debt in the regions and an increase in the number of unfunded social service mandates, one of two options must be considered: 1) either the delineation of responsibilities between the federal and regional governments should be revised in order to leave part of the responsibilities entirely under the jurisdiction of the regions, and to return another part to the federal budget, or 2) regions should be provided with adequate revenue sources to finance these responsibilities on their own.

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# Annex 1. Education indicators

**Table A1.1. Students number and educational forms by federal districts (FD) and selected RF regions**

	Number of students per 100,000 (2008)	Students number growth rate, 1995-2008 (times)	Proportion of students studying at non-public higher education institutions (2008, %)	Proportion of students studying with full reimbursement of education costs*, %
<b>Urals FD</b>		<b>3.1</b>	<b>11</b>	<b>65</b>
Khanty-Mansi AO	357	13.8	9	69
Sverdlovsk oblast	488	2.5	16	60
<b>Volga FD</b>		<b>2.9</b>	<b>15</b>	<b>57</b>
Chuvash Republic	565	3.5	8	65
Samara oblast	568	2.6	18	57
<b>Far Eastern FD</b>		<b>2.6</b>	<b>9</b>	<b>55</b>
Republic of Saha (Yakutia)	458	3.9	12	47
Khabarovsk Territory	638	2.3	7	64
<b>Southern FD</b>		<b>2.8</b>	<b>15</b>	<b>49</b>
Stavropol Territory	507	3.7	17	57
Northern Ossetia	506	1.9	17	27
<b>Siberian FD</b>		<b>2.4</b>	<b>8</b>	<b>55</b>
Chita oblast	337	3.2	3	60
Novosibirsk oblast	648	2.3	9	64
<b>Central FD</b>		<b>2.6</b>	<b>26</b>	<b>51</b>
Belgorod oblast	528	3.6	11	66
Moscow	1254	2.6	32	51
Kostroma oblast	312	1.8	6	33
<b>North-Western FD</b>		<b>2.4</b>	<b>14</b>	<b>51</b>
Murmansk oblast	444	4.4	31	64
St. Petersburg	985	2.1	12	49
<b>Russian Federation</b>	<b>525</b>	<b>2.7</b>	<b>17</b>	<b>54</b>

\* Academic year 2008/2009.

Source: Rosstat.

**Table A1.2. Structure of education expenditures in the RF budget system by levels of education, 2003–2009**

	2003	2004	2005	2006	2007	2008	2009
<b>Per cent of total education expenditure in the RF consolidated budget</b>							
Preschool education (PE)	15.2	15.5	14.1	14.0	14.1	15.3	16.1
General education (GE)	49.8	50.2	44.4	45.9	44.6	44.3	44.6
Basic vocational education (BVE)	6.4	6.0	4.9	4.6	4.3	3.9	3.7
Secondary vocational education (SVE)	5.1	5.1	5.4	5.3	5.2	5.6	5.7
Tertiary education	12.9	13.0	15.7	16.4	17.9	17.7	19.5
Vocational training, retraining, and mid-career education	0.8	0.8	0.8	88.8	0.8	0.7	0.7
Youth policy and children health promotion	0.0	0.0	3.1	3.0	2.8	2.8	2.7
Applied research in education	0.0	0.0	0.2	0.1	0.2	0.1	0.3
Miscellaneous education issues	10.0	9.4	11.3	9.8	10.0	9.5	6.6
<b>Per cent of total education expenditure in the federal budget</b>							
Preschool education (PE)	0.8	0.3	1.2	1.0	0.9	1.0	1.0
General education (GE)	1.5	1.1	1.1	1.3	1.1	1.2	1.2
Basic vocational education (BVE)	21.5	20.0	3.1	3.3	3.0	3.2	3.1
Secondary vocational education (SVE)	13.1	13.0	11.5	10.5	9.0	9.6	9.0
Tertiary education	56.9	59.1	73.5	76.1	77.5	78.9	80.1
Vocational training, retraining, and mid-career education	1.4	1.4	1.7	2.1	1.7	1.1	1.1
Youth policy and children health promotion	0.0	0.0	0.3	0.2	0.1	0.2	0.2
Applied research in education	0.0	0.0	1.1	0.4	0.7	0.6	1.4
Miscellaneous education issues	4.7	5.1	6.6	5.0	6.0	4.3	2.8
<b>Per cent of total education expenditure of regional consolidated budgets</b>							
Preschool education (PE)	19.0	19.4	17.7	17.7	18.1	19.4	21.0
General education (GE)	62.6	62.9	56.3	58.4	57.7	56.7	58.7
Basic vocational education (BVE)	2.4	2.4	5.5	5.0	4.7	4.2	4.0
Secondary vocational education (SVE)	2.9	3.1	3.9	4.1	4.2	4.6	4.8
Tertiary education	1.2	1.1	1.1	1.0	1.2	1.1	0.9
Vocational training, retraining, and mid-career education	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Youth policy and children health promotion	0.0	0.0	2.2	2.1	2.2	2.3	2.1
Applied research in education	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous education issues	11.4	10.5	12.7	11.2	11.3	11.1	7.9

Source: Federal Treasury.

**Table A1.3. Financing specific levels of education by various levels of RF budget system (% of consolidated education budget)**

	2003	2004	2005	2006	2007	2008	2009
<b>Federal budget in % of total expenditures on education in RF consolidated budget</b>							
Education	21.0	20.5	20.2	20.5	21.9	21.3	23.4
Preschool education (PE)	1.2	0.4	1.7	1.5	1.4	1.4	1.4
General education (GE)	0.7	0.5	0.5	0.6	0.6	0.6	0.6
Basic vocational education (BVE)	70.8	68.4	12.7	14.6	15.3	17.5	19.7
Secondary vocational education (SVE)	54.1	51.9	43.1	40.4	37.8	36.2	36.8
Vocational training, retraining, and mid-career education	37.4	35.7	40.5	47.8	44.4	35.6	40.1
Tertiary education	92.8	93.3	94.7	95.1	95.0	95.1	96.4
Youth policy and children health promotion			1.8	1.6	0.8	1.3	1.8
Applied research in education			94.7	92.4	95.9	94.5	98.7
Miscellaneous health issues	9.9	11.2	11.7	10.6	13.2	9.6	9.9
<b>Regional consolidated budget in % of total expenditures on education in RF consolidated budget</b>							
Education	79.0	79.5	78.4	78.2	76.9	77.6	75.5
Preschool education (PE)	98.8	99.6	98.3	98.5	98.6	98.6	98.6
General education (GE)	99.3	99.5	99.5	99.4	99.4	99.4	99.4
Basic vocational education (BVE)	29.2	31.6	87.3	85.4	84.7	82.5	80.3
Secondary vocational education (SVE)	45.9	48.1	56.9	59.6	62.2	63.8	63.2
Vocational training, retraining, and mid-career education	62.6	64.3	52.8	46.9	50.5	59.6	58.9
Tertiary education	7.2	6.7	5.3	4.9	5.0	4.9	3.6
Youth policy and children health promotion			55.6	55.0	58.9	63.6	58.3
Applied research in education			5.3	7.6	4.1	5.5	1.3
Miscellaneous health issues	90.1	88.8	88.3	89.4	86.8	90.4	90.1

Source: *Federal Treasury*.

**Table A1.4. Quality of learning outcomes, PISA 2003 – 2009**

		Mean score		
		Mathematics <sup>1</sup>	Reading <sup>2</sup>	Science <sup>3</sup>
PISA 2003	Russian Federation	468.41	442.20	489.29
	OECD average	500.00	494.20	499.61
PISA 2006	Russian Federation	475.68	439.86	479.00
	OECD average	497.68	491.79	500.00
PISA 2009	Russian Federation	468	459	478
	OECD average	496	493	501
Differences in PISA 2009 and PISA 2003 (PISA 2009 - PISA 2003)	Russian Federation	0	17	-11
	OECD average	-4.0	-1.0	1.4

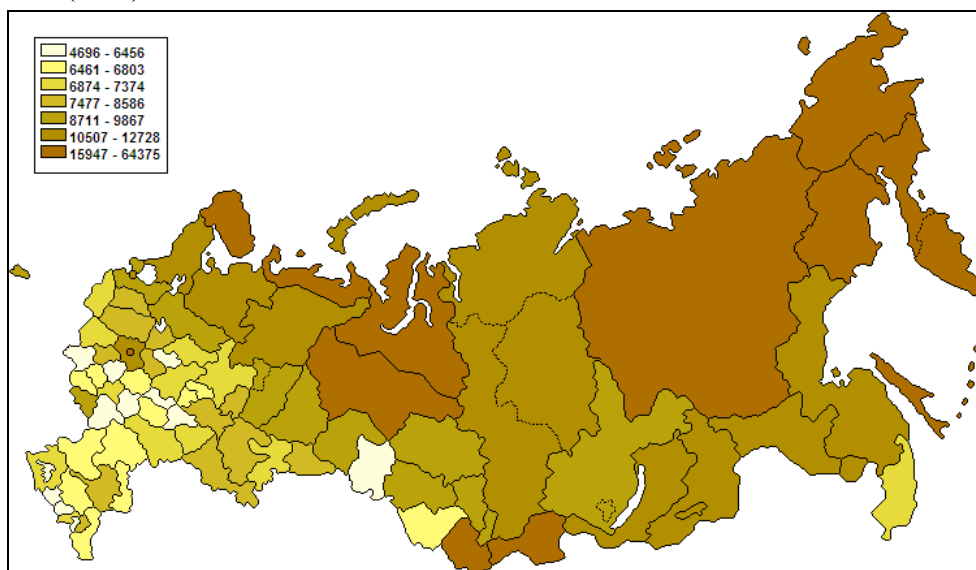
<sup>1</sup>Mathematical literacy is an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen.

<sup>2</sup> Reading literacy is understanding, using and reflecting on written texts, in order to achieve one's goals, to develop one's knowledge and potential and to participate in society.

<sup>3</sup> Scientific literacy is the capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity.

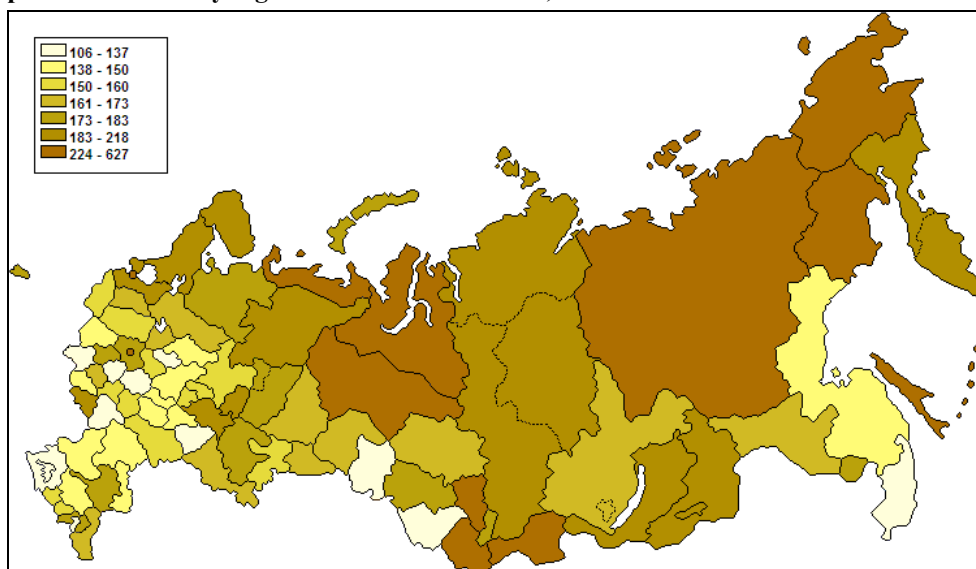
Source: OECD (2010b).

**Figure A1.1. Per capita education expenditures of RF regions' consolidated budgets, 2009 (RUR)**



Source: RF Treasury.

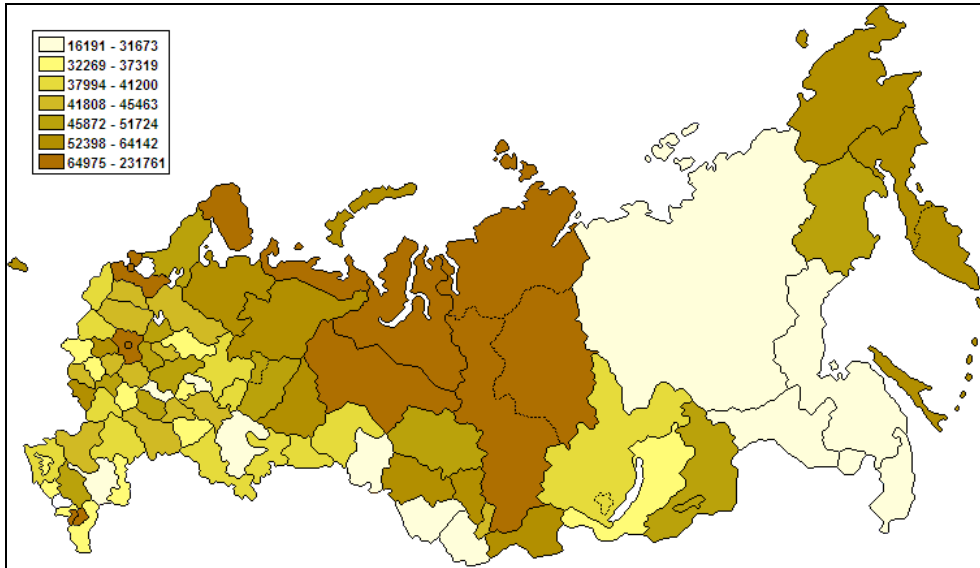
**Figure A1.2. Per capita education expenditures of RF regions' consolidated budgets as per cent of monthly regional subsistence minima, 2009**



Source: RF Treasury.

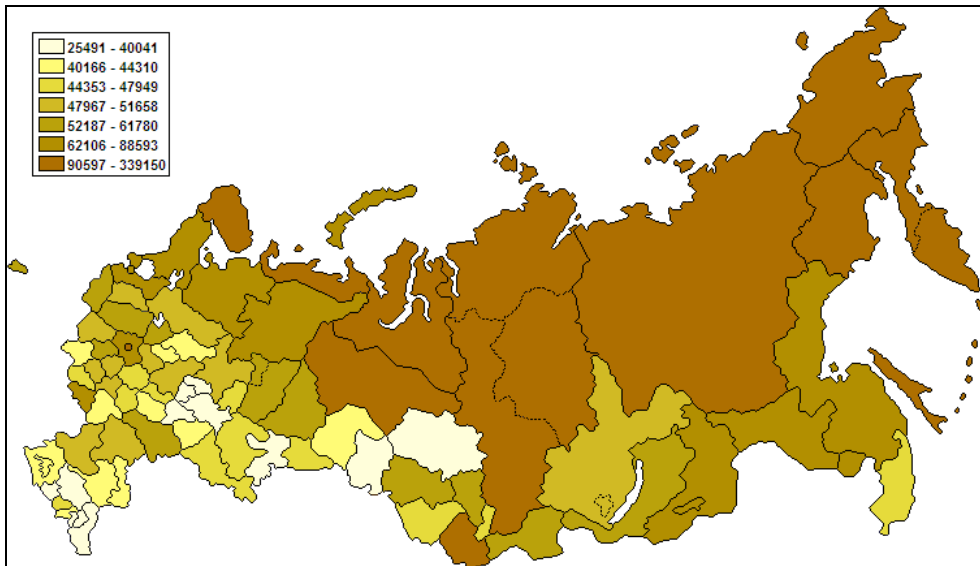


**Figure A1.3. Pre-school education: Expenditures by consolidated budgets of RF regions per pupil, 2009 (RUR)**



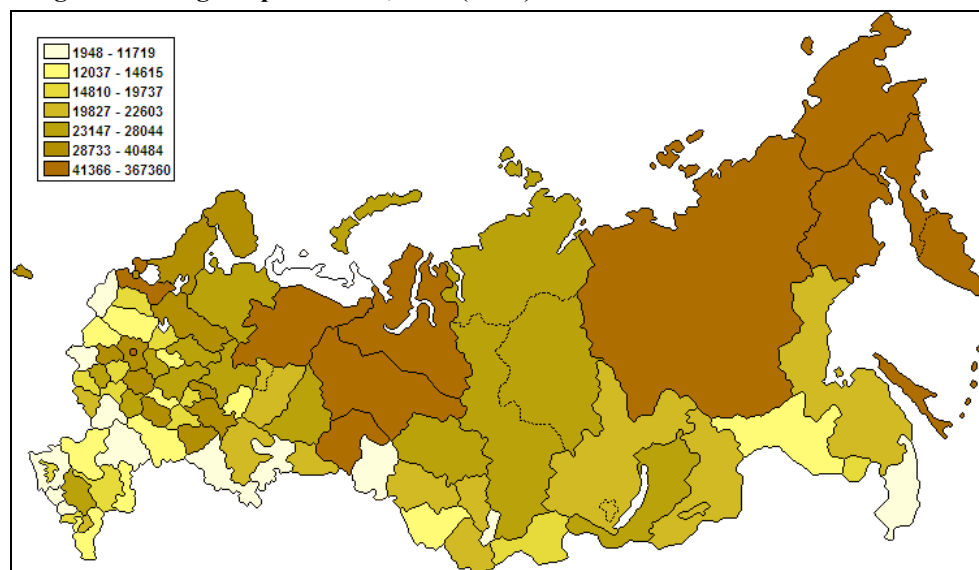
Source: RF Treasury.

**Figure A1.4. General education: Expenditures by consolidated budgets of RF regions per pupil, 2009 (RUR)**



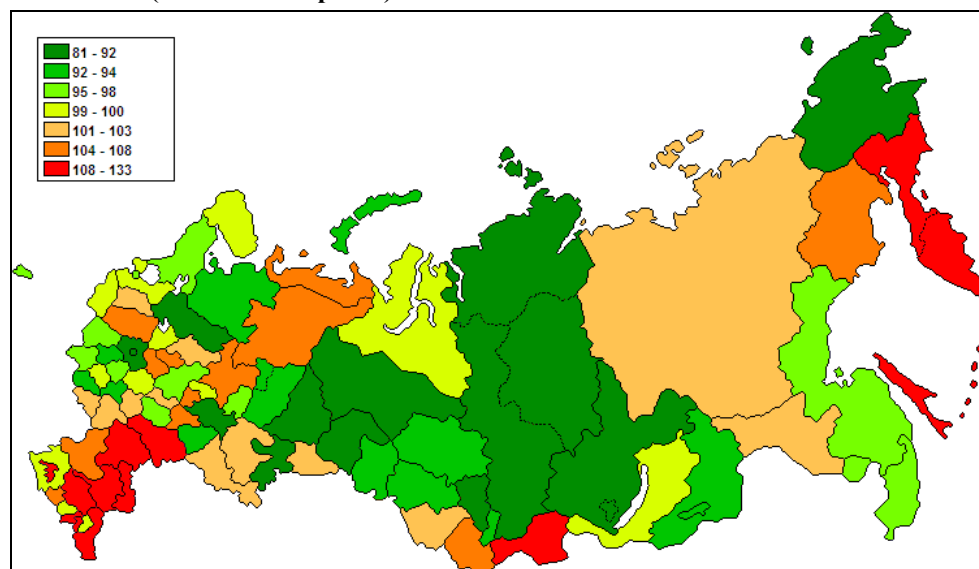
Source: RF Treasury.

**Figure A1.5. Secondary-level vocational education: Expenditures by consolidated budgets of RF regions per student, 2009 (RUR)**



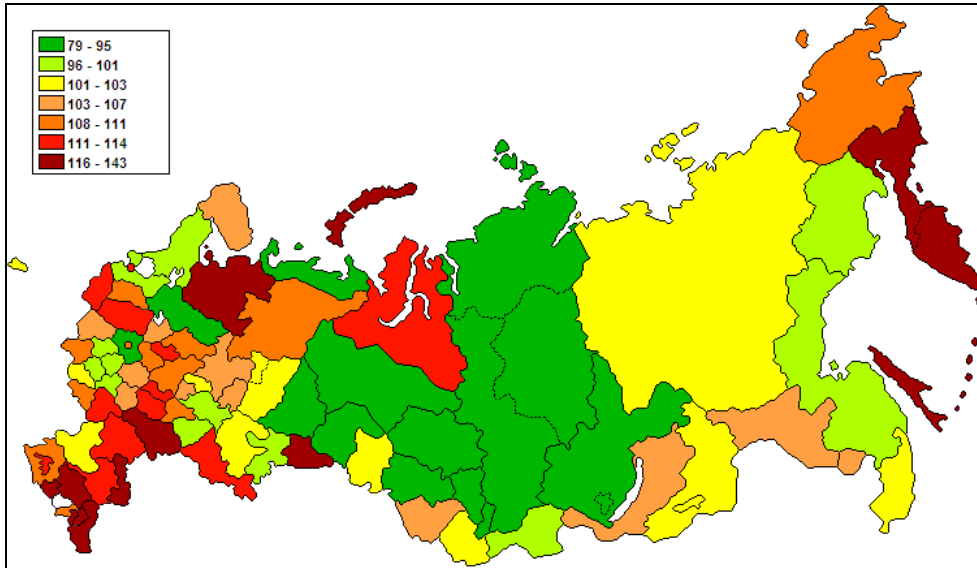
Source: RF Treasury.

**Figure A1.6. Education expenditures of RF regions' consolidated budgets, 2009 as per cent of 2008 (constant 2008 prices)**



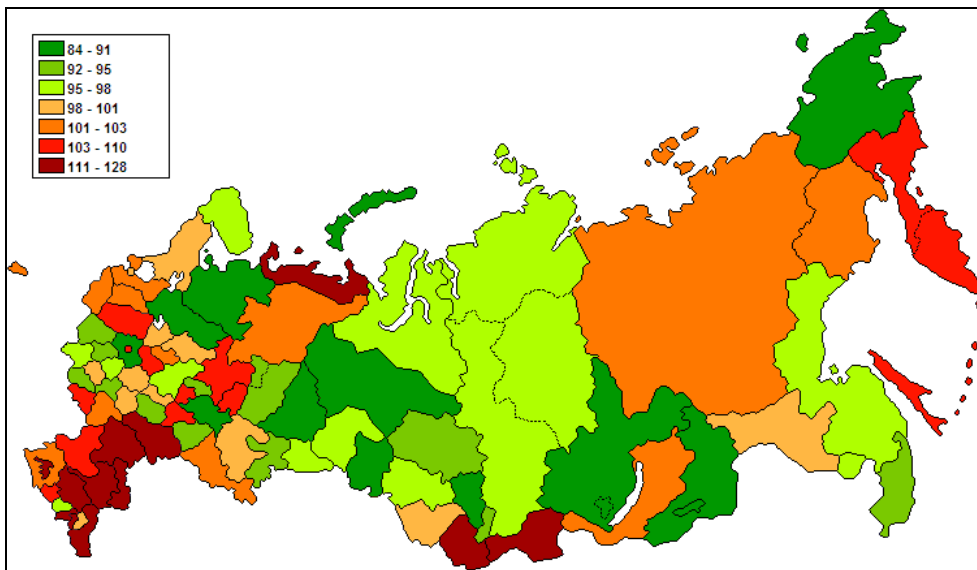
Source: RF Treasury.

**Figure A1.7. Pre-school education expenditures by consolidated budgets of RF regions, 2009 to 2008 (per cent, constant 2008 prices)**



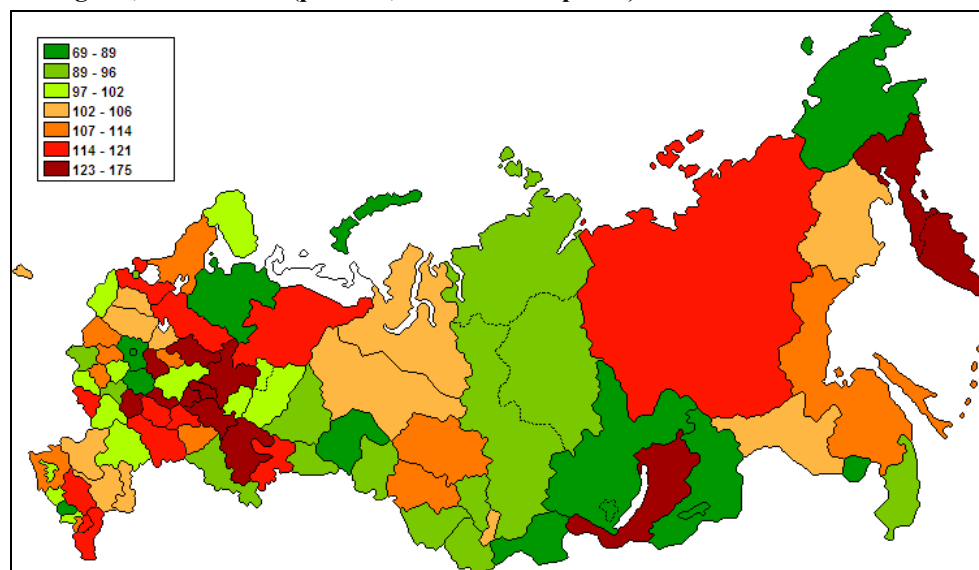
Source: RF Treasury.

**Figure A1.8. General education expenditures by consolidated budgets of RF regions, 2009 to 2008 (per cent, constant 2008 prices)**



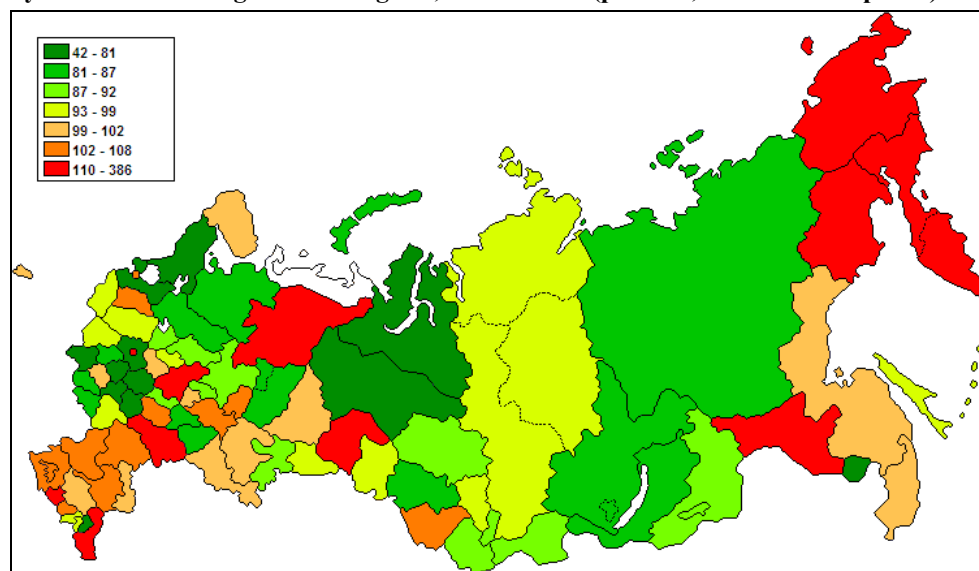
Source: RF Treasury.

**Figure A1.9. Secondary professional education expenditures by consolidated budgets of RF regions, 2009 to 2008 (per cent, constant 2008 prices)**



Source: RF Treasury.

**Figure A1.10. Vocational training, retraining and mid-career education expenditures by consolidated budgets of RF regions, 2009 to 2008 (per cent, constant 2008 prices)**



Source: RF Treasury.

## Annex 2. Health indicators

**Table A2.1. Implementation of Territorial programs of state guarantees (TPSG), 2008**

	Per capita TPSG funding, RUR						
	Emergency medical assistance	Out-patient care	Hospital care	Day patient care	Other health care services	TPSG funding	Of these, from CMI sources
<i>RF normative standard</i>	385.8	1226.1	2134.0	154,9	602.2	4503.0	2207.1
Russian Federation	381.1	1702.9	3221.9	147.0	859.9	6312.8	2906.5
Central Federal District	534.5	2227.7	3981.6	128.3	842.3	7714.4	3369.3
North-Western Federal District	416.2	1933.7	3251.1	164.5	1338.5	7103.9	3146.5
Southern Federal District	227.4	1008.9	2189.7	86.4	574.1	4086.4	2139.0
Volga Federal District	247.7	1245.3	2438.2	149.3	644.1	4724.6	2649.5
Urals Federal District	440.8	2275.0	4263.4	229.2	1411.9	8620.2	3114.7
Siberian Federal District	341.9	1590.2	3021.4	158.9	884.1	5996.5	2800.0
Far Eastern Federal District	598.7	2053.5	4736.3	229.1	861.8	8479.4	3584.6

Source: Ministry of Public Health and Social Development data.

**Table A2.2. Expenditures on the implementation of the Priority National Project “Health”, RUR bn**

<b>Directions of the national project, types of expenditure and sources of funds</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010 (plan)</b>
Total expenditure, in % of GDP	0.29	0.42	0.29	0.37	
Overall expenditure, RUR bn	78.9	139.5	120.7	145.2	146.3
Of which:					
<i>Promotion of healthy lifestyles</i>	–	–	–	0.7	0.8
<i>Development of basic medical and sanitary assistance and improvement of disease prevention</i>	65.2	90.5	65.8	55.7	60.5
<i>Upgrading the technical basis of medical assistance</i>	13.0	46.3	51.3	61.1	60.0
<i>Improvement of medical assistance to mothers and children</i>	9.4	14.9	17.0	25.3	24.9
Implementation of the pilot healthcare modernization project	–	2.0	3.4	–	–
Information support and project management	0.6	0.7	0.2	0.3	0.1

Source: Ministry of Public Health and Social Development data (IET 2010).

**Table A2.3. Public spending on health care, physical fitness and sports, by levels of budget**

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>RUR bn</b>					
RF consolidated budget	797.1	962.2	1381.5	1546.3	1653.0
Federal budget	88.2	147.5	196.5	278.2	352.3
Federal extra-budgetary funds	71.4	119.3	158.0	0.0	0.0
Consolidated budgets of the RF subjects	463.8	601.8	755.0	784.5	758.9
Territorial extra-budgetary funds	250.5	328.4	431.7	491.2	541.7
<b>Growth rates of health care expenditures, y/y (current prices)</b>					
RF consolidated budget	100	120.7%	143.6%	111.9%	106.9%
Federal budget	100	167.2%	133.2%	141.6%	126.6%
Federal extra-budgetary funds	100	167.0%	132.5%	0.0%	147.0%
Consolidated budgets of the RF subjects	100	129.7%	125.5%	103.9%	96.7%
Territorial extra-budgetary funds	100	131.1%	131.4%	113.8%	110.3%
<b>Share of expenditure on health care, in % of the respective level of RF budgetary system</b>					
RF consolidated budget	11.7%	11.5%	12.1%	10.9%	10.3%
Federal budget	2.5%	3.4%	3.3%	3.7%	3.6%
Federal extra-budgetary funds	4.9%	6.4%	7.0%	0.0%	0.0%
Consolidated budgets of the RF subjects	15.8%	16.5%	15.8%	12.6%	12.1%
Territorial extra-budgetary funds	98.4%	96.5%	98.2%	92.5%	98.3%

	2005	2006	2007	2008	2009
<b>Share of expenditure on health care, % of GDP</b>					
RF consolidated budget	3.7%	3.6%	4.2%	3.7%	4.2%
Federal budget	0.4%	0.5%	0.6%	0.7%	0.9%
Federal extra-budgetary funds	0.3%	0.4%	0.5%	0.0%	0.0%
Consolidated budgets of the RF subjects	2.1%	2.2%	2.3%	1.9%	1.9%
Territorial extra-budgetary funds	1.2%	1.2%	1.3%	1.2%	1.4%

Sources: RF Federal Treasury, Rosstat.

**Table A2.4. Structure of public expenditures on health care, physical fitness and sport by RF budget system levels, 2008 – 2009 (total healthcare expenditures at each level = 100)**

	RF consolidated budget		Federal budget		Consolidated budgets of the RF subjects		Territorial extra-budgetary funds	
	2008	2009	2008	2009	2008	2009	2008	2009
Hospital care	33.0	31.0	51.5	48.6	45.6	44.3	1.8	0.8
Outpatient care	11.7	11.2	13.7	15.0	12.4	14.1	9.2	4.8
Care at day patient facilities of all types	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0
Emergency call medical service	3.0	3.3	0.1	0.1	5.7	7.0	0.2	0.1
Sanatory and health improvement care	2.1	2.6	7.9	8.7	1.4	1.5	0.1	0.0
Procurement, processing, storage and promotion of safety of donated blood and its components	0.9	0.9	2.1	1.8	1.0	1.0	0.0	0.0
Sanitary and epidemiological well-being	1.4	1.7	7.9	7.9	0.1	0.1	0.0	0.0
Physical culture and sport	7.6	7.0	5.2	4.2	13.2	13.2	0.0	0.0
Applied research in the fields of health care, physical culture and sports	0.4	0.4	1.7	1.6	0.1	0.1	0.0	0.0
Other issues in the fields of health care, physical culture and sports	39.8	41.8	9.9	12.0	20.4	18.3	88.6	94.2

Source: Federal Treasury data.

**Table A2.5. Structure of health care public funding by RF budget system levels across health care components, 2008-2009 (RF consolidated healthcare budget = 100)**

	Federal budget		Consolidated budgets of the RF subjects		Territorial extra-budgetary funds	
	2008	2009	2008	2009	2008	2009
Health care, physical fitness and sport	18.0	21.3	50.7	45.9	31.8	32.8
Hospital care	28.1	33.5	70.1	65.6	1.8	0.9
Outpatient care	21.1	28.3	53.9	57.7	25.0	13.9
Care at day patient facilities of all types	0.0	0.0	73.3	89.5	26.7	10.5
Emergency call medical service	0.8	0.9	97.2	98.0	2.0	1.1
Sanatory and health improvement care	65.8	72.6	33.1	27.0	1.1	0.4
Procurement, processing, storage and promotion of safety of donated blood and its components	43.8	44.7	54.8	54.0	1.4	1.3
Sanitary and epidemiological well-being	98.1	98.0	1.9	2.0	0.0	0.0
Physical culture and sport	12.3	12.9	87.7	87.1	0.0	0.0
Applied research in the fields of health care, physical culture and sports	81.7	84.1	18.1	15.7	0.0	0.0
Other issues in the fields of health care, physical culture and sports	4.5	6.1	26.0	20.1	70.7	73.8

Source: Federal Treasury data.

**Table A2.6. CMI TF revenues in 2008-2009**

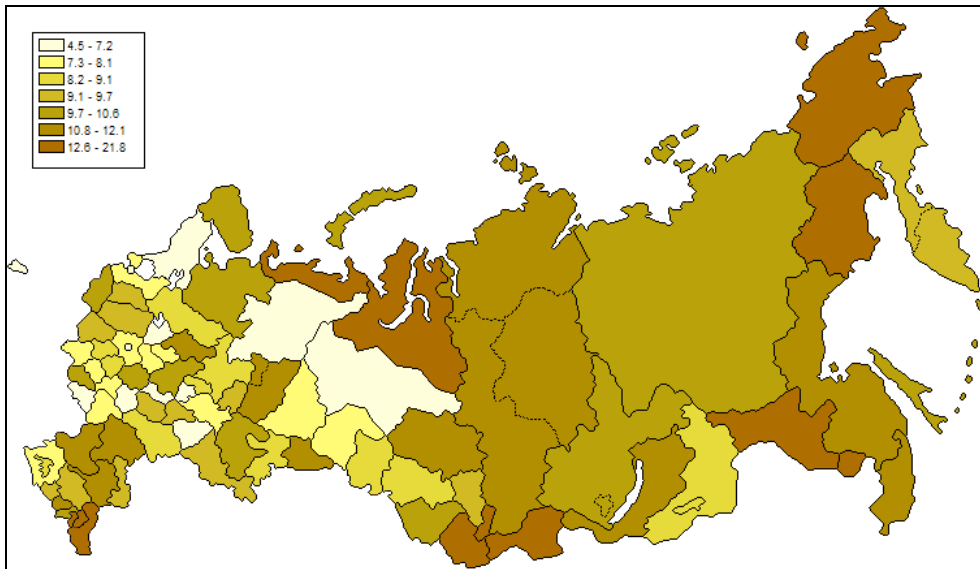
	2008	2009		
	RUR bn	RUR bn	Nominal growth 2008=100	Real growth 2008=100
<b>Revenues, total</b>	<b>537.0.</b>	<b>551.5</b>	<b>102.7</b>	<b>100.2%</b>
<i>Taxes, insurance contributions, total, incl.:</i>	<i>341.9</i>	<i>363.3</i>	<i>106.3</i>	<i>103.7%</i>
UST	153	153.1	100.1	97.7%
Insurance contributions on inactive population	178.9	200.4	112	109.3%
Taxation via simplified schemes	6.2	5.9	95.2	92.9%
Taxes on imputed earning for specific types of business activities	2.8	2.9	103.6	101.1%
<i>Non-repayable revenues, including:</i>	<i>185.2</i>	<i>176.2</i>	<i>95.1</i>	<i>92.8%</i>
Transfers from FF CMI	71.3	91.6	128.5	125.4%
Subsidies and transfers from federal budget	80.0	20.8	26.0	25.4%
Non-repayable revenues from the budgets of the RF subjects, local (municipal) budgets and state organizations	33.9	44.8	165.1	161.1%
<i>Other revenues</i>	<i>9.5</i>	<i>12.1</i>	<i>165.1</i>	<i>161.1%</i>

\* Since 2008 – resources from the budgets of the RF subjects for CMI of the inactive population.

Source: Federal Fund (2010).

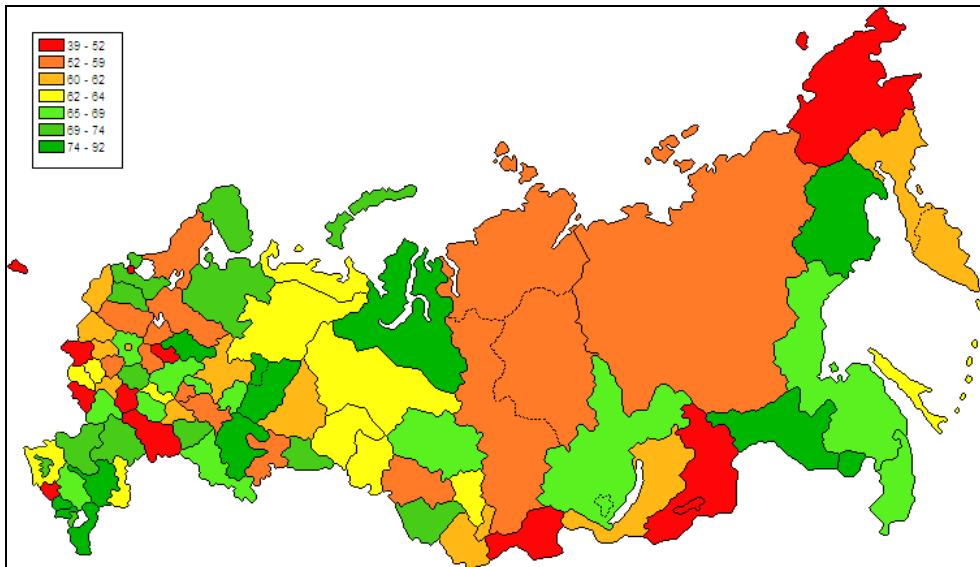


Figure A2.1. Infant mortality per 1,000 live births, 2006-2008 average



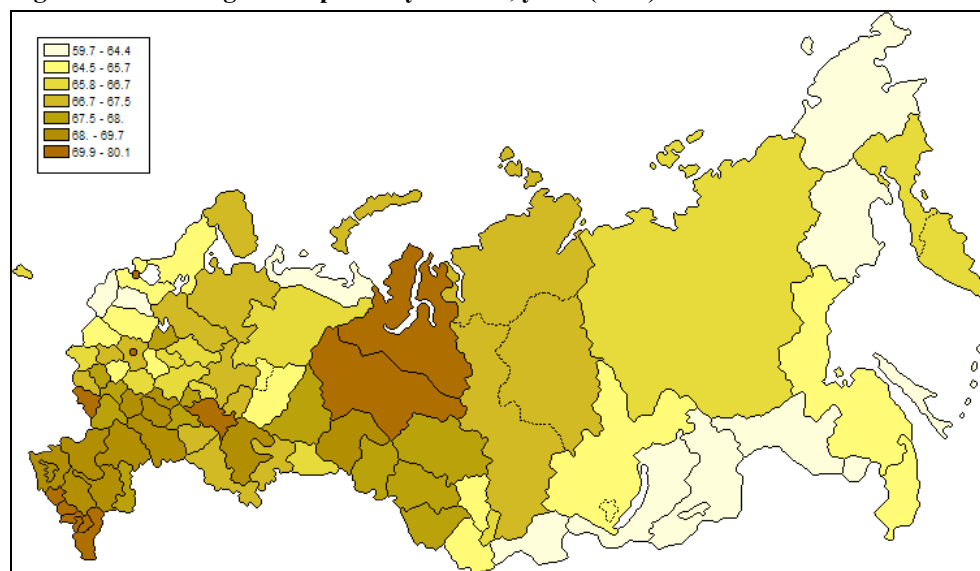
Source: Rosstat.

Figure A2.2. Infant mortality per 1,000 live births, 2006-2008 average as % of 2000-2003 average



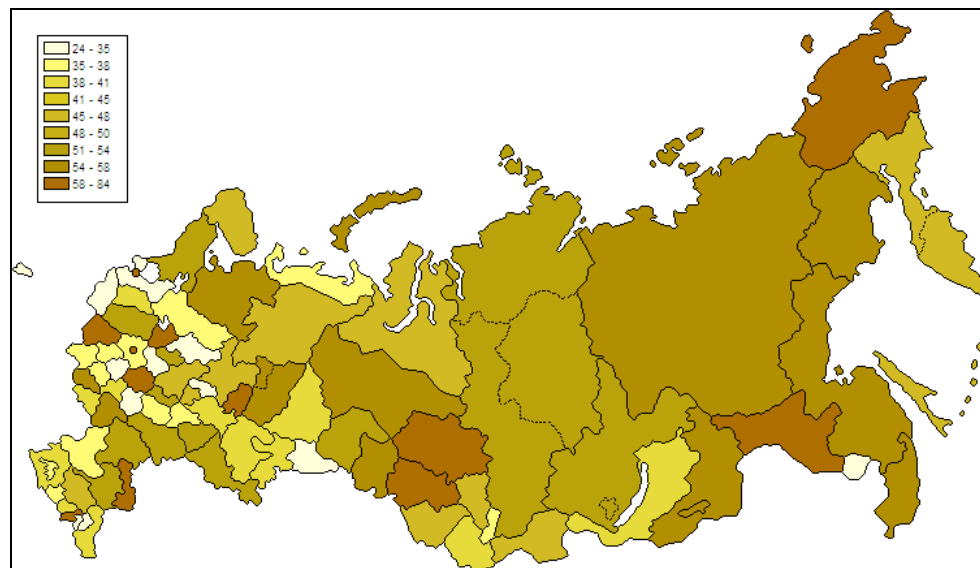
Source: Rosstat

**Figure A2.3. Average life expectancy at birth, years (2008)**



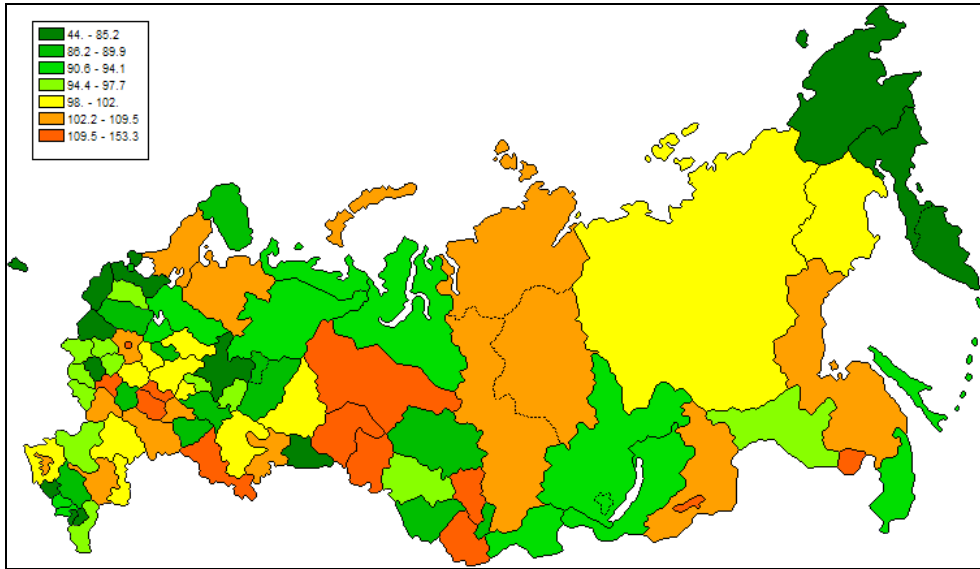
Source: Rosstat.

**Figure A2.4. Physicians density (per 10 000 population, end 2008)**



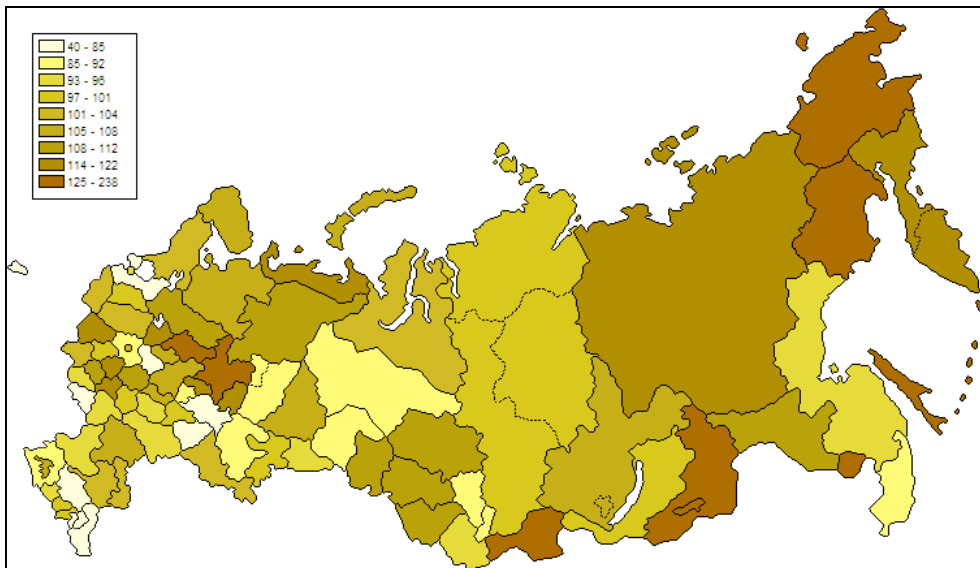
Source: Rosstat.

Figure A2.5. The degree of meeting the needs in outpatient medical services (% , 2009)



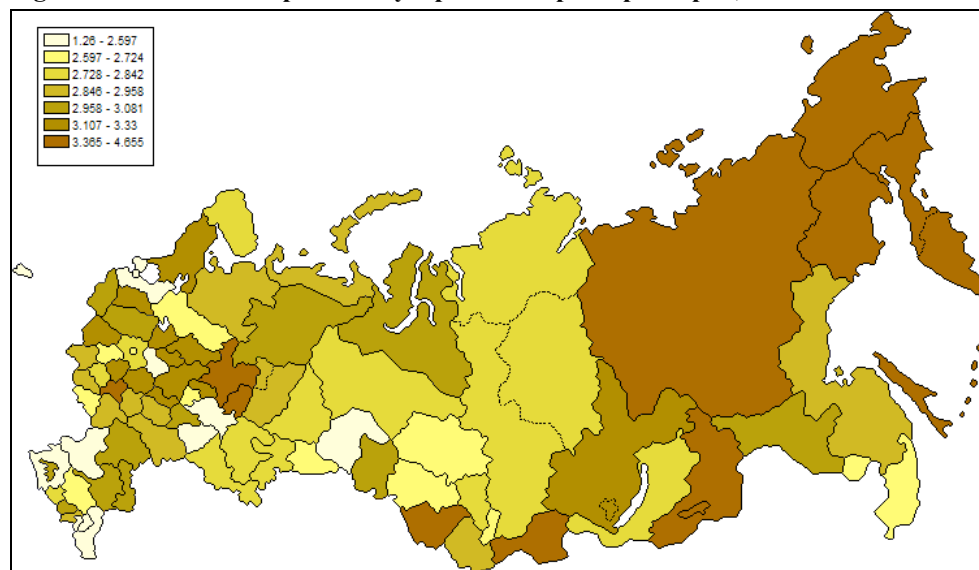
Source: RF Ministry of Health (2010).

Figure A2.6. Number of hospital beds per 10,000 population (end 2008)



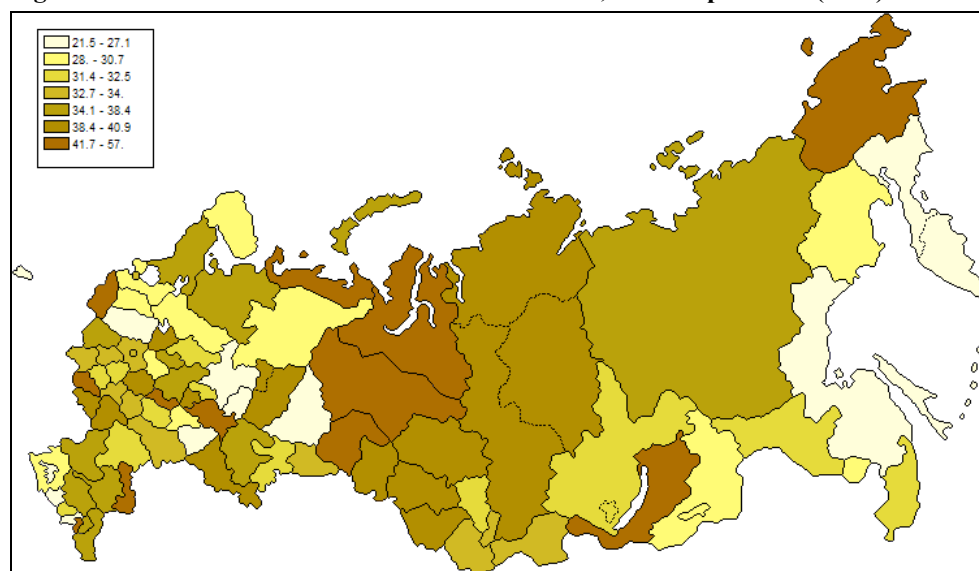
Source: Rosstat.

Figure A2.7. Number of patient days spent at hospitals per capita, 2009



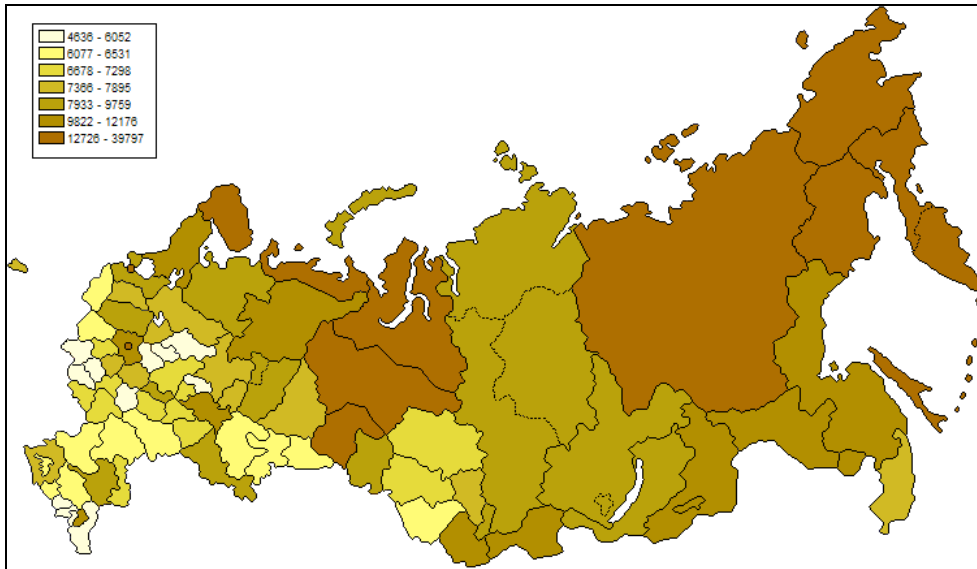
Source: RF Ministry of Health (2010).

Figure A2.8. Public satisfaction with medical services, % of respondents (2009)



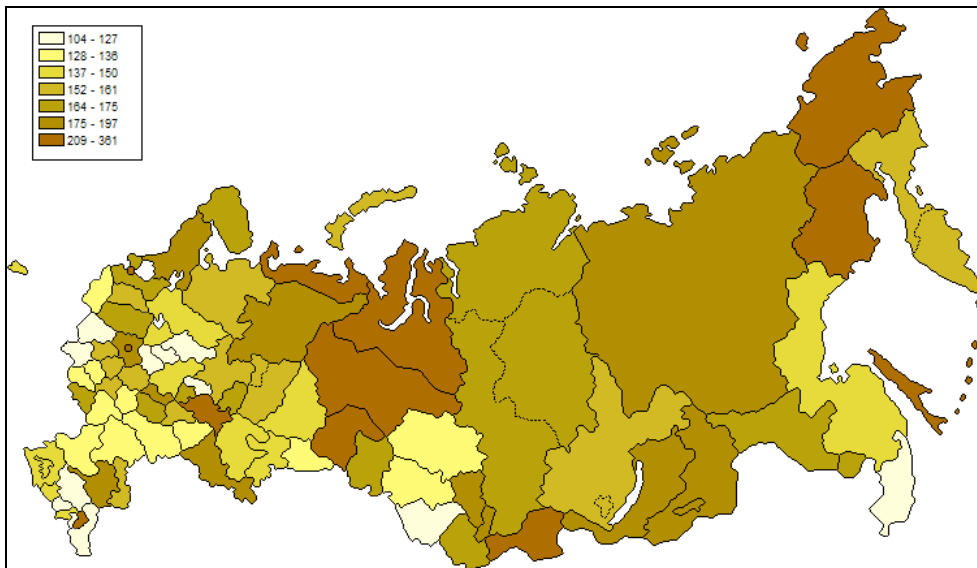
Source: RF Ministry of Health (2010).

**Figure A2.9. Per capita healthcare and sports expenses of consolidated budgets of RF regions and CMI TFs (RUR, 2009)**



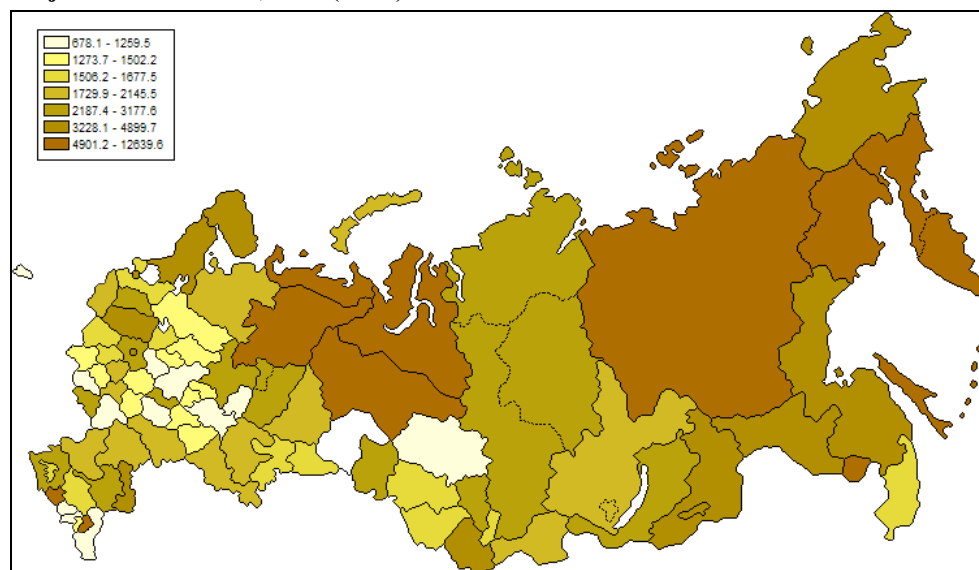
Source: RF Treasury.

**Figure A2.10. Per capita healthcare and sports expenses of consolidated budgets of the RF subjects and CMI TFs, as per cent of regional subsistence minima, 2009**



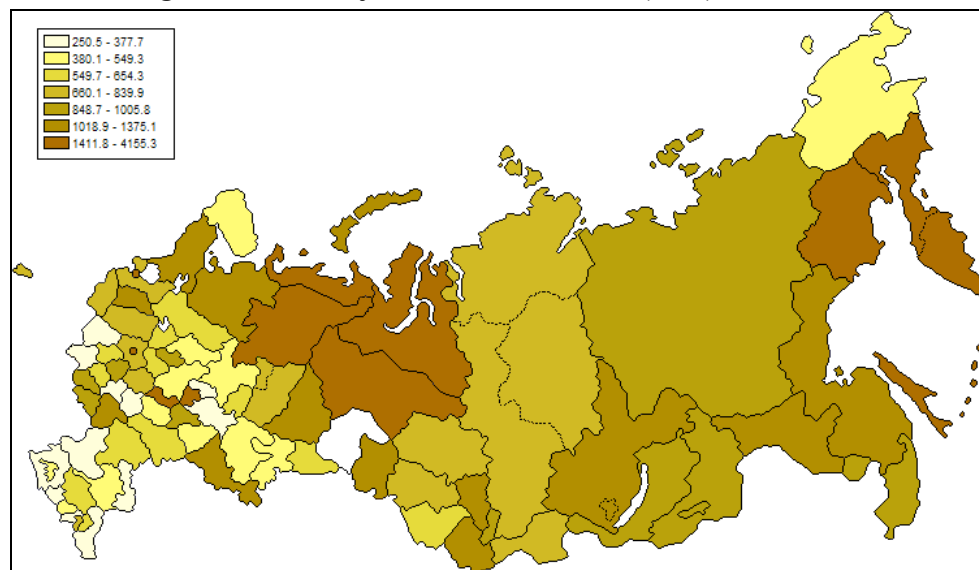
Sources: RF Treasury, Rosstat.

**Figure A2.11. Hospital care: Per capita expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 (RUR)**



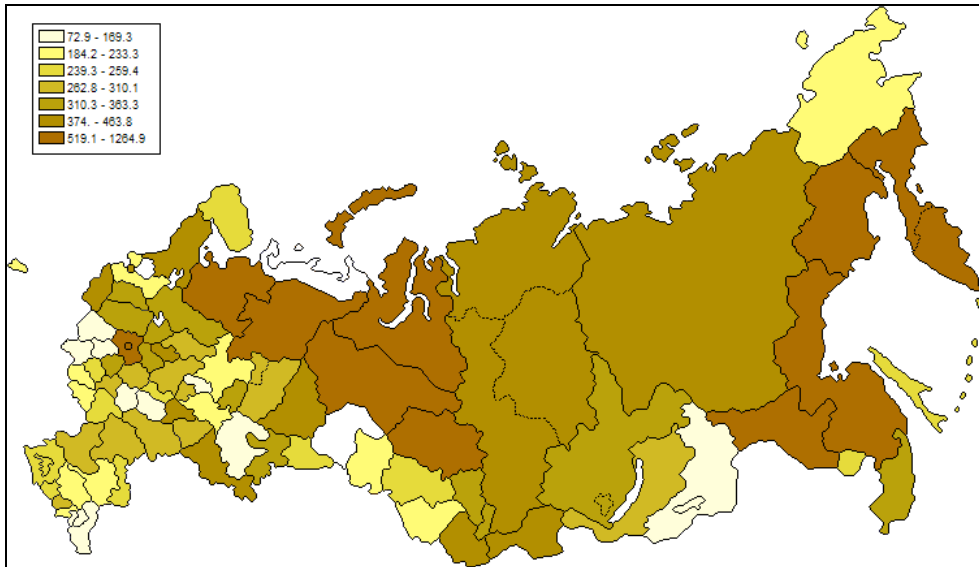
Source: RF Treasury.  
Data for Tyumen oblast are not available.

**Figure A2.12. Care at outpatient and day patient facilities: Per capita expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 (RUR)**



Source: RF Treasury.  
Data for Tyumen oblast are not available.

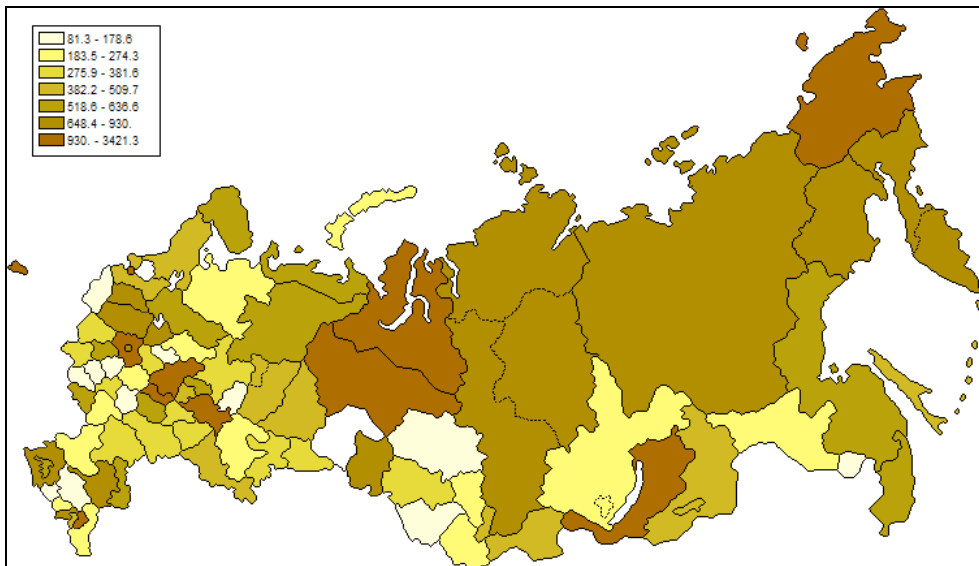
**Figure A2.13. Emergency call service: Per capita expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 (RUR)**



Source: RF Treasury.

Data for Tyumen oblast are not available.

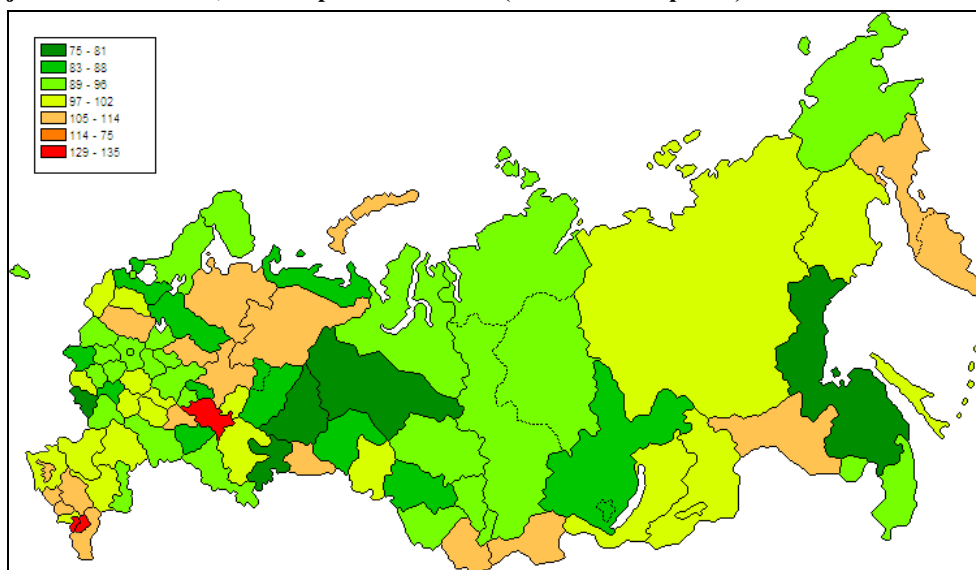
**Figure A2.14. Physical fitness and sport: Per capita expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 (RUR)**



Source: RF Treasury.

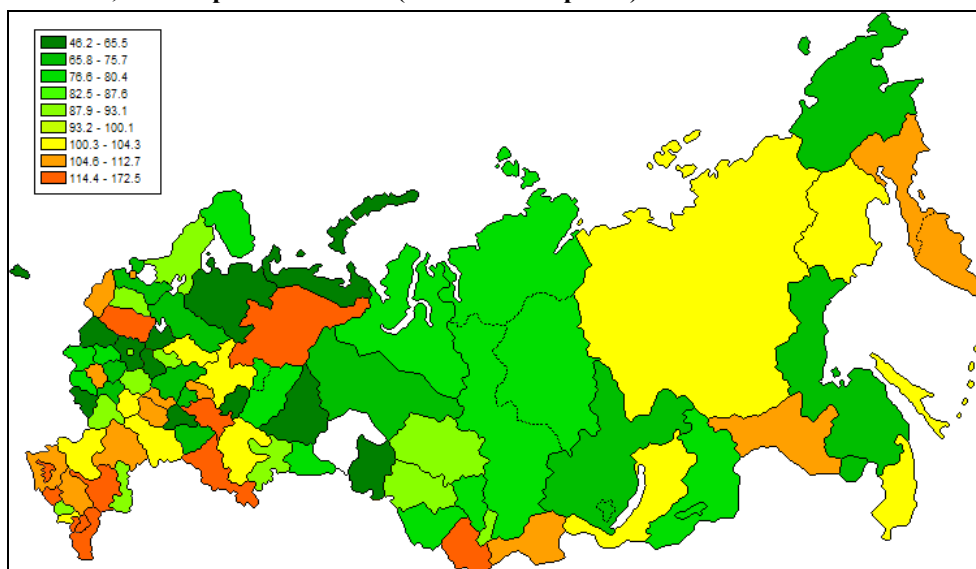
Data for Tyumen oblast are not available.

**Figure A2.15. Healthcare and sports expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 as per cent of 2008 (constant 2008 prices)**



Source: RF Treasury.

**Figure A2.16. Hospital care: Expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 as per cent of 2008 (constant 2008 prices)**

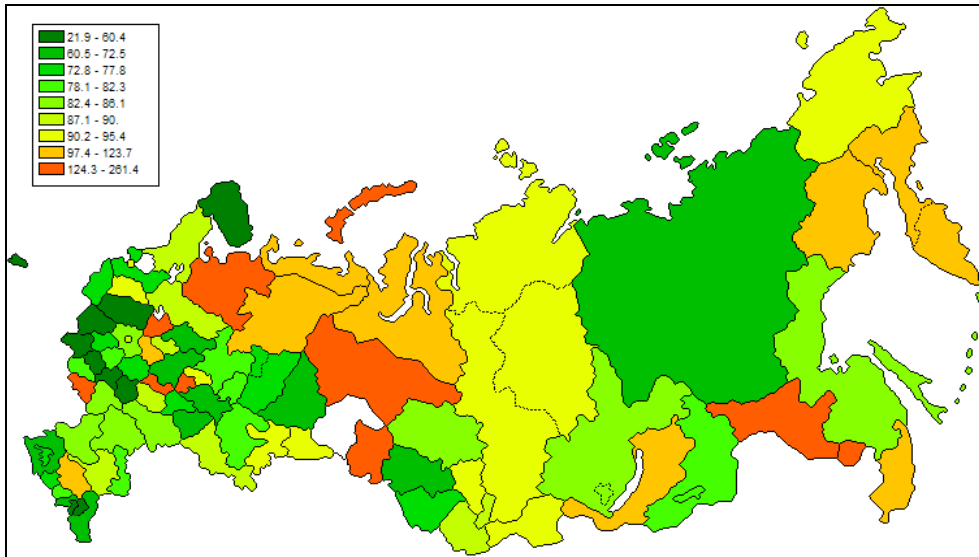


Source: RF Treasury.

Data for Tyumen oblast are not available.



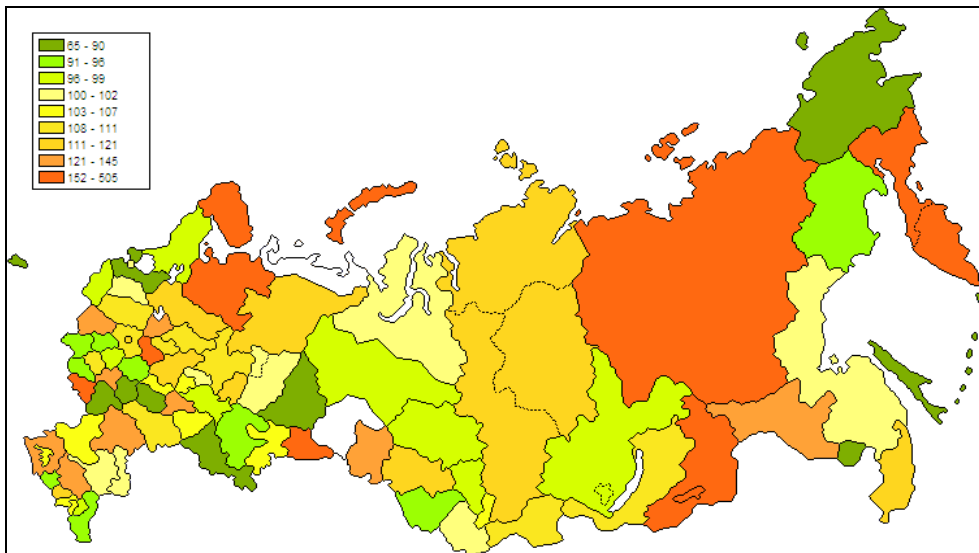
**Figure A2.17. Care at outpatient and day patient facilities: Expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 as per cent of 2008 (constant 2008 prices)**



Source: RF Treasury.

Data for Tyumen oblast are not available.

**Figure A2.18. Emergency ambulance service: Expenses of consolidated budgets of the RF subjects and CMI TFs, 2009 as per cent of 2008 (constant 2008 prices)**



Source: RF Treasury.

Data for Tyumen oblast and Nenets AO are not available.