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Regional budgets and intergovernmental  
transfers in Russian North and Northwest  
regions

Bank of Finland  
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Laura Solanko\*

## Regional budgets and intergovernmental transfers in Russian North and Northwest regions

### Abstract

This paper considers Russian intergovernmental transfers and possible bases determining their share of regional budgets. By concentrating on ten regions in the North and Northwest, possible causes of the highly uneven per capita distribution of federal funds in these regions are noted. Due to the small sample size and problematic statistical data, the paper confines itself mainly to description.

**Keywords:** Russia, regions, intergovernmental transfers, regional budgets

## 1 Introduction

Andrei Shleifer (1997) argues that the governmental evolution from communist institution to market-economy supporting institution is critical to successful economic transition. Moreover, redefining public spending patterns, the role of state in the economy and the structure of public sector are inseparable aspects of this transition in that they are part of the nation's larger institutional transition. The pace of institutional reforms does, to a great extent, explain the great disparity in growth performance between CIS countries and CEECs.<sup>1</sup> Thorough institutional reform in a country as large and heterogeneous as Russia naturally amplifies challenges that may appear minor elsewhere. Redefining the vertical structure of the public sector, for example, involves vast fiscal arrangements. Most literature on Russia's public finances focuses on the federal level, relegating the issues of regional finances to footnote discussions. In fact, understanding the financing of the lower levels of Russia's public sector is as important in designing a successful transition program. This paper considers a significant aspect of current fiscal federal arrangements, intergovernmental transfers. A survey of ten North and Northwest regions is included.

Intergovernmental transfers in Russia have become somewhat of a hot topic among Western scholars. Following on the heels of the early general descriptions on Russian fiscal federal relations from the World Bank were a number of papers discussing equalising transfers from the federal centre to the regional level.<sup>2</sup> Most of these papers use data on all Russian regions to describe determinants for the distribution of federal funds. Standard regression analysis is then used to explain the reportedly unequal pattern of the distribution. The results are mixed. For example, Stewart (1997) and McAuley (1997) conclude that federal transfers have had an equalising effect (albeit rather modest) and were motivated by social concerns. Treisman (1996), (1998a) and (1998b), on the other hand, claims that federal transfers have clearly been used more for political purposes than for economic ones in 1992 and again in 1994–1996. Le Houerou–Rutkowski (1996) find that during 1991–1995 Russia's intergovernmental transfers went from being equalising to causing greater disparity. The different findings may be due in part to the fact that the definition of intergovernmental transfers in Russia is ambiguous. Moreover, data on such transfers is usually not readily available and reporting practices may change annually. In all cases, the studies only look at the general average. Of course, Russia's regions are anything but a homogeneous bunch, so the notion of an average region may be misleading. Therefore, it should be interesting to have a closer look on transfers to a couple of individual regions. In this paper we look at a small group of regions and hope to answer what explains the distribution of federal transfers in these regions.

This paper focuses on the ten regions comprising the North and Northwest macro-regions of the Russian Federation.<sup>3</sup> A short survey of these regions is included in the Appendix 1. Despite common geography, the economic potential among these regions varies tremendously. These regions might be grouped into three imaginary groups: those rich in natural resources (Komi, Nenets, Murmansk to some extent), those with potential to become transport hubs and/or key areas of foreign direct investment (St. Petersburg, Leningrad, Novgorod), and those that lack self-evident potential (Arkhangelsk, Karelia, Vologda, Pskov). Three of the regions studied (Murmansk, Karelia, Leningrad) share a common border with the European Union (Finland). Pskov borders Estonia and Latvia, both prospective EU members. The remaining six regions – St. Petersburg, Arkhangelsk, Komi, Nenets, Vologda and Novgorod – all have close economic links with Western Europe.

As an indication of the peculiarities of Russian federalism, this sample of regions includes an autonomous okrug (AO) and a city. Most of the economic data on any AOs is incorporated into the data on the surrounding oblast or krai. In this sample, Nenets AO data is sometimes (but not consistently) blended with Arkhangelsk oblast data. Also the limits of economic decision-making of an AO and the surrounding region are far from clear-cut. The City of St. Petersburg, of course, is a special case even on a national scale. St. Petersburg is often referred to as the second capital of the country. Its official population of almost 5 million outnumbers any other region in this study. The Northwest is sparsely populated even by national standards. Excluding St. Petersburg, these regions have an average population of about one million. One lesson to be drawn is that most of Russian regions, the Northwest included, are likely to be economically too small to survive on their own.

Limiting the discussion to ten regions admittedly has drawbacks. Statistical analysis loses its meaning with a small sample size, so of necessity we restrict the discussion to a descriptive level. In the analysis, we use data on federal transfers in 1996 and 1997 combined with Goskomstat data on social indicators in 1995 and 1996. Yet, despite problematic data, it may be possible to get a more detailed view on federal redistribution than most scholars attempt. This helps us get closer to possible explanations for the huge variations in per capita transfers received. In 1996 and 1997, for example, Pskov, Novgorod, Karelia and Nenets received high nominal amounts of transfers from federal funds for financial support of regions. These regions also received the largest per capita transfers in the sample. The remaining six received substantially less. Is it possible at this level to distinguish whether there are economic rationales for such variation or whether political actions mainly determine transfers?

The following section offers a general overview of regional revenue sources and regional shares in the consolidated Russian budget. The third section describes intergovernmental transfers in Russia. In the fourth chapter, we present data on transfers to North and Northwest regions in 1996 and 1997. The paper ends with a modest set of conclusions.

## 2 Regional budgets revenues

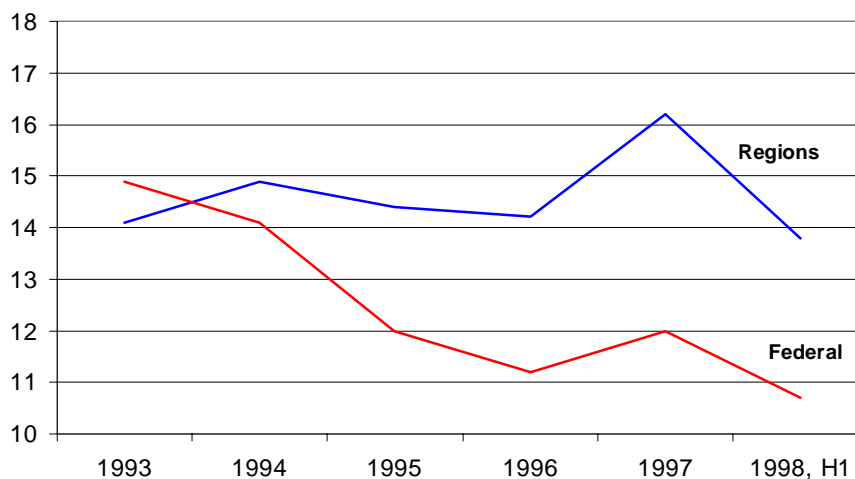
### 2.1 The consolidated budget

Federal budget revenues have declined steadily in recent years to levels approaching a mere 10% of GDP. Especially after the August 1998 crisis and the rouble devaluation, the Russian federal budget has seemed ridiculously small to many western observers. However, the public debate often ignores the fact that the federal budget represents only a fraction of total public sector spending. The consolidated budget that includes both regional and local level budgets and the federal budget for 1998 equalled 30% of GDP. In addition to the official budget figures, all administrative levels run extra budgetary funds (EBFs). Estimating the magnitude of these funds, especially at the lower levels, is virtually impossible since by definition they are not included in any budget laws. We do know, however, that the four largest federal EBFs combined had revenues at around 7.5 % GDP in 1993-1997.

The share of regional and local budget revenues as percentage of GDP has risen to approximately 15%.<sup>4</sup> After a short period of contraction in 1995-1996 when the federal centre asserted itself, the GDP-based share of regional budget revenues has since stayed at around 15%. At the same time federal budget revenues have nevertheless declined steadily. The federal government's actual share of tax revenues has declined to levels below statutory levels. In 1998, for example, reported federal budget revenues were only 11.3% of GDP, while regional

budget revenues equalled 14.8% of GDP (See Figure 1.) Consequently, regions have seen a sharp rise in their share of the consolidated budget. The regional share of the consolidated budget was well below half in 1993. Three years later it exceeded 60%. The regional and local levels thus account for over a half of Russia's public sector. The federal level has increasingly become a night-watch state responsible for foreign debt service, law and order, defence and interregional redistribution, while most social-sphere expenditures have been delegated to regional and local levels.

Figure 1. Budgetary revenues as per cent of GDP (RET 1998.4, p85)



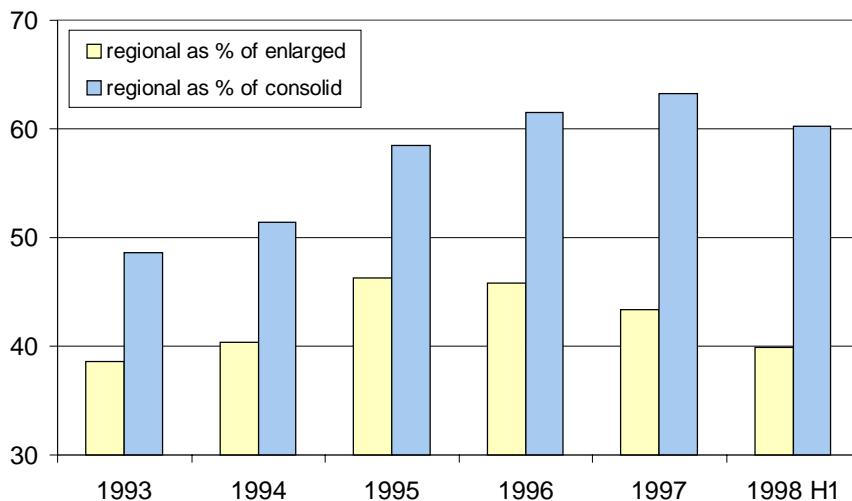
Including the federal extra-budgetary funds into the consolidated budget gives a better picture of the size of public sector than the traditional consolidated budget. The enlarged budget, which includes both federal and regional budgets plus major federal EBFs, has been over 30% of GDP in the 1990s. As it is impossible to take into account all regional EBFs, even this figure underestimates the real share of the public sector in Russian economy. The real figure might have been at around 40% of the country's GDP estimate. As that GDP figure includes also an estimate of the shadow economy, the real tax burden on the official economy is likely to be excessively high. The shadow economy, by definition, does not pay taxes. In the enlarged budget, the share of regional revenues in years 1993-1997 was never over half. In fact, the share has declined since 1996, although intuitively one would expect a rapid increase. As the data on regional EBFs is missing, the regional share in the Figure 2 is substantially underestimated.

## 2.2 Regional revenue sources

Despite of the impressive 50-60% regional share of the consolidated budget, regions have few revenue sources of their own.<sup>5</sup> While the Law on Basic Principles of Taxation, which went into effect in early 1992, allocated many specific taxes to the regional level, revenues accruing from such local taxes as inheritance or advertisement were clearly insufficient to cover regional expenditures. These taxes possibly offered means to regulate certain forms of economic activity, but they scarcely constituted solid revenue sources. The major taxes and

tax rates are defined by federal legislation; regional and local governments are not allowed to introduce taxes of their own. Thus, the federal centre sets tax rates and collects revenues from all major tax bases including income tax and VAT (Barisitz 1998).

Figure 2. Share of regional revenues in enlarged and consolidated budgets.  
(RET 1998.4, p85).



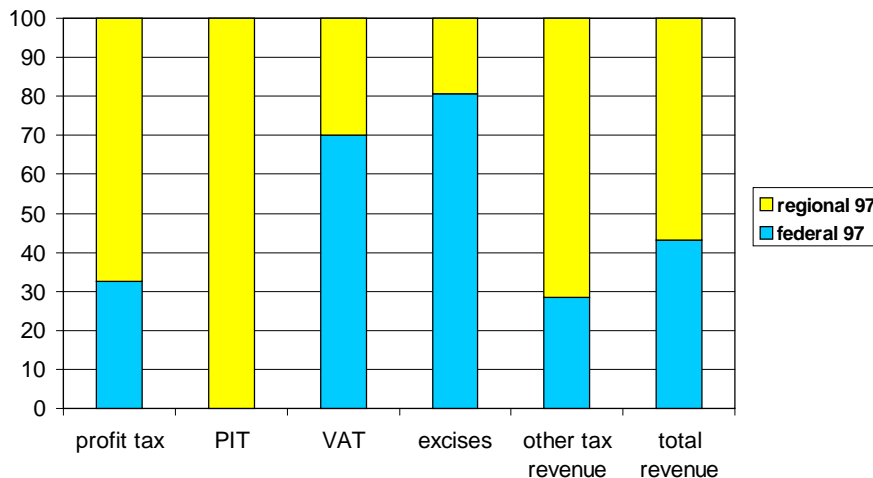
*Note:* Figures for 1993 and 1994 overestimate regional shares because net transfers are not deducted from consolidated budget.

Revenues from major taxes are shared between the regions and the centre according to sharing rules confirmed each year in federal budget act. Interestingly, the only major revenue source reserved exclusively for the federal coffers is customs duties. Despite clearly defined laws, ad hoc arrangements have been common in deciding actual amounts transferred to both levels. During 1992-1993, many regions tended to decide unilaterally what proportion of tax revenues should be shared with the centre. Not surprisingly, sharing rates varied substantially from region to region, with several regions enjoying considerable exemptions or special tax regimes. Of the regions in discussed here, Karelia enjoyed particularly favourable tax breaks from 1991 to 1997. The region had the right to withhold up to 90% of funds that otherwise would have had to transfer to Moscow (Laurila 1994). Although sharing practices seem to have become fairer in recent years, the amounts transferred still differ greatly. (Popova-Tekoniemi 1998.)

According to the 1997 budget act, 100% of personal income tax, 25% of VAT on domestic products (excluding precious minerals), 50% of excises on alcohol and 100% of excises on many other domestic products were allocated to regional budgets. Table 3 shows breakdown of revenues between regional and federal budgets. The 1998 budget act retains these shares, but the sharing rules for various excises are left unspecified. Under the act, 50% of revenues from land tax and land rents accrue to the federal budget. The 1999 budget act foresees regional share of VAT on domestic products of 25% for the first quarter and 15% for the rest of the year. A 10% share of personal income tax is also allocated to federal coffers. Starting from 1999 regions were given right to impose a 5% regional sales tax to compensate for losses resulting from lower shares.



Figure 3. Shares of tax revenues in 1997, per cent of total (RET1998.4)



The shares of profit tax, value-added tax and personal income tax comprised on average 50% of consolidated regional revenues in 1996 and slightly less (47%) the following year. (RET 1998.1) In addition to these taxes, excises constitute a significant source of the revenue shared between the federal centre and the regions. Under the 1997-1999 budget acts, regions could retain e.g. half of receipts from excises on domestically produced alcohol. Excises accounted for 17.5% of federal budget revenues in 1996 and 1997.<sup>6</sup> Moreover, federal transfers constituted on average 15% of regional revenues in 1995 and 1996. According to preliminary data, this share decreased in 1997 due to fallen transfers. (RET 1997.2) This average figure hides a huge variation in the share of federal transfers in regional revenues. In Russia’s poorest regions, federal transfers make up to 60% of revenues. In the poorest region in this discussion, Pskov, total federal transfers in 1996 amounted to 44% of budget revenues.

The remaining approximately 25% of regional revenues is probably comprised of minor federal taxes, local taxes, fees and excises as well as borrowing. At the beginning of the 1990s, regional budgets were in surplus. Since 1995, regional budgets have run modest deficits. Consolidated regional budgets were running a deficit of 1.4% GDP in 1997, largely because of increased borrowing opportunities. This hints that on average the consolidated regional budgets have had deficits of 5–10 %. As usual, such an average figure indicates that some regions ran rather high deficits. According to MFK Renaissance Research (1998, 28) Vologda, Leningrad, Karelia, Arkhangelsk and Komi ran deficits of over 10% of revenues in 1997. In 1996 and 1997, a half of the regional deficits were financed by loans from the federal government. Repayment of the federal loans has all but stopped, so most of these funds would probably be best classified as federal grants. (RET 1998.1)

All this indicates that the vast amount of regional and local taxes (which are constantly claimed to be one of the main obstacles of any legal business in Russia) have, in fact, little impact on regional revenues. Thus, the motivation for collecting them is more likely to be rent-seeking (prospects for corruption) than for budget revenue. As an example, the revenue compositions of Karelia and St. Petersburg for selected years appear in Appendix 2.

Before August 1998, most of regions issued municipal bonds to acquire additional financing. The City of St. Petersburg was one of the first regions to begin issuing those bonds; by 1995 the municipal bonds were city's main source of budget deficit financing. In 1995, regional governments on average covered only 18% of their budget deficits with municipal bonds; by the first half of 1997, the figure had increased to about 40% (RET 1997:3.). Most of the municipal bonds were both highly illiquid, had short maturities and excessively high interest. For instance, in early 1997 the average maturity of St. Petersburg municipal bonds was 90 days. Only a handful of the bonds were actively traded in local and national stock exchanges at that time. Currently, only St. Petersburg and Moscow municipal bonds are traded in very thin volumes at the respective currency exchanges.

In 1997-1998 three Russian regions, St. Petersburg, Moscow and Nizhny Novgorod, managed to place foreign-currency denominated Eurobonds. St. Petersburg has been particularly eager to use EBRD-backed Eurobonds for financing the municipal budget and in converting its high-interest rouble bonds into cheaper financing. The city's first five-year USD 300 million Eurobond was launched on June 1997. Just before the August crisis, half a dozen regions were preparing Eurobond issues for late 1998. Many others acquired syndicated loans from international financial markets. It is impossible to estimate how much Russian regions really borrowed abroad before last August's meltdown, as syndicated loans often lurk unseen until the payment comes due. This was the case e.g. with Leningrad's USD 50 million syndicated loan on which Western creditors required early repayment in May 1999. It is estimated that the City of Moscow has, in addition to USD 992 million worth of Eurobonds, syndicated and other foreign currency loans totalling about USD 850 million.

Even before the August crisis, foreign financing was a rare possibility reserved for the best performing and mostly resource-rich regions. After the huge devaluation and de facto Russian sovereign default, servicing the debts has become nearly unbearable for the most of them. The situation with rouble-denominated municipal bonds is not any better; serious negotiations about rescheduling them are under way. Consequently, no new lending is likely in the next couple of years. This may force regions to have more or less balanced budgets or to increase arrears for some time to come.

A shortcoming of the Russian practice of shared taxes is that regions have few chances to influence the amount of their tax revenues. Most regional revenues come from a negotiated or fixed amount of taxes collected in the region. Thus, regions see shared taxes as essentially central government transfers. They have no direct incentives to broaden their tax base or even ensure effective tax collection, although most economists would concur that doing so is vital to the Russian economy. Instead of a uniform tax code, regions face a jungle of contradictory laws, decrees, exemptions and sharing rules.<sup>7</sup> A recent example from Nizhny Novgorod shows that the federal centre is eager to zero successful regional initiatives in attracting additional revenues. The local administration swapped oil companies pension arrears for oil deliveries to local refineries and proceeds from oil products were then used to pay pensions in the region. This additional source of financing pensions for Nizhny residents was shut up in late 1998 when all proceeds to Pension Fund were ordered to be sent first to Moscow and then back to regions according to federal guidelines.

When considering also the expenditure side of regional budgets, one should keep in mind that regional governments forward most of their revenues to local governments.<sup>8</sup> Due to the lack of detailed information about local finances, budgetary relations between regions and local governments have not been widely studied. Nevertheless, it would be of great value to understand how second-tier federal transfers are determined. The most recent Act on the

Financial Foundations of Local Self-Government (1997) was intended to give local governments more fiscal independence. The law even defines minimum shares of regional taxes to be allocated to local budgets. Implementation of the law, however, has been lax.

### 2.3 Some Russian peculiarities

A short note about the non-traditional means of financing regional budgets might be in place. As mentioned above, various EBFs play a potentially large role also in regional finance. The money in EBFs is supposedly strictly earmarked for special purposes e.g. road maintenance, sewage disposal. As EBFs lie beyond public control, estimation of their true economic role is daunting. This lack of control over the administration of EBFs also provides the unfortunate opportunity to misallocate fund resources. It is not unheard of that the funds had been used in a purpose other than the name of a particular EBF would suggest.

At the federal level EBFs' revenues are about two thirds of those of the federal budget. The ratio may be similar in regional level as well. For example, Moscow's off-budget spending is thought to match its on-budget spending. The St. Petersburg administration claims that extra-budgetary funds account for 14–19% of the region's financial resources. In any case, official regional budget accounts do not tell the whole story. While the four federal extra-budgetary social funds have run small deficits, it is widely believed that regional funds have run sizeable surpluses. It is easy to hide possible surpluses in EBFs before applying for central government transfers. The number of oblast-level EBFs has multiplied since 1992. Again, their importance is hard to estimate as data is unavailable (Stewart 1997).

Measures to correct this problem were included in the 1998 budget act, which prescribed eight federal funds to be included in the budget. Expenditures on these funds make up approximately 6% of the total. The act further included a recommendation that regions include their corresponding funds (e.g. road fund, ecological fund) into regional budgets. This approach is definitely a move in the right direction, but much remains to be done.

The widely discussed problems of barter trade and demonetisation of the Russian economy are even more acute at the regional than at the federal level. One consequence of these phenomena is that much of the revenue collected by governments cannot be easily used to cover budget expenditures. Mutual debt reductions (offsets) between regional governments and companies or between different levels of government create no usable revenue. Offsets also force governments to "spend" their money on a specific company. Moreover, a large portion of revenues at the regional level is paid in kind. Again, payments in gas, electricity or timber do not easily transform into salaries or new investment. Accepting tax payments in kind essentially forces governments into buying products from taxpayers and then allocating the goods through administrative channels.

The role of money surrogates in regional finance is remarkable. As much as 50% of consolidated budget tax revenues in 1996 were in non-money form. According to Lainela (1997) their share in some regional budgets was even around 60-70% of revenues and up to 60% of expenditures. The increased use of the *veksel* (a letter of credit) has alleviated payments crises and helped regional and local governments reduce tax arrears. As opposed to payments in kind and offsets, payments in veksel do not necessarily force the regional government to spend their money on that specific firm or on firm's products. The best veksel were actively traded, especially in late 1996-1997 when yields on federal T-bills were lower. But nether is there a guarantee that veksel will be good for anything later. Full redemption of veksel is not always guaranteed. Indeed, most veksel issued by local banks and enterprises are high-

risk, low quality, short-term debt that a prudent public sector in any other economy would reject out of hand as an acceptable form of tax payment. Unlike money, vekselns have very little function as a store of value.

As vekselns, issued by either regional firms or even by regional governments, are not accepted as tax payments in the federal level, regional taxes may be easier to collect than the federal ones. Van Selm (1998) notes that regions can increase their own tax revenues at the cost of the federal tax revenues simply by accepting tax payments in vekselns. In several regions, arrears to federal budget are indeed larger than arrears to regional budgets. To sum up, a considerable portion of regional revenues may be either in kind, money surrogates or in offsets. The federal transfers, on the contrary, are supposedly made in cash. Therefore federal transfers are likely to be the main source of cash for most regional budgets.

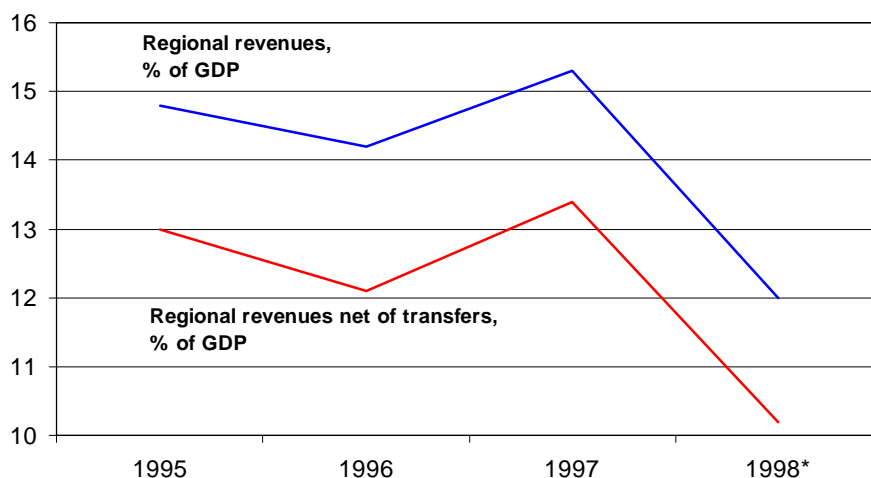
### 3 Intergovernmental transfers and the transfers received in North and Northwest regions

#### 3.1 The various forms of transfers

As discussed in the previous chapter, the majority of regional revenues are comprised of federal funds transferred back to the region where the tax initially was collected. As if the various sharing rules would not be enough to blur the picture of Russia's intergovernmental fiscal relations, the system of intergovernmental transfers in Russia is notoriously messy. The transfers from federal centre to the regions are various in forms and purposes. Total federal transfers constituted about 2.1% of GDP in 1996, but dropped to 1.9% the following year. In 1995-1997, transfers to lower levels equalled 11% of federal budget expenditure and 10-15% of regional revenues. According to the 1998 budget act, regions' share in total revenues was supposed to shrink dramatically. However, this did not happen. The realised figures for 1998 show regional revenues of RUB 398 billion and federal revenues of only RUB 302 billion. The 1999 budget act also threatens to keep more tax revenues in Moscow, but with the Duma elections in December and presidential elections next year, the shares are likely to remain unchanged.

The majority of federal transfers are presently channelled through a special Fund for Financial Support of Regions (FFSR) aimed at equalising regional differences. FFSR was created in 1994 to clarify transfers schemes and to decrease the amount of ad hoc transfers and grants. Initially, the money was allocated to regions needing "some support" or "considerable support" on a formula basis. Regions that had below-average per capita revenues in a base year were classified as in need of some support. Those regions that would have had difficulty in meeting their expenditure requirements even after the first round were classified as in need of considerable support. The amount allocated to each region in the first category depends on the degree to which they fall below the average per capita budget revenues and on the average per capita revenues in the corresponding economic area. The amount allocated to regions in the second category is a function of their budget deficit i.e. the degree to which region's expenditures would have exceeded its revenues without a second round of transfers.<sup>9</sup> The basic scheme still appears to be in use, in spite of numerous minor changes.

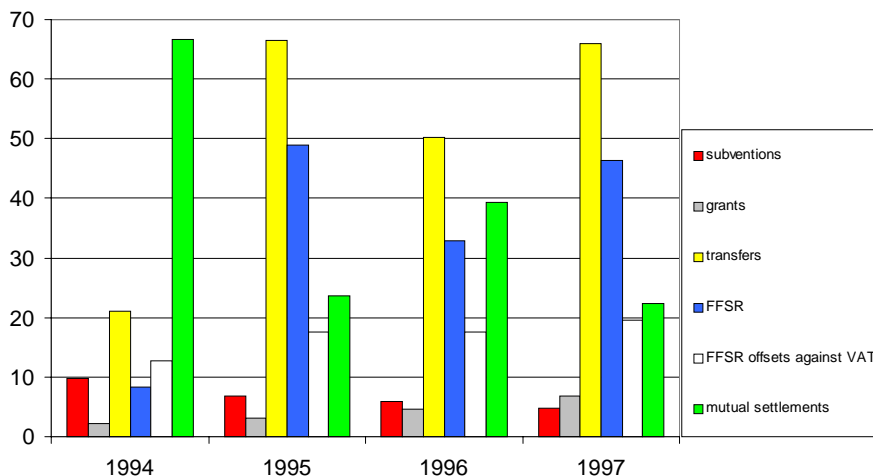
Figure 4. Regional revenues net of transfers in 1995-1998 (RET 1998.1 and RET 1997.3), the estimate for 1998 is based on the federal budget act and Russian MinFin forecasts.



According to Tabata (1998) transfers from FFSR made 50-60% of total federal transfers in 1995-1997. Other forms of federal transfers to regional level defined in the budget laws include subventions (for some specific purpose), grants (without requirement on their use) and budget loans. The City of Moscow is the main recipient of subventions due to its status as a capital city. The northern regions (e.g. Komi, Arkhangelsk, Murmansk and Nenets AO) receive subventions on transportation of some basic goods. Grants are typically allocated to the closed cities, Sochi and Baikonur. Loans, either with or without interest, can be given to a region facing seasonal shortage of financing. How lending decisions are made is not well documented. In any case, these loans are rarely repaid and could therefore be classified as grants. The mutual settlements category accounting for about 30% of transfers in 1995-1997 seems to be the “black hole” of Russian interregional finance. As Tabata (1998) notes: “The nature of transfers included in mutual settlements is not clear at all.” He argues that this category includes transfers to regions to compensate for implementation of federal programmes or other additional expenditure caused by federal decisions.

Especially in the earlier years of reform a substantial share of transfers were transmitted predominantly in the form of retained VAT payments. The regions transferred only a fraction of the VAT collected in their jurisdiction to the centre and the excess shares of VAT proceeds retained in the region were classified as federal transfers. It seems that the practise has continued also in 1995-1997. Figure 5 below shows the composition of federal transfers. In addition to these, 0.5% of GDP in 1996 and 0.7% of GDP in 1997 was channelled to loans to regions. According to 1998 budget act, this channel of financing regions was to be shut down in 1999. (RET 1998.1).

Figure 5. Composition of transfers from federal to regional budgets, % of total (Tabata 1998, 452).



The centre has repeatedly intended to use transfers as a means to promote orderly economic management of the regions, but so far with little success. The Kiriyenko government approved a reform plan that would have tied transfers to prudent regional economic policies. Now it seems that the plan was thrown away together with the government. The 1999 budget act states that regions not fully complying with federal legislation on taxes and budgets are not entitled to federal transfers – a criterion extremely difficult to fulfil.

### 3.2 Transfers to North and Northwest regions

Notably, all the ten regions in question qualified for federal transfers in 1996 and 1997. In contrast to the budget 1996 act, Murmansk oblast received transfers from FFSR although it was not defined as a receiving region. The 1996 and 1997 budget act entitled all regions to transfers from the FFSR, while the 1998 act excluded Komi and St. Petersburg from the list of recipients.

It is clearly visible from Tables 1 and 2 that the transfers from FFSR as well as total transfers vary greatly both in nominal and per capita terms. Judging from these figures, there are clearly three regions that receive larger transfers per capita than the rest of the North and Northwest regions. Nenets AO, Pskov and Novgorod receive the most transfers both from FFSR and other types of transfers. Komi, Vologda, Murmansk and Arkhangelsk receive little in the way of FFSR. The federal funds to these regions seem to come through other channels. St. Petersburg and Leningrad oblast receive small per capita transfers by both measures.

If one can judge anything on basis of two years, it would appear that complaints by the regions about falling federal transfers are modestly justified. In 1996 transfers from FFSR to North and Northwest regions totalled 2773 million roubles; the corresponding figure in 1997 was 2854 million roubles. Inflation in 1997 was 11%. The remarkable changes take place in the targeting of funds. FFSR transfers to Murmansk, for example, increased ten times. What this seems to indicate is that a larger share of transfers were channelled through FFSR. The

total amount of transfers received in Murmansk in 1996 was remarkably higher than transfers from FFSR in both years. The transfers in Pskov, meanwhile, fell dramatically. This is in line with what the regional politicians said in June 1998.

The three regions that received the most transfers per capita (Nenets, Pskov and Novgorod) were also most dependent on transfers. In these regions the share of FFSR transfers in budget revenues was above 20% in both 1996 and above 15% in 1997. It is worth noting that the share of FFSR in total revenues has been greatly reduced in all three regional budgets. Their share in Karelia and Murmansk budgets, however, has risen.

Table 1. Transfers per capita in Russian North and Northwest regions, in millions of roubles (RET 97, MFK 98)

	<b>Total 96</b>	<b>FFSR96</b>	<b>FFSR97</b>
<b>Karelia</b>	463,76	335,29	349,74
<b>Komi</b>	571,21	63,19	79,47
<b>Arkhangelsk</b>	234,89	131,09	113,9
<b>Nenets AO</b>	1681,92	1230,31	1431,78
<b>Vologda</b>	203,18	48,79	0
<b>Murmansk</b>	476,92	16,05	165,57
<b>St Petersburg</b>	59,80	35,18	27,4
<b>Leningrad</b>	91,85	50,41	72,34
<b>Novgorod</b>	484,28	383,23	358,38
<b>Pskov</b>	620,08	479,33	254,96

Table 2. Share of transfers received in regional revenues, percentage (RET 97, MFK 98)

	<b>Total 96</b>	<b>FFSR 96</b>	<b>FFSR 97</b>
<b>Karelia</b>	20,8	13,1	14,0
<b>Komi</b>	15,6	1,7	2,0
<b>Arkhangelsk</b>	15,1	8,4	6,0
<b>Nenets AO</b>	29,7	21,7	18,0
<b>Vologda</b>	10,7	2,6	0,0
<b>Murmansk</b>	20,2	0,7	4,0
<b>St Petersburg</b>	3,0	1,7	1,0
<b>Leningrad</b>	5,9	3,3	4,0
<b>Novgorod</b>	28,0	22,1	16,0
<b>Pskov</b>	43,5	33,6	17,0

## 4 Possible explanations for variations in federal support

As is now clear, although all of ten regions received some federal support, the range of variation has been vast. St. Petersburg and Leningrad clearly fall into their own category in terms of dependence on federal transfers, as do the smallest regions Novgorod, Pskov and Nenets. Is there a rational explanation for this variation, however? In principle, at least equalising transfers should take into account both the capacity of raising revenues in a particular region and the need for public services in that region.

### 4.1 Economic indicators and the FFSR formula

The funds from FFSR are distributed on a formula basis. According to the formula, the region's revenues per capita are taken as a proxy for revenue-raising capacity and expenditure per capita as a proxy for expenditure needs. While taxes collection in the region is a less-than-ideal indicator of revenue raising capacity, it is by far the simplest and most transparent. Thus, it is probably the best approximation available and so own revenues per capita, i.e. total regional revenues minus federal transfers, is used in the formula for FFSR. Regions with low (compared to national average) revenues per capita and high expenditure per capita (compared to regional average) should thus receive larger transfers. In particular, regions where revenues per capita are at least 0.95 of the national average are not entitled to transfers from FFSR through the first window, i.e. 'regions in need.' For higher per capita revenues, even those exceeding the national average, the region may seek transfers through the second window, i.e. 'regions in need of considerable support.' As long as the region's total revenues (after the first theoretical round of transfers) are less than total expenditure, the region is eligible to receive a transfer through the second window. The amount allocated is simply a function of region's budget deficit in the base year.<sup>10</sup> (Steward 1997, Appendix 1)

Of the regions in question here, four had own revenues per capita above the national average of 1,857 thousands roubles in 1996 as shown in Table 3. Own revenues per capita in Nenets and Komi were remarkably higher probably due to oil and gas extraction. Murmansk and St. Petersburg had own revenues only slightly above the national average. These four regions had also high budget expenditure per capita. Intuitively, it is conceivable that these regions may well require high expenditures. For example, St. Petersburg is home to its several major educational institutions and preservation of the city's historical heritage is costly. Others in the group here clearly can make claims based on the harshness of their climatic conditions.

The regional budget expenditure and transfers received seem to positively correlate in this small group. The simple correlation coefficient between expenditure per capita and FFSR transfers in 1996 was 0.83 and 0.71 the next year. The regions where expenditures are high clearly seem to have received more transfers. Here one could argue that actual expenditure is not a good approximation of expenditure needs. Regions preferring large subsidies and inefficient fiscal management continue to receive larger transfers than those with high expenditure needs, but balanced budgets. High positive correlation of budget expenditure and transfers may be an indicator of soft budget constraint rather than of well-targeted transfers' scheme. However, as discussed above, defining the real expenditure need of a certain region is not an easy task.



Table 3. Own revenues, expenditures and deficit excluding transfers per capita in 1996, RUR thousands (RET 1998.1, MFK 1998).

	own revenues per capita 1996	expenditure per capita 1996	own revenues minus expenditure per capita 1996	real budget deficit 1996
<b>North</b>		2544		
<b>Karelia</b>	1516	2425	-909	-152029
<b>Komi</b>	3100	3810	-710	-176152
<b>Arkhangelsk</b>	1326	1834	-508	-407825
<b>Nenets AO</b>	4000	5649	-1649	646
<b>Vologda</b>	1701	2047	-346	-200711
<b>Murmansk</b>	1890	2701	-811	-354008
<b>Northwest</b>		2150		
<b>St Petersburg</b>	1968	2481	-513	-2229021
<b>Leningrad</b>	1467	1672	-205	-203540
<b>Novgorod</b>	1255	1768	-513	-26709
<b>Pskov</b>	809	1544	-735	-98778
<b>RF reference</b>	1857	2316	-459	

RF reference; own revenues per capita: enlarged consolidated regional budget revenues minus transfers, per capita in 1996, R thousands, RET 1998.1, p.76

RF reference; expenditures per capita: enlarged consolidated regional budget expenditures per capita in 1996, R thousands, RET 1998.1, p.76

Also, there seems to be positive correlation between per capita revenues of a region and the per capita transfers received. The simple correlation coefficient between per capita transfers from FFSR and region's own revenues in 1996-1997 was 0.7 and coefficient between total amount of transfers and region's own revenues 0.6 in 1996. High revenues tended to correlate with high transfers. The simplest explanation for this seemingly odd result is that own revenues and expenditure in these regions are highly positively correlated (coefficient 0.97). High own revenues seem to explain the above-average expenditure better than high transfers.

However, excluding the outlier case of Nenets changes the picture considerably. The correlations between transfers and expenditures become much weaker and the relation between own revenues and transfers turns clearly negative. Pskov and Novgorod had the smallest own revenues per capita in 1996. Apart from Nenets, these two received the most transfers per capita. Karelia also received high transfers in both 1996 and 1997 and had own revenues far below the national average. Thus, there seems to be some support for the hypothesis that weak revenue raising capacity and high expenditure needs explain the distribution of transfers in North and Northwest.

## 4.2 Social indicators

McAuley (1997) concludes that real income differentials have a significant role in explaining the pattern of fiscal redistribution in Russia. Of the regions in question here, the lowest levels of income per capita and income per capita in relation to subsistence level are to be found in Pskov and Novgorod. As the figures for Nenets are unpublished, we are back in the small sample of nine regions used above. There is a strong negative correlation (coefficient  $-0.84$ ) between transfers from FFSR and regional income in relation to regional minimum subsistence level.

Other social indicators, like the share of working age population, amount of doctors per thousand inhabitants etc., follow the same pattern. Pskov and Novgorod rank among the worst by all indicators whereby Komi and St. Petersburg that received the smallest amounts of transfers seem to be the best off. (See Table 4.) Broadly speaking, the relatively large transfers received by Pskov and Novgorod seem to be justified on social and economic grounds. Pskov and Novgorod are the poorest regions measured by both income per capita in relation to subsistence level and by GRP per capita. These regions also have the lowest proportion of working-age people and relatively high children mortality rates.

Some of the social indicators available on Nenets hint at a big social need for transfers. Besides, with harsh climatic conditions, large distances and poor infrastructure Nenets is an excellent example of Russian Far North. These regions, endowed with abundant natural resources of e.g. oil, gas and diamonds, are not any more known for good living standards or high real salaries. The lion's share of revenues from natural resources seems to end up in Moscow, not in the regions.

Table 4. Social indicators (Regioni Rossii).

	Income per capita as a ratio to min subst 1996	Income per capita in 1995	Pensioners per 1000 inhabitants 1996	Doctors per 1000 inhabitants 1996	Hospital beds per 1000 inhabitants	GRP per capita in 1995	% of rural inhabitants	% of population in working age	Child mortality in 1995	Unemployment 31.12.95
Russia	202	515	257,8	46	124	9 562,20	26,9	57,0	18,1	3,2
North			249,3	41	124		24,3	60,0	18,5	
Karelia	198	673	269,9	45	125	10 245,50	26,0	58,8	17,4	5,2
Komi	276	666	224,2	38	119	16 250,70	25,6	62,5	25,3	5,8
Arkhangelsk	215	505	262,7	46	131	9 336,30	26,4	59,0	16,2	8,2
Nenets AO			119,0	31	136		40,3	61,0	18,0	7,2
Vologda	217	499	272,4	34	134	14 292,90	32,4	55,7	17,4	2,9
Murmansk	283	740	213,4	44	106	13 577,00	8,0	64,0	15,9	6,0
NorthWest			270,1	57	107		13,3	57,7	14,9	
St Petersburg	237	672	259,7	74	102	9753,90		59,1	13,8	2,1
Leningrad	211	371	272,3	31	100	7466,90	33,9	57,0	14,3	5,4
Novgorod	171	434	294,8	36	136	5923,80	29,1	55,2	19,8	3,9
Pskov	150	340	302,9	33	121	5538,90	34,7	54,7	17,1	9,1

## 4.3 Political factors

Some researchers, especially Treisman (1998), have argued that political motivations explain a major part of intergovernmental transfers in Russia. Treisman has shown that the most anti-reform, anti-Yeltsin regions received the largest transfers. Besides Pskov and St. Petersburg, the voting patterns in the eight remaining regions have been very similar. As seen in Table 5, the regions in this group gave more support to Yeltsin in the 1996 presidential elections than the Russian average. The variation in the 1995 parliamentary elections was larger with Nenets, Arkhangelsk and Vologda giving fewer votes to NDR and Yabloko parties than Russians on

average. However, apart from Nenets the variation is so small that it would be difficult to assess on the grounds of election behaviour whether political motivations actually influenced federal transfers.

Clearly, Pskov has received the largest per capita transfers from the centre; it has also pursued a radically anti-reform economic policy. Pskov also houses several army units, including the prestigious elite troops used e.g. in Kosovo. This may be a fact that Pskov administration have successfully used as a threat in negotiations with the federal centre. St. Petersburg residents on the other end have had notably pro-Yeltsin voting patterns and received the smallest per capita transfers. Other indicators of regional policy orientation do not seem to have had a significant influence on the distribution of federal transfers.

Table 5. Selected indicators of regional policy orientation (Regioni Rossii).

	% of real estate in private ownership 1995	JV Production in 1996	Population 1996	JV production per capita in 1996	Number of SMEs 1.1.97	Vote for NDR or Yabloko in 1995	Vote for Yeltsin in 2 <sup>nd</sup> round 1996
<b>Russia</b>	53	72076,3	148000	0,49	841737	17,02	53,7
<b>North</b>	37	3162,2	5889	0,54	18739		
<b>Karelia</b>	25	242,6	785	0,31	3088	18,40	66,24
<b>Komi</b>	31	1251,2	1185	1,06	3878	18,41	64,23
<b>Arkhangelsk</b>	40	1120,5	1473	0,76	45660	15,70	64,50
<b>Nenets AO</b>	38	974,0	48	20,29		11,66	61,54
<b>Vologda</b>	51	199,9	1350	0,15	3587	16,22	64,15
<b>Murmansk</b>	31	248,0	1048	0,24	3620	21,46	70,13
<b>Northwest</b>	40	9043,1	8052	1,12	104624		
<b>St Petersburg</b>	37	7622,2	4801	1,59	89656	28,81	73,86
<b>Leningrad</b>	32	969,8	1676	0,58	10894	18,97	61,35
<b>Novgorod</b>	56	396,7	743	0,53	2409	17,87	59,14
<b>Pskov</b>	66	54,4	832	0,07	1665	10,99	45,23

## 5 Conclusions

This paper offered a brief introduction into the discussion surrounding Russian intergovernmental transfers and looked specifically for patterns in federal transfers to Russia's North and Northwestern regions. One of the lessons is that regions have very little possibilities to influence their own revenues. The shares of three major federal taxes and federal transfers alone accounted for about 65% consolidated regional revenues in 1996–1997. It is even questionable how much influence the regional administrations have on the federal tax and customs officials working in their region. The examples of large donor republics like Tatarstan, Baskortostan and Sakha have sometimes given an impression that regions can, on their own, decide not to transfer tax receipts collected in their region to federal agencies. The smaller regions, like the ones in question here, are probably too dependent on the federal funds to try such measures.

This paper also considered the possible motives determining for granting federal transfers. The tentative conclusion based on the regional data available is that, in general, high transfers seem to have been directed to regions with poor social indicators, weak capacity

to raise revenues and most pronounced anti-Yeltsin voting patterns. The wealthiest, reform-minded regions, on the other hand, seem to have received smallest per capita transfers. Beyond these broad guidelines, it was impossible to conclude that the transfers would have been determined according to any clear formula or consistent principle.

So it seems like both Treisman (1998) and McAuley (1997) were right; both social and political indicators may matter in interregional redistribution. A simple explanation for this result is that poor socio-economic situation and anti-reform sentiments are closely and positively correlated. Countywide experience hints to the same direction. The depressed Red Belt regions have traditionally given the strongest support for communists and left-wing agrarian parties. Similar reasoning may help to explain why some writers both in Russia and abroad have argued that the official status of a region matters in interregional redistribution. It has been claimed that ethnic republics and okrugs received relatively more transfers than normal Russian regions. While this is true, it should however, be remembered that the majority of ethnic regions are the poorest ones in the federation, often located at the borders of the whole country with large distances and high costs to cover. Nenets AO is a good example of this group, together with e.g. Chechnya, Dagestan, Hanti-Mansiskii, Tuva and Agaim-Buriatia.

Thus, while examining a small group of Russian regions does not offer particularly useful explanation of the contradictions in earlier studies, it does highlight Russia's need to make more transparent the present system of intergovernmental fiscal relations. Discussion about reforming the system of intergovernmental transfers and equalising transfers was particularly sharp in connection with new IMF loan package in summer 1998. One proposal incorporated into the new financial agreements signed with the majority of regions in July 1998 says that future federal transfers are conditional on economic reforms in the particular region. In particular, regions have been forced to promise to freeze public sector salaries and raise housing rents. If this principle is enforced, regions such as Pskov may face even harder times ahead. On the other hand, the upcoming parliamentary and presidential elections may well scotch these plans.

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## Notes

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<sup>1</sup> More on this topic, see e.g. EBRD Transition Update, April 1999.

<sup>2</sup> Of the earlier studies see e.g. World Bank (1995), Wallich (1993) and (1996).

<sup>3</sup> I refer to all subjects of federation as regions irrespective of their nominal status, i.e. *oblast*, *respublika*, *krai* or *okrug*.

<sup>4</sup> We refer to these as regional revenues, although the figures actually comprise both regional and local budgets.

<sup>5</sup> From now on I refer to regional budgets meaning consolidated regional e.g. regional and local budgets combined.

<sup>6</sup> Unfortunately, data on excise taxes in consolidated regional revenue seems unavailable. A ballpark guess is probably around 10% of total revenue.

<sup>7</sup> About Russian taxation and challenges for future reform, see Popova-Tekoniemi 1998 and Pirttilä-Tekoniemi 1999.

<sup>8</sup> Alexeev-Kurliandskaia 1998 estimate that on average 59% of regional expenditures in 1996 were made out of local budgets.

<sup>9</sup> The calculation method used in 1994–1995 is detailed in Steward (1997).

<sup>10</sup> As I do not know the measure used to indicate national average on revenues per capita when shares in FFSR are calculated, I use the figure obtained by dividing the enlarged consolidated regional budget revenues in 1996 by total population. I hope that this gives a reasonable proxy for this figure.

## Appendix 1. Basic data of the regions

The following overview gives a few key indicators of the regions discussed. Most have at least one border with another country or sea, so most have a large military presence. It also implies that they have had opportunities to benefit from cross-border trade. Another common feature is the large role of forest industry in these regions. With the exception of the City of St. Petersburg proper, all regions are sparsely populated and Russians are the dominant ethnic group. These northern regions are by Russian standards rather reform-minded and have given considerable support to Yeltsin. Pskov is the outlier in this respect.

### Karelian Republic

The Karelian republic is a small region situated between Finland to the west and the White Sea to the east.

Population	785,000
Territory	1,724,000 km <sup>2</sup>
Capital	Petrozadovsk, pop. 282,200
Ethnic composition	74 % Russian, 10% Karelian

The republic is rich in wood and minerals. It provides gravel, granite and macadam used in construction. Forest industry accounts for about a half of industrial production of the region. GDP per capita is just above the national average. In the April 1998 elections, the incumbent communist governor lost to the pro-reform major of Petrozavodsk, Sergei Katanandov. Communists still hold strong positions in the republic administration and the regional legislature. In national elections, however, Karelia has shown considerable support for pro-reform candidates.

### Komi Republic

The Komi republic is a large, resource-rich region in the northern part of European Russia. It borders the Ural Mountains to the east.

Population	1.19 million
Territory	4,159,000 km <sup>2</sup>
Capital	Syktyvkar, pop. 227,000
Ethnic composition	57% Russian, 23% Komi

The electorate has been relatively reform-minded in national elections and its governor Yuri Spiridonov, a Yeltsin appointee, was popularly elected in 1996. Komi was among the first regions to sign a power-sharing agreement with the centre in March 1996. The republic's industry is based on extraction of oil and gas from the Timan-Pechora fields and coal in Northeastern Vorkuta. Forests cover about 65% of the region, so forestry and wood processing are also important contributors to the republic's economy. GDP per capita is the highest of the ten regions summarised here and substantially above the national average of 16,251 roubles in 1995.



## Arkhangelsk oblast

Arkhangelsk oblast borders the Arctic Ocean. Administratively, it includes the Nenets Autonomous Okrug.

Population	1.5 million
Territory	58,749,000 km <sup>2</sup> (including Nenets AO)
Capital	Arkhangelsk, pop. 372,100
Ethnic composition	92.1% Russian

This reform-minded region is governed by Anatoly Yefremov, who was elected in December 1996. Mr. Yefremov enjoys relatively good relations with the Kremlin. Traditionally Arkhangelsk has relied on the forestry, wood processing, and pulp and paper industries, all of which were severely hit in recent years. Oblast is home for large military units, including the intercontinental missile launch site at Plesetsk. Combined GDP per capita in the oblast and okrug in 1995 was slightly below national average.

## Nenets Autonomous Okrug

Nenets AO occupies a small, sparsely populated coastal strip on the Arctic Ocean. Several promising hydrocarbon deposits have been identified in the region.

Population	48,100
Territory	176,700 km <sup>2</sup>
Capital	Harjan-Mar, pop. 19,200
Ethnic composition	66% Russian, 12% Nenets

The region's indigenous people, the Nenets, have traditionally lived on hunting, fishing and reindeer herding. Still in 1995 over 40% of the population lived outside urban settlements. With the recent discovery of vast reserves of oil and gas this is bound to change. The production-sharing agreement with the French Total and Norwegian Norsk Hydro on use of the Kharyaga oilfield in Nenets AO went into force in February 1999.

## Vologda oblast

Vologda is a developed, medium-sized region 500 km north of Moscow.

Population	1.3 million
Territory	145,700 km <sup>2</sup>
Capital	Vologda, pop. 300,400
Ethnic composition	97% Russian

Vologda gave 64% support to Boris Yeltsin in the 1996 elections, well above the national average. However, in the 1995 parliamentary elections, the Vologda electorate failed to support the NDR and Yabloko parties. Current governor Vjatseslav Pozgalev, elected in October 1996, is a strong Yeltsin supporter. Vologda signed a power-sharing agreement in July 1997. Although Vologda's only significant natural resource is peat, the region's GDP per capita is still well above Russian average (14,293 roubles in 1995). Vologda is a major metallurgical centre in Russia, and production of iron, steel and rolled-steel products (in Cherepovets) accounts for 70% of the region's total industrial output. Chemical production (e.g., fertilisers for forestry) is another strong industry. Arable land accounts for only 10% of the territory and some food processing (dairies) takes place.

## Murmansk oblast

Murmansk occupies the Kola Peninsula and borders on Norway, Finland and the Karelian republic. Practically all of its territory lies north of the Arctic Circle.

Population	1,048,000
Territory	144,900 km <sup>2</sup>
Capital	Murmansk, pop. 399,000
Ethnic composition	84% Russian, 8% Ukrainian

The pro-reform, pro-Yeltsin sentiments of the region were well demonstrated in the recent elections. In 1996 presidential elections, only eight regions of 89 showed greater support for Yeltsin than Murmansk. In the November 1996 gubernatorial elections, the Yeltsin-appointed incumbent lost to Yuri Evdokimov. The current governor has, however, maintained good relations with the Kremlin and taken a pragmatic attitude towards reform. A power-sharing agreement was signed in October 1997. The region's economy is heavily based on mining and metallurgy. Murmansk has rich deposits of iron ore, copper, nickel and apatite. Also fishing and shipbuilding have traditionally been important for the economy. Murmansk continues to be a strategically important region as it shares a common border with a NATO country (Norway) and hosts Russia's Arctic Sea fleet. Regional GDP per capita is above the national average.

## St. Petersburg

St. Petersburg is Russia's second largest city and regarded as the second capital of the country. Located on the Gulf of Finland, the city is surrounded by the Leningrad oblast to the north, east and south.

Population	4.8 million
Territory	900 km <sup>2</sup>
Ethnic composition	89% Russian

St. Petersburg has been one of the strongest supporters of market reforms in Russia. Pro-reform parties have won with large margins in national elections. Current governor Andrei Yakovlev is a pragmatic reformer who has pushed for a tight fiscal discipline. During the Soviet era, St. Petersburg was highly dependent on military-industrial activities. The city was home to various military research institutes as well as large machine-building units. Because of the structure of its economy and traditional high dependence on the navy, St. Petersburg was exceptionally hard hit by the economic reforms. The city saw its industrial production fall over 40% between 1992 and 1995. Official GDP per capita in 1995 was about the national average.

## Leningrad oblast

The Leningrad oblast, which borders both Estonia and Finland, has its administrative centre in St. Petersburg.

Population	1.7 million
Territory	85,900 km <sup>2</sup>
Ethnic composition	Russian 90 %

Leningrad gave firm support for pro-reform candidates in the recent national elections. Boris Yeltsin took 61.4 % of votes in the second round of presidential elections in 1996, when his overall national share was 53.7 %. A communist, Valdimir Gustov, beat out the Yeltsin-appointed incumbent in the elections held in September 1996. Notably, Mr. Gustov has pursued numerous pro-market reforms to the extent that he has even brought down the wrath of the St. Petersburg administration. Leningrad is not rich in natural resources; its economy relies on diverse industries. The oblast has several large oil refineries, the Sosnovy Bor nuclear power plant, and the Svetogorsk and Vyborg wood processing and pulp and paper mills close to the Finnish border. About a third of the population lives in rural areas. The region's agriculture has traditionally supplied St. Petersburg with foodstuffs. Regional GDP per capita in 1995 was 78% of the national average.

## Novgorod oblast

Novgorod is a small region located between St. Petersburg and Moscow.

Population	742,600
Territory	55,300 km <sup>2</sup>
Capital	Novgorod the Great, pop. 233,000
Ethnic composition	Russians 97 %

The governor Mikhail Prusak, elected in 1996, is probably one of the most reform-minded of Russian governors. The voting patterns in the national elections as well have shown considerable support for reform-oriented candidates. Apart from forests, Novgorod has few natural resources. Machine building (notably electronics) and chemicals (mainly fertilisers) were traditionally the largest sectors of industry. Most industrial production went to the military. Today, wood processing has a higher profile. Aware of its meagre resources, Novgorod has actively sought to attract new investments, mainly in the form of green-field projects. Currently, Novgorod is second only to Moscow in FDI per capita. However, income per capita and GDP per capita are still well below the Russian average.

## Pskov oblast

Pskov is a small, poor region, sharing common borders with Estonia, Latvia and Belarus.

Population	832,300
Territory	55,300 km <sup>2</sup>
Capital	Pskov, pop. 207,100
Ethnic composition	Russians 94 %

Anti-reform themes have played better with the Pskov electorate than in any of the other regions described here. In the 1996 presidential elections, Boris Yeltsin received only 45% of the vote. Support of pro-reform candidates in the State Duma elections was well below the average elsewhere in Russia. In the October 1996 gubernatorial elections, the incumbent was unseated by LDPR's Yevgeny Mikhailov, who ran on an anti-market platform. Subsequently, many posts in the Pskov administration went to LDPR sympathisers. Like Novgorod, Pskov lacks any major natural resources. About a third of the population lives in rural settlements. Agriculture is the most important livelihood and arable land covers 28% of the territory. Pskov's most important industries are machine building and food processing. Nominal GDP per capita in Pskov in 1995 was only 58% the national average. As a border region, Pskov oblast houses several army units.

## Appendix 2. Revenue sources in Karelia and St. Petersburg

Main sources of budget revenues in Karelia and St. Petersburg,  
shares as percentage of total revenue

	<b>Karelia</b>	<b>Karelia</b>	<b>Karelia</b>	<b>Karelia</b>	<b>St.Petersburg</b>	<b>St.Petersburg</b>	<b>St.Petersburg</b>
	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1993</b>	<b>1994</b>	<b>1996</b>
<b>CIT</b>	38.40	28.60	25.00	16.30	45.60	37.70	22.30
<b>PIT</b>	15.20	18.80	14.40	16.90	14.40	20.40	20.80
<b>VAT</b>	23.30	16.90	4.30	4.80	22.60	12.40	15.30
<b>Federal transfers</b>	9.80	14.60	11.20	17.72			
<b>Loans from federal budget</b>				19.00			
<b>Other</b>	13.30	21.10	45.10	25.28	17.40	29.50	41.68

*Sources:* Goskomstat Karelii, *Kratkosrostonie ekonomisteskie pokazateli*, Petrosavodsk 1996, *Sotsialno-ekonomitseskoe polozhenie 1996*, *Za stroikami tsifr S-Peterburg 1995*.  
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