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A Study of the
Russian Region of Novgorod

KITTY STEWART

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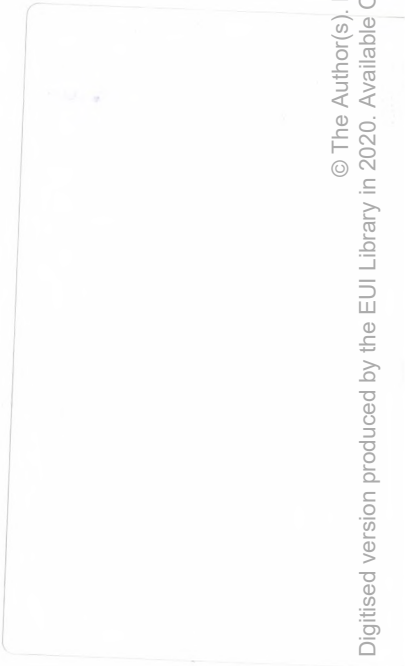


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Financing education at the local level: A study of the Russian region of Novgorod

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Rapid decentralization since 1992 has given substantial responsibility for key government services not just to Russia's 88 regions (oblasts) but also to its 1800 local authorities (raions). It seems likely that this will have had consequences for the equity of provision of these services. However, very little is yet known about how the fiscal system works at the raion level. The majority of studies of the impact of decentralization in Russia have concentrated on the relationship between the federal government and the oblast.

This paper attempts to fill in a small part of this information gap by presenting an analysis of the system of financing of one service, education, in one oblast, Novgorod, in North-West Russia. Representing the results of field research, it asks what fiscal mechanisms exist to ensure that all raions can meet their responsibilities, and examines how successful these are in preventing raion disparities in education financing. It also presents some evidence on the role played by non-budgetary sources of funding.

The paper finds that Novgorod has a strong redistributive mechanism which goes a long way towards equalizing budget revenues across raions, but it confirms reports that education expenditure in all parts of the oblast is at a disturbingly low level. This in turn is leading schools to raise additional funds from parents, with consequences for both regional and individual equality.

Keywords: Decentralization, Education, Russia

JEL classifications: H71, H72, I22, P52

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1. Introduction

The implications of fiscal decentralization for the equitable provision of public services in Russia is becoming an increasingly popular subject (see for example, Bahl et al 1993, Klugman 1995, McAuley 1996, Stewart 1997). Almost all work done so far, however, has concentrated on the relationship between the 88 'subjects of the federation' and the federal government, rather than between the subjects and their own sub-regional units. The reasons for this are understandable: substantial inter-regional differences make these relationships interesting and important, while data constraints present an obstacle to a study of the sub-regional level. For obvious reasons indicators available with regional breakdowns are given by region rather than by raion (which would mean 1800 units).

At the same time, there are several reasons to want to take the analysis beyond the inter-regional level. First and foremost, many of the expenditure responsibilities which tend to be classified as the responsibility of 'regional authorities or below' are in reality the responsibility of 'below'; that is, of the local (raion or municipal) authorities. In the sphere of education, for example, kindergartens and general schools are now raion responsibility, meaning the vast majority of pre-compulsory and compulsory educational institutions fall under raion control. There are certain federal constraints on provision, but in principle it is up to the raion to decide how much to budget for these institutions and how the budget should be allocated.

Second, while regions are likely to be more homogenous as units than the federation as a whole, with less severe internal differences in economic circumstances, there is still room for considerable intra-regional disparity, both between urban and rural areas and between different towns. These differences may be small in comparison with the inter-regional disparities, but this is by no means certain; at least not certain enough for sub-regional issues to be ignored. It is possible that local authorities even within a single region face very different economic constraints. While there are federal regulations on what the region is required to do to ensure all raions can cover a minimum budget, these are not specific and it is not clear how they are enforced.

The aim of this paper is to fill in a small part of the hole of information about what takes place below the level of the region, by presenting an analysis of the system of financing of education in Novgorod Oblast. Why education and why Novgorod? Education is chosen in part simply as a way of focusing the analysis on a single sphere as a representative of others: if provision of education is very different across the region, then we might expect provision of other goods to be so too. But it is also chosen because of the importance of equality of provision of education in particular, and for this reason the paper does not stop at issues which will be

generalizable but tries to draw a fuller picture of the situation in the education sector in particular.

The reasons for the choice of Novgorod Oblast are perhaps less transparent. In a sense any region might have done, given that the purpose of the exercise is to see how education is financed in a region, any region. But Novgorod seemed to be typical in a number of ways. It is an industrial region in European Russia, and along with most of European Russia has suffered considerably during the transition. Its industry traditionally centred around the development of radio technologies used predominantly by the military; over the past five years demand has virtually disappeared. It is now poorer than average but not among the very poorest of Russian regions, ranking one third of the way down the list of recipients of federal transfers.

At the same time, however, it has a progressive administration which has received wide recognition for its innovation: last year for instance the World Bank declared it to have one of the six most favourable climates in Russia for foreign investment. This last feature is clearly not so typical of other regions. The choice of Novgorod might be justifiable all the same as a deliberate decision to examine a case likely to present the better face of sub-regional organization; thus avoiding drawing over pessimistic conclusions on the basis of a single wayward region. In fact a more decisive consideration was that it proved hard to gain access, for reasons which are perhaps obvious, to regions which seemed promising as disastrous cases. This is also likely to be a difficulty in any attempt to follow this study up with a study of a contrasting region. In any case, in what follows I try to give an idea of how much of what I discovered during my stay in the oblast seems to me to be generalizable and how much likely to be unique to Novgorod.

The paper begins by introducing Novgorod and the circumstances in which it finds itself. The rest of the paper is divided into two parts. The first part is concerned with general financing issues which are essential to an understanding of how education is financed, but not specific to the sector. In this part I try to answer three questions in particular. First, what are the raions' expenditure responsibilities in practice? Second, what mechanisms exist to ensure that all raions can meet these responsibilities? And third, how far is what happens dictated by federal law, and how much is left to oblast initiative? This last question is important to our understanding of how typical the Novgorod situation might be.

The second part of the paper turns to look at education. The focus here is on the extent of disparities in education finance across the oblast's raions, but the analysis is broader in two senses. First, it tries to give some idea of the incentives and constraints raion education departments face. This is partly motivated by the fact that there is much greater uniformity in raion budget allocation decisions than the system

formally requires, which in turn suggests that a high degree of uniformity might persist right across the country. Second, it presents some evidence on other aspects of inequality: it asks whether there is an urban-rural split in education provision, and discusses the role of non-budgetary sources of funding, and how these may be affecting both regional and individual equity of educational opportunity.

The paper concentrates on the picture in 1996: it aims to provide a snapshot portrait and makes no attempt to try to track changes in the situation over recent years. This is partly for practical reasons: budget data was hard to come by for more than one year, while tracing changes over time would present considerable difficulties, both because of the need for a price deflator and because of the speed of changes that have taken place (and are still taking place annually) in the responsibilities of different levels of government. But a snapshot also seems a reasonable starting point given the little that is known so far about equity and public finance at the sub-oblast level.

2. Administration, history and economics: a brief tour of Novgorod¹

Novgorod Oblast is in North-West Russia, 600 kilometres north-west of Moscow and 200 kilometres south of St. Petersburg. Smaller than average for a Russian region, it has a population of 740,000, some one third of whom live in the administrative centre, Novgorod City. A further 120,000 live in the three other main urban centres, Borovich, Staraya Russa and Chudova. In total, just over 70% of the population are urbanized, close to the Russian average. The oblast is divided into 22 sub-regional divisions, called towns (if solely urban) or raions. For simplicity, below I use the term 'raion' to include all 22 divisions. Novgorod City is in fact the only such town; most raions have mixed urban-rural populations but there are five which are fully rural. These are also the smallest, with six to ten thousand inhabitants each.

Like all Russian regions, the Oblast has its own elected parliament (Duma), as well as a directly elected Governor who heads the Duma and the Oblast Administration (a non-elected civil service). All oblast policy and oblast budgets must be approved by both the Duma and the Governor. Each raion also has its own small elected Duma and its own Administration, headed by a directly elected mayor. Neither the Oblast Duma nor Administration therefore has direct control over the actions of raion politicians, who are accountable only to their electorates. In essence the system is similar to that in most of Europe, where local government

¹ This section draws on Dmytryshyn (1977) and the Russian Academy of Science (1995).

functions independently of regional or national government. However, personalities seem to play a more important role than party politics in local elections: in the elections to the Oblast Duma in October 1997, only one out of twenty-six successful candidates had a party affiliation (a member of the Communist Party). The majority of the others were directors of large enterprises or heads of local administrations (RFE/RL Newswire, October 21st 1997).

Novgorod is now often confused with its more famous namesake, Nizhny Novgorod (800 kilometres away on the Upper Volga), but it occupies by far the more prominent place in Russian history. Founded in 859, it is Russia's oldest town and was also briefly capital of Rus, the predecessor of modern Russia. At its peak Novgorod controlled a territory which stretched from the Arctic Ocean to the Volga and from the Gulf of Finland to the Urals, allowing it to establish itself as one of the key East-West trading points and to rename itself 'Lord Novgorod the Great' (a name still used on tourist brochures, and to mark the distinction from the upstart Nizhny).² But the wealth that came from trade was not able to protect the town from Ivan the Terrible and his minions in pursuit of hegemony for Muscovy: in 1570 Ivan arrived in person to initiate a five week massacre from which Novgorod never recovered.

Its more recent history has not been so illustrious. During the Soviet era there was little to distinguish it from the other industrial regions of Central and North West Russia. Its primary industries were radio-electronics, with a strong leaning towards military production and a sideline in radios and televisions for the consumer market, timber processing and chemicals. By the end of the 1980s about 13% of the working population were employed in agriculture, roughly the Russian average. If Novgorod stood out it was for poor levels of social indicators relative both to the rest of the North-West and to Russia as a whole: in 1990 infant mortality was 18.0 per thousand compared to 16.9 in the North-West and 17.4 in Russia; male life expectancy at birth was 61.6 years against 64.2 in the North-West and 64.0 in Russia.

The transition has hit the oblast hard. The radio-electronics industry has suffered most: military demand has collapsed and lines of production aimed at the consumer market have found it difficult to survive on their own, particularly in the face of cheap imports from the Far East. In Novgorod City only two of the fifteen largest firms remain in operation; one is the (heavily polluting) chemical plant AKRON,

² According to local folklore, Peter the Great made Novgorod drop its titles when he founded nearby St. Petersburg. But in January 1998 the Novgorod City and Oblast legislatures voted to restore the name Velikii Novgorod (Novgorod the Great). The change is waiting approval from the federal government (IEWS Russian Regional Report, Internet edition, Vol. 3, No. 5, February 5th 1998).

which makes fertilizers, and which is the only firm in the oblast to have managed to keep production stable, largely due to exports to countries which presumably do not want to suffer the consequences of production themselves. In total there are three chemical plants in the oblast, and in 1995 these three between them accounted for 34% of the volume of production.³ An unofficial estimate is that AKRON alone currently provides one half of oblast budget revenues raised in the region.

These developments are illustrated in Table 1, which shows production of a series of goods over the period 1991-1995. This is likely to be a better indication of the state of the economy than the unemployment rate, which rose from 5% in 1992 to 10% in 1995 but which almost certainly hides substantial underemployment: it is common for workers to remain on the official employment roll despite not having worked in practice (or been paid) for several years. Table 1 also shows the collapse in production in the agricultural sector. Most kholkozi have ceased functioning. Former workers farm small plots of land privately for their own consumption and for small scale trade.

Table 1. *Production of a series of goods in Novgorod Oblast 1991-1995*

	1991	1992	1993	1994	1995
Fertilizers, thousand tonnes	680.0	629.9	585.2	570.0	664.0
Industrial wood, thousand m ³	2417.1	2011.9	1355.3	1113.1	1229.3
Paper, thousand tonnes	65.5	44.0	23.8	6.9	7.2
Televisions, thousands	236.5	210.2	240.8	95.9	16.6
Videos, thousands	57.7	68.9	47.7	13.8	0.8
Meat, thousand tonnes	32.5	26.9	19.0	13.6	9.1
Dairy products (converted into whole milk), th. tonnes	86.5	38.2	34.9	28.7	22.8

Source: *Novgorod Oblast in Figures*, Novgorod Oblast Committee of State Statistics, 1996

Overall though, and perhaps due to the success of the chemical industry, the collapse of production does not look so bad in comparison to the Russian average. In 1994 industrial production in Novgorod was 63% of its 1990 level, while in Russia as a whole it was just 51%. But the gap in social indicators has continued to widen. By 1994 infant mortality in Novgorod had risen to 20.8, compared to 18.6 for Russia, while the average for the North-West had actually fallen to 16.1. Male life expectancy in Novgorod was just 55 years, compared to 56.6 in the North-West and 57.6 in Russia as a whole.

Prospects for the region look relatively bright. Earlier this year the World Bank declared Novgorod one of the most favourable six regions in Russia for foreign

³ Novgorod Oblast Committee of State Statistics (1996).

investment, while in June *The Economist* sang its praises as one of Russia's boom towns.⁴ While this may be a bit premature, it is true that foreign investment has begun to arrive, most notably from Cadbury's, which last year opened a big chocolate factory just outside the town of Chudova. The reason for this success seems to be a progressive and active administration headed by a young and dynamic governor, Mikhail Prusak: Alexei Lavrov, an advisor in Yeltsin's office on regional affairs, recently described Novgorod as one of only six reformist regions in Russia ('going more by feeling than by statistics').⁵ One example of the administration's activity is the new experimental scheme of tax holidays for small businesses investing in any of the four most depressed areas of the country. These businesses will be exempt from all profit tax, with even their share of federal profit tax paid for them by the oblast government.

For the moment, however, the brighter future has yet to materialize. Novgorod may look promising as one of the successful regions of the next century, but today it ranks firmly in the bottom half. In 1995 20% of Novgorod's revenues came from the Federal Support Fund, compared with an average across Russia of 8%. Furthermore, although the new tax scheme shows that the problem of uneven regional development is being addressed, considerable disparities between areas persist as yet. Only two towns, Chudova and Novgorod, have so far seen any foreign investment, while rural areas have almost no local sources of budgetary income. The extent of raion disparities in own revenues -- and the mechanisms used to even them out -- are discussed further in Section 3.

3. The fiscal system and its implications for the raion

This part of the paper explores the general structure of the fiscal system as it affects the raion. It sets out to answer three questions in particular. First, what are the raion's expenditure responsibilities? Second, what mechanisms exist to ensure that raions have the revenues they need to meet these responsibilities? And third, is the system dictated by federal law or does oblast initiative play an important role? This last question is clearly important in affecting our ability to reach generalizations on the basis of the Novgorod story.

The section contains of necessity a large amount of descriptive material. To try to make this easier on the reader the information is sub-divided. In Section 3.1 I detail

⁴ 'Russia: An old-fashioned, modern look', *The Economist*, June 14th 1997.

⁵ 'Russia: Regions are to blame for wage arrears', Robert Lyle, RFE/RL Newslines, March 7th 1997.

the raion's expenditure responsibilities, putting these into context with some examples of the local authority burden in other countries. In Section 3.2 I turn to look at revenue sources: Section 3.2.1 looks briefly at some international examples of local authority revenue structure; Section 3.2.2 describes the rules as laid down by Russian federal law; Section 3.2.3 turns to look at the way the system works in practice in Novgorod; and Section 3.2.4 analyses how far the Novgorod system succeeds in providing adequate revenues for less well-off raions. Finally, Section 3.3 sums up by clarifying the answers to the three questions posed above.

3.1 Expenditure responsibilities

The decentralization process of the last few years has not stopped at the level of the oblast: federal law has delegated many responsibilities directly to the raion level. The Federal Law on Local Government⁶ includes among the responsibilities of raion governments the 'organization, maintenance and development' of local pre-school and school institutions, institutions of professional education, and local health care institutions. Local public transport, local roads, the police force, the housing fund and the provision of social support and employment assistance all also fall into the raion's sphere of control.⁷

In practice the process of decentralization is an ongoing one. It is up to the oblast to implement federal law in the area, and the speed and extent to which it does so also seems up to the oblast to decide: presumably the federal government has more serious things to worry about than who is in charge of a particular school, and will interfere only in cases of serious violation of the law. In some cases, the federal level itself still holds responsibility for items that should fall under oblast control. The result is that the location of responsibility for a series of items will vary across oblasts for some time to come. As an example within the education sector, professional-technical institutions (PTUs) were taken over from the federal level by Novgorod as an oblast responsibility only last year and at the oblast's initiative, whereas in principle as institutions of professional education they ought to be raion responsibilities. Responsibility for special schools and boarding schools (mostly 'correctional' schools) was handed over by the Novgorod Oblast Administration to the raions as of January 1st 1996, but this may not have happened in all oblasts.

These imprecisions notwithstanding, the bulk of institutions delegated by law to the local budget ought in practice to be found there by now, and Table 2 below should be fairly representative of the situation across the federation. The table shows

⁶ Russian Federation Federal Law on General Principles of the Organization of Local Government in the Russian Federation, adopted by the State Duma on 12 August 1995; further referred to as 'Federal Law on Local Government'.

⁷ Federal Law on Local Government, Article 6.

the percentage of oblast expenditure in Novgorod in 1996 which was spent at the raion (rather than the oblast) level; along with an estimate of what this is likely to represent as a percentage of total (consolidated) expenditure in each sphere. The table shows that about 60% of all Novgorod Oblast expenditures was spent at the raion level, representing nearly 30% of consolidated budget expenditure. The raion's role is most important in the social sphere, where it spent over 90% of the oblast total in 1996, corresponding to some 80% of consolidated expenditure. About 80% of the total budget for education was spent at the raion level.

Table 2. *The importance of raion expenditure in the oblast and consolidated budgets 1996*

	<i>Raion share in oblast exp (%)^a</i>	<i>Estimated raion share in total exp (%)^b</i>
Total expenditure, of which:	61	28
Administration	78	49
Law enforcement	16	4
National economy, of which: ^c	73	53
Housing	81	81
Social expenditure, of which:	92	78
Education	95	81
Health and physical culture	91	83
Culture, art and mass media	65	46
Social policy	96	79

Source: Author's calculations based on data from the Finance Committee of Novgorod Oblast Administration, and on Ministry of Finance territorial and federal expenditure data for 1995 printed in Dmitriev 1996. ^a The total spent by all raions in Novgorod as a percentage of total expenditure in Novgorod Oblast in 1996. ^b A rough approximation of the raion share of consolidated expenditure, equal to the first column multiplied by the fraction of consolidated expenditure spent at the territorial level in 1995 (1996 not available). ^c 'National Economy' also includes subsidies to industry and agriculture and expenditure on developing market infrastructure, transport and the environment.

It is worth commenting briefly on how this situation compares to that in other states in Eastern Europe and beyond. Are Russian raions being given unusual levels of responsibility, or are their duties much the same as that of other local authorities? Table 3 gives the share of total government expenditure spent at local level in a number of other European countries in the early 1990s. There is considerable variation, reflecting a range of government systems from highly centralized to very decentralized. The Russian level fits somewhere in the middle, with a local government share very similar to that in the UK, France and Germany, and

considerably lower than that in Lithuania and Sweden. Of the countries given, local authorities have main responsibility for the provision of pre-primary, primary and secondary education in all except Slovakia, Romania, Poland and Austria (pre-primary and primary only), and the Czech Republic, where responsibility is shared with district offices of the Ministry of Education (Van Haecht 1996 and Barrow 1997).

Table 3. *Local budget expenditure as share of total government expenditure in selected European countries in the early 1990s*

	<i>Local share of total</i>		<i>Local share of total</i>
Czech Republic	21	Germany	29
Slovakia	12	France	27
Poland	22	UK	27
Romania	17	Denmark	31
Lithuania	59	Sweden	38

Source: Council of Europe 1997, p.19. All figures refer to 1994 except France (1992) and Romania, Lithuania and Germany (1993). Lithuania has since experienced a substantial recentralization process (Klugman 1997).

3.2 Revenue sources

But where does the raion get the revenue to cover these responsibilities? This is an important question for two reasons. First, the structure of the revenue system is a key determinant of what local responsibility means in practice. The numbers in Tables 2 and 3 could reflect several very different scenarios: while it may be that local authorities are indeed the ones deciding what to spend and where to spend it, it could also be the case that the local budget is really just a stopover for already earmarked central government resources.

Second, and more important for this paper, is the equity question. If raions do have real responsibility for such an important range of expenditures, there is clearly a concern about what will happen in poorer areas. Particularly if inter-raion economic disparities are large, we want to know what kind of transfer mechanisms exist to protect these areas and how effective these mechanisms are.

In Section 3.2.1 I look briefly at some examples of local authority revenue structure from other countries. In Section 3.2.2 I describe the rules of the system in Russia as laid down by federal law and discuss how far they leave room for differences across oblasts in interpretation. In Section 3.2.3 I turn to look at the system as it works in Novogorod, and in Section 3.2.4 ask how successful this system is in equalizing revenues across raions.

3.2.1 International examples

A standard textbook revenue system would give local authorities control over a key local tax to give it autonomy, usually an income or property tax, and would then use a system of general and unconditional transfers to support the revenues of poorer regions.⁸ These latter would be based on a formula which takes into account indicators of local expenditure need as well as an estimate of the region's tax base (independent of how far the local authority chooses to tax it), the idea being to give local populations a choice about tax-rates and service levels without penalizing taxpayers in poorer areas. In addition, there may be conditional or earmarked transfers, these to fund goods which central government wants to encourage local governments to provide or which they provide in an agency role for the centre.

It is difficult to summarize international experience because it is so varied, but on the surface this is essentially how the system works in many European countries. In most cases local authorities have some control over either income tax (e.g. Scandinavia and Switzerland) or property tax (e.g. Germany and the Netherlands), although in many cases they are constrained in how far they can adjust tax rates, either for economic or political reasons: in France and Austria property tax rates are set locally but only within limits imposed by the centre, and the UK also moved in this direction with the introduction of 'rate-capping' in 1984 (see Council of Europe, 1997; Batley and Stoker, 1991). In Central and Eastern Europe as a rule central governments still hold on tightly to their fiscal tools: local authorities have limited control over either income or property tax in the Baltics, Hungary, Poland and Romania, but no control at all in Bulgaria, the Czech Republic or Slovakia (Council of Europe, 1997).

Most countries also have a transfer system along the lines of the one above. Allocation of transfers are based on estimates of local tax base adjusted by needs criteria, which can include population mix and density (numbers of pre-school and school children, young people and elderly), children in one-parent families, length of roads, age of housing and level of labour costs. Variations on this theme can be found in the UK, Germany, France, Denmark, Sweden, Portugal and Australia (Council of Europe, 1997; Norton, 1994; Searle 1995).

The importance of transfers relative to local tax revenues will clearly depend on both the emphasis given to equalization relative to autonomy and on the level of initial disparity to be equalized. Table 4 shows a range of possibilities by giving an overview of sources of municipal funding in a number of European countries. In the Scandinavian countries local taxes make up the majority of local revenues;

⁸ This is of course a gross oversimplification. See Oates (1994) for an overview of the public finance literature on these issues.

elsewhere there is more of a balance between local taxes and general grants. In Romania, France and the UK, over 25% of local authority revenue comes from general grants, although Romania and the UK are the only countries where grants are more important revenue sources than local taxes and fees and charges taken together. Comparisons are confused however by the role played in some countries of 'shared taxes', which are taxes with rates set by the centre but receipts shared between different government levels. In some cases (e.g. Germany) receipts from these taxes are shared out across local authorities with the intention of equalizing revenues, making them really a form of general grant. A second reason for caution is that countries which appear to have only a small role for grants may of course have very effective equalization schemes which concentrate on the very poorest areas; in other countries *all* regions may contribute to the central budget, and then all may receive general transfers of varying sizes. The most important information the table gives us is really that a wide variety of combinations of revenue sources are possible.

Table 4. *Sources of municipal funding in selected European countries in the early 1990s (%)*

	<i>Local taxes</i>	<i>Fees & charges</i>	<i>Shared taxes</i>	<i>General grants</i>	<i>Earmkd grants</i>	<i>Borrow -ing</i>	<i>Other</i>
Czech Republic	16	12	23	8	10	11	20
Poland	21	7	23	15	22	0	12
Romania	5	16	33	25	21	0	0
France	36	2	0	24	0	10	28
Germany	19	16	17	15	13	9	11
UK	11	6	17	32	27	0	6
Denmark	51	22	2	12	0	2	12
Sweden	61	8	0	11	8	1	11

NB. 'Local tax' means local authority decides rate (in some cases within limits). 'Shared taxes' are those with rates set at the centre. Source: Council of Europe, 1997. For relevant years see note to Table 3.

Finally, does international experience give us any examples of the role played in local financing by *regional* level authorities? In countries which have three tiers of government, does the middle level tend to have any control in determining equalization mechanisms and the extent of local autonomy within the region? The answer again is varied, as the cases of Germany and Austria illustrate. In Germany, a degree of control is given to the *Länder* (regional) governments over the operation of the transfer mechanism, degrees of local equalization differing fairly significantly across *Länder* as a result (Gunlicks 1986, p.128). But in Austria, although federal

structure is very similar, the federal constitution is much more explicit on the relations between regional and municipal authorities, and the situation across regions is basically uniform (Council of Europe 1988, p.6). In laying out below the basic rules that govern local authority financing in Russia, I assess how much room is left for regional difference in practice.

3.2.2 Russia: the basic rules

There are two important aspects to the raion revenue system in Russia. First, the basic system is established by federal law to be one of 'revenue-sharing' (like the 'shared taxes' in Table 4). Rates for the main taxes are set at the federal level, and raions keep a share of the tax revenues raised from these taxes on their own territories. The remainder is handed up to the oblast, which in turn keeps a share determined by the federal government and passes the rest to the centre. The four most important of these shared taxes -- profit tax, income tax, value added tax (VAT) and enterprise property tax -- together make up some 70% of tax revenues in both Novgorod Oblast and the Russian Federation as a whole.⁹ A degree of control over the system is given to the oblast: first, the oblast can determine the proportion of the non-federal share each raion can retain (shares can also vary across raions) although there are federal constraints on the oblast's choice, as discussed below. Second, since 1996 the oblast has been able to set its own rate for profit tax, up to a maximum of 22%, and can also choose to vary this rate across raions (allowing the new 'tax-holiday' scheme introduced in Novgorod's more depressed raions). However, the raion itself has no say in either of these decisions.

This system has two immediate problems. First, it clearly leaves raions with little control over their budgets: they get whatever they happen to raise and are allowed to retain from the main taxes. Raions do have the right to the proceeds from a series of minor taxes and charges that they can set themselves,¹⁰ but these in general form a small percentage of the total (some 10%; see Table 6 below). At the same time, however, this is not a dissimilar amount to that in a large number of other countries, as shown in Table 4.

Second, there is an immediate equity concern. If raions begin with very different tax bases, a revenue sharing system clearly offers the potential for large disparities in raion budget revenues. Germany also has a revenue-sharing system for several taxes,

⁹ Profit tax made up 27% of tax revenues in the consolidated Novgorod budget in 1996 (33% of the 1995 RF consolidated budget); income tax 23% (10%); VAT 14% (24%); enterprise property tax 5% (4%).

¹⁰ Russian Federation Federal Law on Basic Budgetary Rights and Rights of Formation and Use of Extra-Budgetary Funds, adopted by the Supreme Soviet 15 April 1993; further referred to as 'Federal Law on Budgetary Rights'; Articles 1 and 14.

but there the shares kept by the local authority are not necessarily the shares raised there: the *Länder* can redistribute the share and hand out greater shares to poorer areas (Council of Europe 1997). In Russia this cannot happen and each raion keeps its own share.

This is where the second aspect of the revenue system comes into play. Federal legislation does impose on the oblast the requirement to address inter-raion disparities. This requirement is based on the concept of a 'minimum necessary budget'. Every oblast must calculate such a budget for each of its raions, and then in theory the oblast must ensure that the raion has the resources to cover it. This should be done first by setting revenue sharing rates for each raion so as to allow them to cover 70% of the minimum budget with their own tax receipts (if possible), and then by way of transfers to the raion level.¹¹

Under federal law, the 'minimum budget' is to be based on the raion's current (non-capital) expenditures in the previous year. This figure is then adjusted to take into account the rate of inflation, the cost of providing any additional services devolved to the raion (or removed from the raion) during the year, and any changes made by the oblast or federal authorities in 'social and financial norms and standards' (the latter presumably meaning changes in the levels of benefits, minimum wages etc).¹² Raion tax shares must then be set so that at least 70% of the minimum budget can be covered by their own retention of revenues from the main taxes.¹³ In addition, the oblast government is required to use additional mechanisms ('dotations and subventions') to ensure that the raion has the means to cover the remainder of the minimum budget.¹⁴ In essence this is a mini-version of the principle applied at the federal level to try to ensure that all subjects of the federation can meet their essential budgetary needs (see Stewart 1997). Transfers are unconditional: the minimum budget is calculated as a single figure, and there are no requirements on the raion to spend grant receipts in particular ways. Nor are there federal provisions for specific transfers for particular sectors.

To sum up, federal law allows the raion little autonomy over the size of its budget, but appears to guarantee less well-off raions a fairly strong degree of protection. How much role is there for the oblast in all this? Federal government regulations seem tight, but in practice there is limited room for oblast initiative, or at least variation in arrangements across oblasts. This arises, first, from the fact that the method to be used to calculate the minimum budget is specified only vaguely. In Novgorod, for instance, the criteria suggested are used as guidelines, but additional

¹¹ Federal Law on Budgetary Rights, Articles 1 and 9.

¹² Federal Law on Budgetary Rights, Article 7.

¹³ Federal Law on Budgetary Rights, Article 9.

¹⁴ Federal Law on Budgetary Rights, Article 1.

factors are taken into account as well, including changes in the number of school-age children.¹⁵ There are also no formulae dictating what the weight of each factor should be. The second area which is underdetermined is the transfer system: the source of revenues for transfers is not mentioned; nor is any provision made to ensure that funds are sufficient. This opens questions about where the resources are to come from, and what happens if an oblast simply decides it cannot afford to run such a fund. The solutions found in Novgorod are not necessarily universal solutions.

3.2.3 Novgorod Oblast: the revenue system in practice

This section examines how the system works in practice, looking first at the allocation of revenue shares across revenues and then at the transfer mechanisms. The following section assesses the success of these mechanisms in achieving equalization of revenues.

Table 5 shows the share of the four major taxes kept by the raion rather than fed into the oblast budget. Effectively what happens is that most raions keep everything they raise. Given that many of the raions have little or no tax base, this is the only way to get close to meeting the 70% requirement; I was told in the oblast budget department that in practice for some raions even this is not enough. The oblast budget depends heavily on income from just two raions, Novgorod City and Chudova. The oblast is entitled to all receipts from some smaller taxes and charges, but receipts of profit tax from Novgorod and Chudova and VAT from Novgorod

Table 5. *Percentages of revenues from the major taxes to be retained in the raion, Novgorod Budget 1996*

<i>Tax</i>	<i>Percentage to be retained in the raion</i>	<i>Total share to remain in raion or oblast*</i>
Profit tax	21% Novgorod City 50% Chudova 63% all others	63% (max)**
Income tax	90% all	90%
Value added tax	7% Novgorod City 25% all others	25%
Enterprise property tax	60% all	100%

* Total share to be retained by either raion or oblast, as opposed to being passed up to the federal level. ** Federal profit tax is set at a rate of 13%; subjects can set their own rates up to a maximum of 22%. Sources: Novgorod Oblast Law 'On the Oblast Budget in 1996', accepted by the Oblast Duma 30 Jan 1996; Russian Federation Federal Law on the Federal Budget in 1995, Article 14.

¹⁵ Novgorod Oblast Law on the Budgetary Process in the Oblast, approved by the Oblast Duma 6 February 1995; Article 4

composed some 65% of oblast tax revenues in 1996.

Despite the fact that most raions retain the majority of their taxes, in many cases these taxes comprise a small part of the overall budget, as reflected in Table 6 below. While 80% of budget revenue in Novgorod City is raised in the raion itself, and 50% in Valdai Raion (an industrial raion in the south-east of the oblast); in the smaller, predominantly rural raions of Shimsk and Poddorsky the percentage raised in the raion is only 30% and 20% respectively. These raions are both dependent on transfers from the oblast budget for the vast majority of their revenues.

Table 6. *Raion budget revenue by percentage shares; four raions in Novgorod Oblast 1996*

	<i>Big 4 taxes</i>	<i>Other shared taxes</i>	<i>Other own tax, fines etc</i>	<i>TOTAL OWN REV</i>	<i>MS & Dot'ns</i>	<i>Eq. transfers</i>	<i>TOTAL TRANS</i>
Novgorod C	54.4	9.0	16.1	79.2	8.1	11.8	20.0
Valdaisky	34.3	4.5	11.7	50.5	22.4	25.2	47.6
Shimsky	20.2	7.1	3.9	31.2	17.4	48.7	66.1
Poddorsky	12.1	5.2	1.3	18.6	12.4	61.3	73.7
Total (all raions)	44.5	7.0	10.1	61.6	14.5	20.6	35.1

Source: Author's calculations using data provided by Finance Committee of Novgorod Oblast Administration. Notes: 'Big 4 taxes' are profit tax, income tax, VAT and enterprise property tax. 'Own taxes and fines' are those over which raion exercises control. 'MS & Dot'ns' (Mutual Settlements and Dotations) are transfers made to compensate raions for extra responsibilities or mandates handed down by higher levels of government. 'Eq. transfers' are those made according to formula and intended to equalize revenues, as explained below. Where total own revenue and total transfers do not sum to 100, the difference is made up by subsidies and credits.

As Table 6 illustrates, since 1995 raions have received two types of transfer from higher level government. The idea of the first type, which I have classified to include 'mutual settlements' and 'dotations', is to satisfy the obligations of higher levels of government to lower. Mutual settlements are intended to make up for any change in expenditure at one level of government caused by a decision taken at another level (such as a centrally determined increase in public sector salaries, when salaries are paid by the local level). Dotations are meant to cover additional expenditures arising as the result of the handover of responsibilities from oblast to municipal budget. The size of the transfer in each of these cases is decided by the oblast after negotiation with the raions. In both cases transfers are always made by the oblast rather than the federal level. Even if the federal government mandates some increase in expenditure,

it reaches a decision on compensation with the oblast government, which then goes on to conduct negotiations with the raion authorities in its territory.

The second type of transfer is used directly for equalizing purposes. These are the transfers the federal law requires oblasts to make in order to bring all raions up to a minimum budget. As already noted, however, the law contains no regulations about how such a transfer mechanism should work, or on what resources it should be based. The details are left to the oblast's initiative. For the last two years Novgorod has used a formula system closely resembling the one used to distribute transfers from the federal level to the oblasts (see Stewart 1997). Details of the formula are given in Appendix A, but essentially the mechanism works in two stages. First, raions are classified as 'in need of support' if their predicted per capita revenue in the year in question is less than predicted per capita revenue in the oblast as a whole: they are then awarded transfers in proportion to the difference. In the second stage, raions are labelled 'in need of considerable support' if their revenues after first stage transfers are still going to be insufficient to meet their estimated 'minimum necessary budget'. In that case they are allocated the difference. The minimum budget is calculated as dictated by federal law, except that 1991 expenditures are used as the base, rather than last year's expenditures.¹⁶ These are then adjusted for inflation and for changes in federal standards (such as wage changes). Novgorod has also introduced some additional criteria not laid down in federal law, such as changes in demographic structure (number of children).

In essence then, the idea is that each raion gets topped up to its minimum budget, but with a little extra for those raions with below average revenues, regardless of their necessary expenditures. But this leaves the question of where the funds come from to cover these transfers. As minimum budgets are calculated quite independently of oblast revenues, there is no guarantee that there will be sufficient funds to cover them. In practice then, the allocated sum really determines, not a fixed rouble amount, but the share the raion will receive of the funds that are available in practice. In other words, despite the law, raions will only be sure of covering their minimum budgets if transfer funds allow.

So where do the transfer funds come from? In Novgorod what happens is simple: the oblast takes the transfers which it receives from the *federal* transfer fund (the Federal Fund for Financial Support to the Subjects of the Federation), and simply passes them on to the raions using the formula above. Naturally what this means is that raions are very dependent on federal transfers being made in full and on time,

¹⁶ The Federal Fund for Financial Support has also calculated necessary expenditures on the basis of 1991 expenditures since 1996 (before then it used expenditures in 1993). So this is accepted federal practice even if not in accordance with federal law.

neither of which happen in practice. In 1996, about two thirds of the initial allocation arrived, and this came in trickles through the year. What the oblast does then is allocate piecemeal to raions depending on the urgency of need; naturally some raions end up receiving more of their initial allocation than others. By the end of 1996 raions had received between 59% and 68% of their planned transfer allocation.

I asked whether the oblast could implement its own transfer system on the basis of its own funds, and the answer was perhaps obvious: in principle of course it could, but in practice it doesn't have the money. Given lack of local funds, it sees the best way to distribute federal transfers as to pass them on to the raions, especially given that their stated purpose is equalization (although there is no federal obligation or even assumption that they will be passed on). However, in 1997 the Oblast Administration did implement an additional system of 'subventions' for the first time. These are to come out of the oblast budget and to be given to raions to cover the 'protected items' in their budget: wages, meals and medicine. ('Protected items' are items given top priority by federal authorities. They must be covered before other expenditures, and planned spending on them cannot in principle be reduced even in the event of a budget shortfall.) The introduction of the subventions is seen as a way for the oblast to ensure that all raions are able to cover essential items as quickly as possible even if federal transfers are delayed. This should reduce, for example, the incidence of wage arrears, a huge problem in many regions and one which regional authorities often blame on delays in federal transfers. Under this new system, transfers will be worked out in the usual way, but with receipts from subventions included in a raion's 'pre-transfer' revenues.

3.2.4 The impact of the transfer system

Several criticisms of this transfer system are possible, even putting aside the instability of the financing source and the insufficiency of funds. The most obvious is the use of the 'minimum budget' as a proxy for expenditure needs, where the minimum budget is based on the level of spending in a previous year. As discussed above, in most countries formula mechanisms to determine equalizing grants are based on direct indicators of need (population, area, number of school-children etc). Though far from being an exact science, this seems a more reasonable starting point: why after all would past expenditure levels be a good proxy of current needs? The mechanism implies great trust in the equality of the old system; but the key motivation behind its use in Russia appears to be more inertia than belief in the allocative justice of the Soviet era. Several people I spoke to in the Novgorod Oblast Administration felt that the system was unfair and should be replaced, but argued that it was imposed on them by federal law. This is true -- although it is not clear how far it is really an obstacle given the imprecision of the law and the fact that other federal

laws are happily bent. For the moment though it seems likely that it is a system used as standard right across the country.

Whatever the rights and wrongs of the minimum budget, however, a look at the Novgorod budget for 1996 shows that in practice the system's impact is considerable. Table 7 gives summary statistics for average pre- and post-transfer revenues per capita and actual per capita expenditures. The first column gives revenues per capita as raised and retained in the raion. Disparities are considerable, with an almost six-fold difference between the lowest and highest revenue raions. Many of the lower revenue raions -- Moshenskoi, Volotovskiy, Marevskiy, Poddorskiy -- are small rural raions with no industry. In the past the local economy was based around the collective farm, but the majority of these have now collapsed into private plots run for subsistence or very small scale private sale. At the other extreme, Novgorod City and Chudova have been the only direct beneficiaries of all recent foreign investment.

Table 7. *Summary statistics for pre- and post-transfer revenues and total expenditures per capita Novgorod Oblast 1996 (thousand roubles per capita)*

	<i>Own revenues only</i>	<i>plus mut. settlements and dotations</i>	<i>plus transfers</i>	<i>Total exps</i>	<i>Minimum exps</i>
Minimum	238	397	916	993	947
Maximum	1,367	1,451	1,583	1587	1,736
Mean	619	844	1,265	1,294	1,322
Max/Min ratio	5.7	3.7	1.7	1.6	1.8
90/10 decile ratio	3.2	2.1	1.6	1.5	1.7
Coefficient of Variation	0.40	0.28	0.16	0.14	0.17

Source: Author's calculations based on data from the Finance Committee of Novgorod Oblast Admin. Note: Each raion is weighted by its population for the calculation of decile ratios and coefficients of variation.

Transfers however have a dramatic impact on the distribution. The second column of the table shows per capita revenues including mutual settlements and dotations (i.e. transfers made not for equalizing purposes but to fulfil commitments made from higher levels of government or to cover newly devolved responsibilities). The third column shows the latter plus the equalizing transfers made according to the formula outlined above. Disparities are sharply reduced at both the dotation stage and the 'transfer' stage, as reflected in each of the measures of inequality given at the bottom of the table.

Finally, the fourth column of the table gives total per capita expenditures by raion, which includes any subsidies and credits made to the raion. Expenditures appear to be slightly more evenly distributed than total revenues. The upshot is that while the highest revenue raion raised 5.7 times more than the lowest in own revenues, the highest spending raion spent just 1.6 times more overall than the lowest. As a comparison, in 1995 the highest revenue *oblast* in European Russia raised 9.6 times more than the lowest, while the highest spending oblast spent 5.2 times more.¹⁷ The coefficient of variation for this group of oblasts came down from 0.47 for own-revenues to 0.42 for expenditures. The scale of initial disparity is therefore much smaller at the sub-oblast level, but the equalization mechanism inside Novgorod also appears to be considerably more effective than the inter-oblast mechanism.

In addition, final raion expenditure levels in Novgorod appear to be dictated slightly more if anything by the level of the minimum budget than by initial own revenues: correlation between total expenditures and own revenues is 0.68; between total expenditures and the minimum budget 0.75. While these correlations are not significantly different, the relative importance of the two factors varies depending on the level of own revenues, as the scatterplot in Figure 1 illustrates. It seems that having high pre-transfer revenues per capita will ensure high per capita expenditures, but that low revenue raions are not necessarily condemned to the lowest levels of spending, thanks to the transfer mechanism. Among the bottom half of the expenditure distribution, the minimum budget is a more important determinant of spending than own revenues.

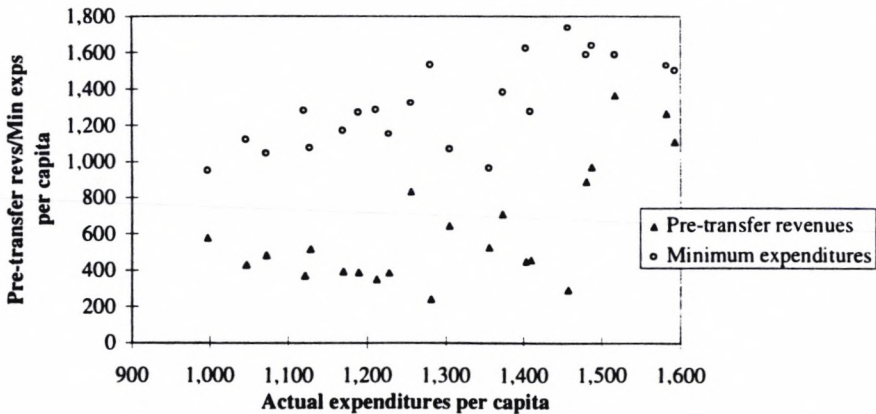
3.3 A summary

This part of the paper had three main aims: first, to establish the extent of raion expenditure responsibilities; second to explore the mechanisms that exist to ensure that raions have the revenues they need to meet these responsibilities; and third, to determine how far the revenue system is dictated by federal law and how far arrangements might differ across oblasts.

The first question is straightforward. The raions of Novgorod Oblast are now responsible for some 60% of oblast expenditure, or nearly 30% of consolidated expenditure in the oblast. In the education sector, they are in charge of all pre-school and school institutions, which means 95% of oblast education spending or 80% of all

¹⁷ These figures are calculated for the 35 oblasts of the North-West, Central, Central Black Earth, Volga and Volga Vyatskiy Regions. The North Caucasus, Siberia and the Far North and Far East are excluded to avoid distortion by outliers.

Figure 1
Scatterplot showing raion expenditure per capita against pre-transfer revenues and minimum expenditure per capita



spending on education. Furthermore, analysis of the revenue system shows that raions have real responsibility for these services: their role is not just to pass on earmarked funding from above. While they have only limited ability to affect the *size* of their budgets, they do have full control over allocation: even grants received from higher levels of government are general and can be spent freely. There are of course a number of federal regulations on minimum expenditure levels: those that affect education will be described in Section 4.

In answer to the second question, it turns out that fairly powerful mechanisms exist to ensure that even less well-off raions can meet their responsibilities. Equalization transfers bring the ratio of per capita budget revenue in the highest and lowest revenue regions down from 3.7 to 1.7 and the coefficient of variation down from 0.28 to 0.16. The level of post-transfer revenue disparity within Novgorod Oblast is hence much lower than that between the oblasts of European Russia, where the ratio of maximum to minimum for 1995 was 5.2. The degree of disparity in expenditures per capita in Novgorod is actually lower than that in the minimum budgets calculated as essential for each raion.

One very interesting aspect of the Novgorod transfer system, however, is the fact that the degree of support to poorer raions depends entirely on the level of oblast receipts from the federal transfer fund. This brings us on to the third question: how far can this, among other aspects of the Novgorod system, be assumed to apply to

other oblasts too? Many of the basic characteristics of the system are laid down in federal law and as such are likely to hold for all oblasts: most importantly, federal law requires that oblasts have a system of transfers which ensures that all raions can cover a 'minimum budget', and also states that this budget should be calculated on the basis of last year's spending levels, adjusted for various relevant changes since then. However, there are no requirements (or guidelines) on where the funds to cover these transfers are to come from.

If the Novgorod system is universal, it raises an interesting question. The system implies that, despite federal law, the degree of equalization achieved depends on the sum of federal funds -- indeed, actual transfers made were considerably less than intended in Novgorod in 1996 because transfers from the centre fell below plan. If other regions do things in the same way, poorer regions (those receiving more) will have stronger redistribution systems. The fact that Novgorod is poor and receives a relatively large sum in transfers from the federal support fund is what allows it to achieve such a high degree of equalization. In 1995 19% of Novgorod Oblast's total budget revenues came from the federal support fund, compared to a regional average of 8%: does this mean that Novgorod redistributed 19% of its revenue while the average region redistributed only 8%? The extreme cases are the donor regions, those receiving no federal transfers: do they have an internal redistribution system at all?

The last possibility seems unlikely, and the fact that Novgorod itself has introduced a second transfer mechanism to cover protected items is evidence that regions can and do have the initiative to set up their own systems from scratch. But this leads to a second question for the donor regions. Novgorod does its best to follow federal law in bringing each raion as close as possible to a minimum revenue level. In practice every raion ends up qualifying for transfers: even Novgorod City and Chudovsky, once they have submitted their allotted tax shares to the oblast budget, fall below their minimum budgets on the basis of their own revenues. The point is that while Novgorod is doing a good job, what it is doing is (of necessity) a minimum. Would more distribution take place if the oblast had resources sufficient to do *more* than the minimum? With a basic revenue level assured for all raions (and the requirements of federal law satisfied) it would be interesting to know whether equalization would continue or whether some areas would pull ahead. In the Novgorod case today this is impossible to answer.

4. Financing education in Novgorod Oblast

This part of the paper concentrates on the financing of the education sector in Novgorod. The focus is on disparities in education finance across the oblast's raions, but the analysis is broader in two senses. First, it begins by trying to give some idea of the way in which decisions are made, and the incentives and constraints involved at different levels. And second, it also looks briefly at evidence on other aspects of inequality, in particular the urban-rural split, and the differences in opportunities facing individual children living in the same area. The focus on finance does not reflect a belief that education finance is synonymous with quality of educational provision; just that (at least in a context of severe cutbacks) the first is likely to have an important impact on the second, while also being a straightforward measure and one which adjusts immediately to new conditions.

In the first sub-section below, I clarify the division of education expenditure responsibilities by government level, and discuss the degree to which the local level is really free to make its own decisions. I look at the formal constraints faced by raion authorities, and also at the informal framework of precedents and incentives within which they make their decisions. In practice, budget allocation decisions are much more uniform than the system formally requires, and it is the reason for this that interests me here. The next sub-section explores the evidence on disparities in total raion education spending. It asks how far these seem to be explained by financial constraint and necessity, and how far by raion choice about priorities. Section 4.3 looks at how funding is allocated within the education budget, both by item and between different institutions, and asks in particular whether raions differ in the priority that they give to kindergartens, given that there is somewhat less compunction to provide these than to provide compulsory schools. Section 4.4 asks whether there seems to be an urban-rural split in education provision, looking at what evidence there is on non-monetary measures of education provision. Finally, Section 4.5 looks at the role of non-budgetary sources of finance, including the importance of private schools and of private financing of public schools.

4.1 Background: responsibilities, constraints and incentives

In principle the raions in Novgorod have full control over current expenditure on all pre-schools and general schools, including (since 1996) correctional boarding schools and schools for children with special needs. There are one or two exceptions in practice, of which textbooks are the main one. The oblast authorities continue to provide textbooks (to the extent that they are provided at all) to all raions except Novgorod City, which chooses to provide its own. This is a responsibility which the oblast could by law delegate, but feels that the raions are not in a position to take on

themselves. For the same reason, the oblast authorities told me that they fund teachers' holiday pay. Capital repairs are the raion responsibility, but capital construction comes from the oblast budget. In practice construction is virtually non-existent for the moment, and what little there is shows up as an expenditure in the raion budget: the funds appear to be transferred from oblast to raion as part of mutual settlements or dotations. Aside from the items already mentioned, the oblast education budget covers only general educational development programmes, teacher training, (voluntary) assistance to Novgorod State University, and as of January 1997 the 25 technical-vocational institutions in the area. Previously these were federal responsibility but the oblast has opted to take over control. The federal budget is responsible for the university.

How far does raion autonomy over education spending reach in reality? There are basically five constraints on raion authorities. One has already been discussed above -- the raion's limited ability to adjust tax rates to raise extra revenues if it wishes to. However, the fact that all transfers from the oblast are lump sum and unconditional means that at least within the limits of its budget the raion is free to spend money as it chooses. This is with four provisos which apply specifically to education. First, under federal law the raion must ensure that all children have access to free (non-paying) education at primary and secondary level, where this covers as a minimum the subjects included in the basic curriculum.¹⁸ Second, there are maximum limits on class sizes for each age group, implying minimums on teacher numbers. Third, these teachers must be paid at least the salary level set as a minimum in Moscow, and increased by the oblast authorities if they so choose. Finally, the raion must cover 'protected items' before any others. In education, the only significant item here is the wage bill. The other protected items are food (a minimum per pupil expenditure, which is negligible -- 1,200 roubles per child per month, enough for half a loaf of bread), and medicines (an even tinier sum). Aside from these limits the raion's hand is free to allocate the education budget as it chooses, and indeed to determine the education budget's size. It can take funds away from other activities to spend on education, or it can take funds away from education and spend them on other things.

The combination of minimum teacher numbers and minimum salaries might seem quite a severe restriction on what the raion can do, but it is worth noting that in practice the limits on teacher numbers at least are unlikely to change anything in how the education budget is run by the raion. I did not hear any complaints at oblast or raion level about being forced to hire too many teachers: at all levels the recent rise

¹⁸ Russian Federation Federal Law On Education, Accepted by the State Duma 12 July 1995 and approved by the Federation Council 5 January 1996; further referred to as 'Federal Law on Education', Articles 5 and 31.

in teacher numbers was defended on grounds of need (higher pupil numbers in general and particularly at secondary level). What I was told about this in Shimsk Raion matched exactly what I was told in the federal Ministry of Education three months earlier.¹⁹ There were complaints from the oblast about salary limits, but more out of principle than a belief that wages were actually too high. The Oblast Administration pointed to the irrationality of having one government level decide on the wage level while another pays the wages, but nobody suggested that teachers' wages had been pushed too high by federal decree, nor that they were being forced by federal law to spend too large a proportion of the budget on wages. As context it is worth noting that in 1995 the average wage in education was 72% of the overall average in Novgorod, compared to 85% in 1991; while at the beginning of 1997 the average teacher's wage was under 400,000 roubles a month (\$70), with textbooks retailing for up to 100,000 roubles each. While the ability of the centre to set a floor for the wage might seem odd, in the light of these figures one could look at it as the imposition of a minimum wage, which is widely accepted as a right of central government. Note that in principle at least the federal level should in any case foot the bill for any mandated salary increases through 'mutual settlements' (see above), although there are continual complaints from the regions that these are non-transparent and insufficient.²⁰

Yet however constrained raions may be by these regulations, I was interested to discover that the uniformity of the budgeting process far exceeds their limits. There seem to be two different reasons for this. The first is inertia and lack of innovation in the budget allocation system. Despite the fact that each raion is free to determine the education budget in the way it chooses,²¹ all three raions I visited did it in the same way -- on the basis of last year's budgets, with adjustments made for changes in pupil numbers after negotiations between raion finance department and raion education department. The same was also apparently true of the way in which funding was allocated by raion education departments to schools and kindergartens. In essence, this is a reproduction of the principle behind the calculation of the raion 'minimum budget' discussed in Section 3.

¹⁹ Meeting with V.V.Grachev, Head of Department of Statistics, Ministry of General and Professional Education (MGPE), Moscow, April 15th 1997.

²⁰ V. Bolotov, Vice Deputy Minister, MGPE, acknowledged lack of transparency to be a problem with these payments at the OECD Review of Education Policy in the RF (Moscow, June 16-17 1997). He said it was completely unclear why one region got one sum to cover wage arrears and another a different sum.

²¹ Article 31 of the Federal Law on Education explicitly notes the right of the raion to 'develop and adopt local norms of financing for the education system'.

Naturally there are both efficiency (incentive) and equity implications of such a system. It is inefficient as those making spending decisions have no real incentive to economize as this will just result in a smaller budget for next year. The rational course of action for both the raion education department and the individual school is to keep requesting more funding and then spending it whether it is needed or not. In the current context of severe shortage of resources this may not be a very important consideration: there are always many more ways in which money can usefully be spent, and so institutions and local budget departments have clear incentives to prioritize expenditure. For the moment the equity implications may be more worrying. In each of the three raions I visited, and at the oblast level, it was openly acknowledged that the system was outdated and inaccurate, with past expenditure levels bearing little obvious relation to current need. At the same time the lack of transparency of the system and the room it allows for negotiation may add to inequality as it may mean that schools which are better at bargaining or which have friendlier relations with the raion authorities receive more than others.

Why do local authorities stick with this allocation system, if they recognize its faults? At each level of government there seemed to be a desire to change the system, but also a feeling that no change could realistically be made unless it came down from the centre. At raion level, redesigning financing norms appears simply to be too big a job, one which it would not make sense for them to take on. They are waiting for the initiative to come from the oblast, which has a policy role even if it has no coercive power over any raion. At the oblast level, work has in fact begun on a new system which would use a per-pupil type formula to allocate funds, and several people I spoke to were enthusiastic about it.²² The obstacle here seems to come from Oblast Duma deputies who have been persuaded of the convenience of the non-transparent system, which allows criteria to remain cloudy and prevents any school from being able to stake an absolute claim to a certain sum. The Oblast Duma has apparently said it would refuse to adopt any new system unless it was first adopted at the federal level.

A second factor driving uniformity, however, is the fact that actual budgetary resources are limited, unstable and always below plan. Funds reach both raion education budgets and schools in trickles throughout the year, which means that in practice by the time they arrive they are already earmarked: they go to pay the most urgent arrears, be it salaries or heating bills. This means raions have no chance of making any policy decisions about how to spend funds, and may be one of the

²² This is currently one of two main policy concerns of the Oblast Education Committee. The other is school budget autonomy (see below).

reasons behind the failure to develop new financing norms: what would be the point? This is explored further in Section 4.3 below.

One further aspect of the financing system is worth highlighting. Under the traditional allocation mechanism, not only was a school's funding for this year based on its expenditure last year, but in addition the school never got to see what this allocation was. All local school funds were handled by a single accountancy office for each raion. While in principle these accountants knew how much funding a school was entitled to and were supposed to ensure that by the end of the year they hadn't received more (or less?), the school director was *not* aware of how much his/her school was allocated. Each time there was a need for a new expenditure (a light bulb, some teacher overtime, new chairs) the school director went to the central accountant and made a request for funds. The accountant could accept, or reject on the grounds that the school had used up its share of resources. Such a murky financing arrangement clearly gave the school director very little incentive to keep costs down or to prioritize spending. It also confused the issue of accountability. If a teacher was not paid it was not theoretically the school director's responsibility but that of the central accountant. But as the accountant paid wages via the director, the money could get lost along the route.

In Novgorod this is an aspect of the financing system which the Oblast Education Committee has been keen to address, giving it top priority alongside the goal of per-pupil financing. In this case they have been much more successful in implementation, apparently because they have federal law on their side: the Federal Law on Education gave the school the right to its own independent budget and the school director full control over how it is spent.²³ As of July 1997 budget autonomy had been delegated to almost 40% of schools in Novgorod Oblast, and the aim was to reach 50% by the end of the year. Funds to these schools are still negotiated on the basis of past expenditure levels, but once agreed on the sum is transferred into an independent bank account upon which only the school director can draw. The authorities argue that budget autonomy will give school directors more incentive to control costs and to prioritize, as the buck now stops with them. According to raion officials, school directors did not universally jump at the chance to control their own budgets; many of them seem to have been quite content with having no responsibility. But as they are appointed and dismissed by the raion authorities they do not have much choice. The determinant of whether a school will have an independent budget is what the raion thinks of the policy: in those raions in favour, most or all schools have now moved over; while in other raions the policy has not yet taken off at all. The oblast has no power to force raions to comply.

²³ Federal Law on Education, Articles 42 and 43.

Despite the fact that school budget autonomy is now federal law, Novgorod appears to be unusual in putting it into practice. A recent Ministry of Education officials claimed that schools had no budget autonomy as recently as April 1997,²⁴ while at a Novgorod conference to discuss oblast education policy with neighbouring Leningradskaya Oblast in June 1997,²⁵ the Leningrad delegates heavily criticized the idea of greater decentralization. They argued that it would increase injustice in the system as it was not possible to predict in advance where expenditures would be most needed, in effect claiming an equity justification for the non-transparent process run by the all-powerful central accountant. They also maintained that it was pointless to concentrate energy (and money, as school directors have to be retrained) on a process which will not affect the basic problem the system faces, lack of funds. The Novgorod delegates refused to accept that there were implications for equity, while arguing that the new system would not only mean more efficient use of funds, but would also lead to an increase in the total available, as there would be more incentive for school directors to raise their own additional funds. I go into this in more detail in Section 4.5 below. In practice this impact on fund-raising activity is likely to be the main effect of the move to independent school budgets in the immediate term. Ability to determine the direction of budgetary resources has even less real meaning for the moment for schools than for raions, because of the context of shortage of funds. In practice funds reach both raion budgets and school budgets already earmarked, as will become clear below.

4.2. Raion disparities in education finance

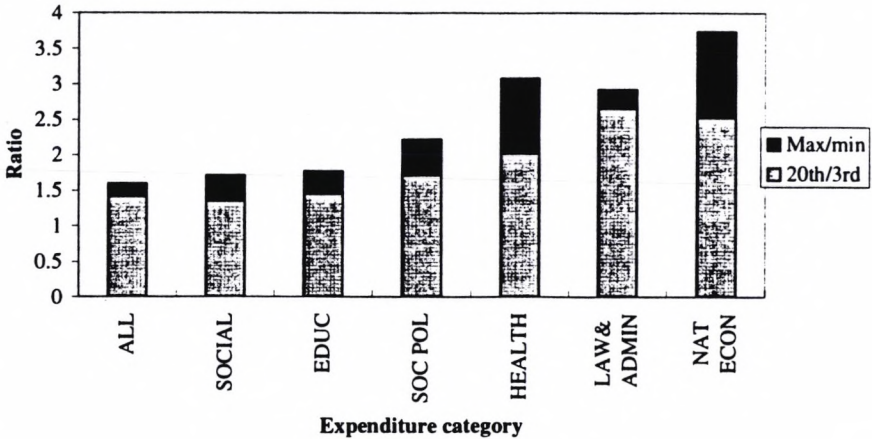
How large then are disparities across the oblast in education financing, and how do they compare to disparities in other sectors? Figure 2 shows the ratio between the highest spending and lowest spending raions in various sectors, and that between the third raion from top and third from bottom (to get rid of outliers). Expenditure includes capital spending (insofar as there is any) and is measured per capita, except for education expenditure which is measured per person under twenty (a category

²⁴ Meeting with G.V.Bashkina, Deputy Head of Department of Economics in the MGPE, Moscow, April 18th 1997. A recent note on the direction of education reform prepared by several Deputy Ministers claims that fewer than 10% of Russian secondary schools have their own accounts. ('On Objectives and Directions of the Education Reform in Russia (Analytical Note)', draft proposal prepared by Deputy Ministers Tichonov, Asmolv, Dmitriev (Ministry of Labour), Summer 1997.)

²⁵ Conference on 'Education Policy in Novgorod and Leningrad Oblasts', Novgorod, June 25th 1997.

imposed by the population data: in fact pupils move onto higher education -- and therefore out of the raion's sphere of responsibility -- at seventeen or eighteen).²⁶

Figure 2
Measures of disparity in raion expenditure, by raion



The raion spending most on education spends about 80% more per child than the lowest spender, and the third highest 50% more than the third lowest. As the figure shows, this is a level of difference very similar to that for total expenditure and for the sum of social expenditure, but considerably lower than for other spending categories, among them other social categories such as health and social policy.²⁷ It looks as though education is being protected better than other spheres. The fact that the sum of all expenditure shows roughly the same level of disparity as education is strange, however, given the much greater disparity in other categories. This is particularly so as 'national economy' (mostly spending on housing) takes up a large share of the total raion budget -- 35% on average compared to just under 30% on education. One explanation may be that all raions give education the same priority -- the basics cannot be cut -- whereas other spheres are valued differently in different areas. Finally, it is worth noting that the scale of disparity observed here in all sectors is much lower than that between oblasts. The highest per capita level of

²⁶ The difference in results if education expenditure is measured per capita as opposed to per child is minimal.

²⁷ However, health expenditure is difficult to interpret because of the growing importance of the centralized Medical Insurance Fund, which is not included here.

expenditure in European Russia in 1995 was over five times greater than the lowest level; while per child spending on education varied by a factor of 2.6.²⁸

All the same, an 80% difference in per child education spending is not inconsiderable. The highest spending raion, Borovichsky, borders the lowest spending, Okhulovsky: it appears that a school in one village could be enjoying almost twice the funding per child as a school in a neighbouring village. Given the importance played by the 'minimum budget' in determining raion revenues, however, it is plausible that some of this difference results from differences in provision costs. Fixed costs mean that raions with fewer children or a more scattered population are likely to have to spend more per child on education, and if this was taken into account in the Soviet allocation mechanism it would also affect revenue allocations now. Table 8 shows the results of some simple OLS regressions which aim to measure the impact of revenue on education spending if these cost factors are held constant. It is striking that while budget revenue seems to explain about 60% of variation in education spending, the two control factors have almost no impact. The share of the rural population has no bearing at all on the sum spent per child, while slightly more is spent per child in raions with a smaller total number of children. However, neither of these factors diminish the size or significance of the revenue

Table 8. Results of OLS regressions for per child education expenditure (th. roubles per child)

	Budget Rev per child (1000 rubles)	Budget Rev per child SQ'D (1000 rubles)	No. of children	Rural pop (%)	Constant	R ²
1	0.23 (5.6)				353.7 (1.7)	0.59
2	0.25 (6.0)		-0.004 (-1.6)		285.1 (1.4)	0.61
3	0.25 (5.8)		-0.003 (-1.2)	0.15 (0.1)	274.4 (1.2)	0.60
4		0.000022 (5.7)			921.1 (8.7)	0.60
5		0.000024 (6.1)	-0.004 (-1.6)		900.6 (8.8)	0.63

Note. T statistics are given in brackets.

²⁸ Figures calculated for the 35 oblasts of the North-West, Central, Central Black Earth, Volga and Volga Vyatskiy Regions. The North Caucasus, Siberia and the Far North and Far East were excluded to avoid distortion by outliers.

variable.²⁹ Revenues appear to have a very slightly non-linear relationship with education spending, a greater share of each extra rouble going to education as revenue rises.

This still leaves over one-third of the variation explained by neither budget revenue nor (apparently) higher provision costs. This suggests an element of choice in raion budget allocation, a possibility supported by the variation in the *percentage* of the raion budget spent on education: variation is between 24 and 37% of the total, and none of this disparity is explained by the percentage of the population which is of school age (the correlation between the two series is 0.02). Furthermore, and consistent with the significant quadratic term in the regressions, the share of education in the budget is positively correlated (0.34) with per child rouble expenditure: that is, raions spending more on education are spending a higher *share* of their budgets on education, conflicting with the idea that they simply have more to spend.

Care has to be taken, however, in interpreting expenditure disparities on the basis of data from a single year. On the one hand, the differences could represent a long term trend in which some raions spend more than others. But another explanation is that they represent one-off financing of urgent repairs in particular raions. In a situation in which funds are extremely limited, the replacement of a school roof in one raion could affect the relative expenditure figures.³⁰ More seriously, perhaps, financing of these one-off items might explain not only part of the variation in education expenditure not explained by variation in revenue, but also some of the variation in revenue itself. This is because the oblast has more discretion over revenue allocation in practice than appears to be the case in theory. This is primarily due to the haphazard and piecemeal nature of financing, which is received and allocated bit by bit, with some never received at all (executed revenues tending to fall short of planned revenues). This forces the oblast to engage in a degree of prioritizing. As noted in Section 3, allocation of official oblast transfers to raions varied between 59 and 68% of their planned level in 1996. How did the oblast determine which raions should be given precedence? In essence the rule appears to be simply that the most urgent requests are met first. Protected items take priority, followed by essential repairs. So once all raions are able to cover wages, food and medicine, a raion with a school with a collapsed roof would be first in line to receive

²⁹ In a separate regression, it was established that none of the variation in budget revenue per child could be explained by the number of children in the raion or the rural population share, so if these factors do affect the minimum budget the impact is negligible.

³⁰ This was in fact a point made to me in Shimsk Raion, about disparities in raion funding to different schools. However it is possible that it might also be relevant at the level of the raion itself.

its share of transfers. A second mechanism open to the oblast is the oblast reserve fund, through which loans are made in emergency cases. Again, prioritizing seems to take place along the same lines.

The point is that there may be some element of reverse causation: a raion may have higher revenues and therefore higher education expenditure not just because of its minimum budget (leading to a greater allocation of transfers) but because it has gone to the oblast with an urgent expenditure item which cannot be put off (so it receives a greater share of its allocation). Unfortunately, without a series of data over time, it is hard to know whether an oblast spending money on repairs is doing so because it has the money or has the money because it is doing so. Even data showing the breakdown of expenditure by item (which is presented in Section 4.3.1 below) cannot help to answer this. However, I was given the raion *plans* for expenditure for 1996, and hoped that this might shed light on the matter: if it is true that prioritizing on the basis of emergency need is important, planned expenditures should show much less disparity than executed expenditure.

It turns out to be true that planned expenditure figures show less inter-raion variation than the executed figures, although only slightly less: the ratio of maximum to minimum is 1.68 (compared to 1.78) and the ratio of third highest to third lowest 1.35 (compared to 1.46). However, two points are interesting. First, no raion spends more than 100% of its plan, although this does not of course mean that there was no emergency expenditure, just that what there was displaced other planned education sector spending. More surprising is the fact that planned education expenditure is very badly explained by planned revenues, with a correlation of 0.17 (compared to 0.78 between actual revenues and actual education spending). Indeed, if the OLS regressions in Table 8 are run using planned revenue and expenditure figures, the only variable significant is the percentage of the population which is rural, as shown in Table 9. A higher rural population seems to mean a raion will plan to spend more per child on education (although, as we have seen, this factor is irrelevant in determining what is actually spent by the end of the year).

Table 9. *OLS regression results for planned education expenditure (thousand roubles per child)*

	<i>Planned budget rev per child (1000 roubles)</i>	<i>No. of children</i>	<i>Rural pop (%)</i>	<i>Constant</i>	<i>R²</i>
1	0.03 (0.8)	0.0 (0.0)	4.3 (2.3)	1398.1 (4.9)	0.20

Why are planned revenues so unimportant in determining planned education expenditure, while executed budget revenue is the driving factor behind actual education spending? One possible explanation of this is that planned education expenditure is planned at the lowest essential level, regardless of planned revenue. Raions have to spend a certain basic amount per child (a bit more per child in rural areas) to keep the schools running. With this covered, they cannot afford to plan more as there are numerous other services that need attention, which is why education spending bears no relation to revenues in the plan. In practice however what happens is that executed revenues fall way below plan (on average actual raion revenues were some 70% of the plan for 1996), so that only the real necessities can be covered, of which education is one. The result is that education spending falls only a little below plan (as can be seen below in Table 10) compared to spending in other sectors which fall considerably under; while education spending also ends by being closely related to actual budget revenues, as it is one of the areas on which revenue is spent as it comes in. This story is consistent with the idea of higher raion revenues being explained by greater need, as suggested above. Although clearly not conclusive, it supports the idea that it would be unwise to attribute too much significance to the disparities in budget spending on education noted. This was backed up by what I was told within the oblast: the overriding problem as seen from the ground is not differences in the funds available to different raions, but a shortage of funds which affects everyone. Some more evidence for this is presented in the next section.

4.3 Allocating resources within the education budget

4.3.1 Allocation by item

Once the raion education committee has its budget, in theory it is free to determine allocation as it wishes, both to different institutions and on different items, provided it covers protected items first. As already implied however, financial reality imposes sharp constraints on the decision-making process. Even the money for protected items comes in in trickles during the year: several raions had wage arrears in July 1997 dating back two or three months. After these items, attention can be turned to maintenance of the buildings and urgent repairs. The officials I spoke to claimed that once protected items were covered there was very little money left, and that the direction of what there was dictated by the urgency of repairs.

There are two illustrations of the tight situation in which the education budget finds itself. First, as noted above, actual raion revenues averaged some 70% of planned revenues, resulting in cuts across the board in a budget already considered to be insufficient. Table 10 gives the executed budget in 1996 as a percentage of the

budget as planned. All sectors end up spending less than had been planned, some substantially less. The education sector fares less badly than many.

Table 10. *Executed as a percentage of planned raion expenditure in selected sectors 1996, Novgorod Oblast (sum of all raions)*

	<i>Execution</i> (%)		<i>Execution</i> (%)
Total expenditure	71	Total social expenditure	77
Administration	97	Education	85
Law enforcement	83	Health	67
Industry	67	Social policy	73
Agriculture	68	Physical culture	99
Transport	57	Culture	77
Market infrastructure	46	Housing	61
Environment	70	Mass media	90

The second indication is the breakdown of raion education expenditure by item. What is of particular interest is the amount of money spent on non-protected items (equipment and textbooks), and the amount spent on capital repairs. Unfortunately I was only able to gather the former from two raions, Novgorod City and Shimsk Raion. This data is somewhat sketchy and hard to match up with what I received from the oblast authorities, but it supports the idea that sums spent on equipment and supplies are small. In Novgorod the equivalent of some 10% of what was spent on teacher salaries in general schools (excluding wage funds) is recorded as having been spent on textbooks, with an extra 4% on equipment and 'soft supplies' (stationery etc.). In the rural raion of Shimsk just 4% of the wage bill was spent on these categories together.

The other interesting question is what has happened to capital expenditure. As a share of total expenditure, the amount spent on capital repairs was in no raion greater than two percent, with six of the 22 raions spending nothing. Variation in capital construction was higher, but largely because of one raion, Khvoinsky, where a new school was built. In Khvoinsky 16% of the total education budget went on construction, but everywhere else construction expenditure varied between zero and three percent of the total, with the majority of raions (fourteen) spending nothing. The bigger towns tend to have done slightly better than average with respect to capital spending, with Chudova spending 5.1% on capital repairs and construction, Novgorod City 1.8% and Borovich 2.4%. Khvoinsky is a smallish raion with no outstanding characteristics other than a 53% increase in the number of school students since 1989, the highest increase in the oblast. (Total pupil numbers

have risen 20% over this period). The new school is the result of an oblast level decision and is the first school to be built in the oblast for five years. Previously the policy was to finance one new school in each raion every year.

One odd thing about the low levels of expenditure on equipment and repairs is that data on protected items (wages, food and medical supplies) show a much lower share of expenditure on wage items than is normal by international standards. The wage share varies between 35% and 55%, excluding payments to the wage funds; if those were included the sum would be more like 45% and 70% (assuming the wage funds to be roughly 25% of the wage bill). In Britain around 70% of current account spending goes on teacher salaries (MacKinnon and Statham, 1995, p.139), while in less developed countries the percentage can reach 80 or 90% (Mingaat and Tan, 1992, cited in Klugman, 1997). Clearly low wages are keeping the wage bill down despite high teacher numbers. An extra five to ten percent of the budget is spent on food, while medical supplies are so small as to be invisible in most areas. This suggests that a relatively large amount is left over for other items. However, utility bills are likely to take up the bulk of this. I did not obtain separate data on expenditures on utilities, but these have become substantial in recent years with the lifting of price controls.³¹

4.3.2 Allocation between institutions, and the impact on pre-schools in particular

The conventional method of allocating funds from the raion budget to school institutions has been described in Section 4.1 above. I explained there that, while raion authorities are free to develop their own local mechanisms for allocating funds to schools,³² in practice raions seem to follow the same method; basing this year's allocation on last year's, with adjustment made for changes in the contingent of children. Whatever the arguments for and against this method, one effect of it should be that the distribution of funds across education levels remains fairly constant over time. This was the response in Novgorod when I asked if the financing of kindergartens had deteriorated relative to that of general schools in recent years. I had wondered whether, given the lesser obligation on raions to provide pre-school education (in part because of its non-compulsory nature and in part because the law

³¹ At the OECD Review of Education Policy in the RF, G. Bashkina (Deputy Head of the Department of Economics in the MGPE) claimed that huge tariffs were now paid for utilities and that these took up the lion's share of funds allocated to schools (Moscow, June 16-17 1997).

³² Federal Law on Education, Article 31. Article 41 suggests that there are federal minimum norms to adhere to, but in practice these seem to exist only for protected items.

gives it slightly less protection³³), they were taking the obvious step of squeezing pre-schools to support compulsory schools. But I was told at both oblast and raion levels that pre-school institutions were treated just the same in the allocation process as other institutions, and that while all levels of education had suffered, cuts had been inflicted on all levels fairly evenly.

In practice, however, the pre-school level overall is clearly receiving a smaller share of the total than previously, simply because more and more kindergartens have closed down. In 1996 there were 410 kindergartens in operation, compared to 513 five years earlier. (These figures include both municipal and enterprise kindergartens: all but a handful of enterprise kindergartens have now been divested to the raion authorities.) Closures are in part due to falling fertility rates, but enrolment levels have also fallen: in January 1990 the percentage of children aged between one and six (inclusive) attending kindergarten varied across raions between 84% and 50%, by January 1997 the maximum was 74% and the minimum just 28%. Overall enrolment in the oblast has fallen from 71% to 56% of this age-group. Demand factors still seem to be the direct cause; supply of kindergarten places now outstrips demand for the first time in the Oblast Administration's memory. Both rising unemployment and the cost of attendance are likely to be encouraging parents to keep their children at home: under federal regulations kindergartens can charge parents up to 20% of the average cost of a child's place, and may also demand assistance in kind, as explained below.³⁴ The cost of a child's place is an indeterminate concept, but the rule seems to be interpreted to mean that the kindergarten can use fees to raise up to 20% of what it spends.

Yet while demand factors may be the direct reason for closures, the supply side policies followed by the raion can themselves affect demand. In particular, raions can influence the level of charges in their local kindergartens. Although the amount to charge is a decision made by the institution, the raion can offer to cover part of the fee itself as an additional payment to the kindergarten, keeping the charge to parents down if pre-school education is considered a priority. I was told that in practice fees charged vary across the oblast between 6% and 12% of the provision cost. One raion, Staraya Russa, was held up as a shining example by the kindergarten experts in the Oblast Administration: the kindergartens there charge 2,000 roubles a day against the average charge of 3,000 roubles, and Staraya Russa -- about average in terms of education spending per capita -- has an enrolment rate of 72%, second only

³³ Federal Law on Education, Articles 5 and 18. Article 18 states that a network of pre-school institutions exist to help with the upbringing of young children, and guarantees access to these institutions to all sectors of society, but Article 5 on the child's right to education does not mention pre-school.

³⁴ The 20% limit was set by Presidential Decree and could be changed by a similar decree.

to Novgorod City. Note that 3,000 roubles a day makes 60,000 roubles a month, compared to an average per capita income in December 1996 of 832,000³⁵: i.e., not an impossible amount, but a sizeable chunk of average income. Demand is bound to be price-elastic at these prices. (In addition to the fee there may be other hidden costs, as explored in Section 4.5 below.)³⁶

Despite the apparently standard allocation mechanism, it seems then that raions can and do exercise influence over the relative position of pre-school institutions, and naturally individuals will have different priorities about where money should be spent. This was underlined for me at the conference on educational policy mentioned above. One Novgorod raion was praised by the kindergarten lobby for having succeeded in increasing its enrolment rate over the last few years against the trend. The Chair of the Education Committee responded that that particular raion also had among the worst records on teacher wage arrears. It was clear which he thought more important. It is likely then that some raions are indeed squeezing kindergartens to try to soften the difficult conditions facing other schools.

4.4 Disparities in non-monetary measures: evidence of an urban-rural split?

An oblast level study provides a good opportunity to explore what evidence there is for an urban-rural distinction in education provision. As we have seen, total education expenditure was uncorrelated with urbanization in Novgorod in 1996 although planned spending per child was higher in raions with larger rural populations. In this section I ask whether other indicators of standard of educational provision suggest any bias against rural schools. The four indicators which were examined are kindergarten enrolment, pupil-teacher ratios, the percentage of teachers with higher education and the percentage of 17 year olds going on to higher education.

The results for kindergarten enrolment are the most interesting. Kindergarten enrolment among one-to-sixes in 1996 was higher where education expenditure per child was higher, and higher also in larger raions, suggesting possible economies of scale; but urbanization was insignificant. However, both of the latter results were driven in part by the influence of Novgorod City. With Novgorod City excluded,

³⁵ Data from the Centre for Economic Conjuncture.

³⁶ It is worth noting as an aside here that the 20% policy naturally means extra money for kindergartens which are already able to spend more. An examination of the amount spent on kindergartens in Novgorod City and Shimsk Raion suggests that the average kindergarten in Novgorod could charge 6% and still get 2,000 roubles a day, while a Shimsk kindergarten could only charge 1,000 roubles even if it demanded the full 20%.

both spending and raion size were still significant, but so was urbanization: remarkably, raions with *higher* rural shares in the population tended to have higher kindergarten enrolment. The degree of explanatory power of these variables is limited: in a regression run on enrolment in all raions but Novgorod, only about a third of the variation could be explained by all three factors together, while the correlation with urbanization alone was just 0.13 (negative). However, the fact that enrolment has no positive relationship with urbanization remains surprising.

Pupil-teacher ratios in general schools are available not only by raion but also with an urban-rural breakdown within each raion. As would be expected, there is a significant difference between the two. In urban areas averages range across raions from 11 to 16 children per teacher employed, while in rural areas the maximum is 11 and the minimum just 4. Once the degree of urbanization is taken into account, expenditure has no impact, although the size of the raion is relevant (smaller raions having lower ratios). However, it is worth noting that while pupil teacher ratios have fallen in urban areas since 1990 (from 15.4 on average to 14.2), supposedly because of aging pupil populations, they have risen in rural areas (from 7.6 to 8.5), as schools have been closing down. So there does seem to be a process of rationalization going on, presumably at the price of longer daily journeys for some rural pupils.

The percentage of teachers who have a higher education tends to be slightly higher in urban areas, though within group variation is also high. The percentage varies between 67 and 90% in urban areas and between 60 and 84% in rural areas. There is no correlation with education spending.

Finally, there is no clear explanation of the percentage of 17 year old school leavers going on to higher education. There are two outliers here, Novgorod City at 74% and (for reasons which are unclear) Solyetsky Raion at 67%, with all other raions lagging behind between 17 and 50%. Among this majority group there was no relation with urbanization, nor indeed with proximity to Novgorod City, where the higher education institutions are found. I was told in Novgorod that there are special policies to make higher education entrance easier for pupils from rural areas, and it may be that these are reasonably successful. For example, it seems that rural pupils can gain automatic entry to Novgorod State University in the faculty of their choice. A professor in the new faculty of Fashion and Design told me her star student was a boy from a rural raion who turned up and took advantage of this policy: over 100 local students took exams in fine art to compete for one of ten available places, while this student walked in having never drawn anything before in his life. Such cases may explain some of the feeling I was surprised to find among residents of Novgorod City that rural pupils were actually relatively privileged. On the other hand these cases are clearly fairly rare; and Novgorod City still finds itself in a different league to the rest of the oblast on this as on other indicators.

4.5 Non-budgetary sources of finance

So far this paper has been concerned entirely with budgetary resources, but in practice extra-budgetary or private sources of funding are becoming increasingly important. These can broadly be divided into two types: fees charged by non-governmental institutions, and extra-budgetary funds raised by state institutions to supplement their budget allocations.

To date fee-paying institutions play a relatively minor role in Novgorod. There are three gymnasia and one kindergarten which charge fees, covering in total about 1% of all children in the oblast.³⁷ These institutions are referred to as 'non-governmental' rather than private as in principle they need not necessarily charge pupils but may raise funds through charity or sponsorship. The difference from state institutions is that they have the right to demand fees if they wish to, while government institutions are obliged to provide at least the basic curriculum free of charge. One striking fact is that, as long as they receive state accreditation, non-government schools are eligible for budgetary financing on the same basis as other schools³⁸; a remarkably free market approach to education provision, in which resources follow the child even if the child chooses to opt out of state provision. However, I was told that in practice non-governmental institutions always receive less than others as they are never given priority for repairs etc. Fees for both gymnasia and kindergarten were about 250,000 roubles a month in the first half of 1997, compared to a teacher's average wage of less than 400,000. These schools are all new -- there is no opt-out policy for current governmental institutions. But it seems that anyone can start a school, although accreditation may not be so easy to achieve.

State schools are obliged to provide the basic curriculum, as laid down in federal law, free of charge. Beyond this, however, they can raise additional funds in almost any way they like. The Federal Law on Education confirms that schools can set up extra-budgetary funds and engage in a number of different types of money-making activity,³⁹ and the oblast authorities in Novgorod have made a point of encouraging this activity. As noted above, part of the purpose of giving budget autonomy to school directors was to encourage fund raising by reassuring school directors that any funds raised would not be 'crowded out' by cuts in budgetary allocations.

³⁷ However, this is higher than the share of children in private schools in Russia as a whole, estimated at under 0.5% by M. Leontyeva, Head of the Department of General Secondary Education in the MGPE (OECD Review of Education Policy in the Russian Federation, Moscow, 16-17 June 1997).

³⁸ Federal Law on Education, Article 41.7.

³⁹ Articles 45 and 47.

Furthermore, as long as the money raised is spent on the institution it is not treated as profit and is not taxed.

School money-making activity tends to take two forms: provision of 'additional paid educational services' over and above the basic curriculum, and fund-raising through 'voluntary contributions'. Examples of paid extra services include after-school clubs, music and dance, extra languages and coaching for university entrance. The basic curriculum includes one foreign language, for example, so most schools will provide English free and then, if they have qualified staff, provide French or German for a charge. In some schools in Novgorod City university lecturers give lessons after school to the graduating class to prepare them for university entrance exams. (Arrears in university salary payments are even higher than in the compulsory school sector, so some lecturers survive by doing this.) I was also told by parents that some state schools have two parallel classes for all subjects; a fee-paying one and a free one.

The second standard method for both schools and kindergartens is to call on 'voluntary' type contributions from parents to repair and redecorate school buildings and buy new furniture and equipment. This is in effect a compulsory fee which parents seem resigned to paying; it also turns out to be nothing new and was typical during the Soviet era. In Novgorod City parents told me they paid 20,000 roubles a month: if this is the case for all parents, it would add up annually to about 10% of what is spent from the budget. Parents are also expected to turn out to help with painting and repairs, as are children from older classes. One fifteen year old told me her class sometimes had to 'volunteer' to stay after class to help mend the furniture. She said you could always refuse, but then 'they look at you badly'.

Another Soviet era way of economizing is for schools to grow food on their own plots of land for school meals, or in a few cases to sell for extra funds. The children will help in the garden as part of a practical lesson, or parents are brought in to help. This applies mostly to rural schools; in urban areas parents might donate something from their own allotments. As seen above, raions must provide schools with a certain amount per child for school meals, but this is a tiny sum, enough for about half a loaf of bread per child per month. Some schools in Novgorod City also charge for school meals, although parents told me that whether they charged or not the result was minimal, and that most children took their own food.

'Gifts' such as televisions or computers are a third type of in kind assistance. There appears to be some feeling however among parents and pupils that such gifts are a way of buying a child greater attention, better marks or even entrance to an institution. One Novgorod City mother in search of a kindergarten for her child told me that at each one she visited she was asked openly what she and her husband could do for the kindergarten; when the family's economic circumstances became

clear she was told the kindergarten was full for the foreseeable future. She eventually secured her daughter a place by agreeing to make costumes for the children's plays.

Parents also help by buying textbooks. The authorities claimed that the situation was bad but not desperate, and that for the moment books were provided, but parents told me that at least in older classes it was standard to buy one's own. At the beginning of the year teachers provide the class with a list of necessary books as a matter of course. Textbooks are apparently extremely expensive -- as much as 100,000 roubles each, which is about \$17, or one eighth of average per capita income at the end of 1996. If a child's parents cannot afford to buy the books he or she works with friends or copies from the teacher's book after class.

Another type of contribution which schools are entitled to pursue is to attract sponsorship. So far this is seen in the Soviet light of having close links with an enterprise which helps the school out, which means that for now there is virtually none as all but one or two of the old state enterprises are bankrupt. I was interested to know whether sponsorship could be interpreted in a more Western manner, allowing, for instance, Pepsi to come along and match budget funding in exchange for blanket advertising inside schools. The oblast administration found the idea of Pepsi wanting to do such a thing highly entertaining, but it does not seem completely implausible.⁴⁰

Finally, schools also have the right to engage in 'profit-making activity', where this includes trading in goods, dealing in shares, and renting out their property. For the moment these activities do not seem to be very common, and certainly from the school property I saw I couldn't see renting being an option for the near future. But, like sponsorship, it raises some disturbing possibilities for the future. Schools may well prove happy to hire out their playgrounds in the interests of their classrooms.

Much of the evidence presented above is, of course, anecdotal, but the overriding impression I got from talking to parents, pupils and local education authorities was that all schools and kindergartens are out to make money or find equipment from wherever they can. Given the budget figures seen above, which suggest that there is almost no money available for equipment, books, furniture, decoration or even repairs, this is not surprising. But it is clearly worrying for equity, and on two different counts. First, there is the obvious question of individual equity if children are unable to find a kindergarten place or have a fair shot at university entrance

⁴⁰ For instance, instead of the quickly forgotten 'Project Blue' campaign in April 1996, Pepsi could have doubled the year's education funding in five oblasts of Novgorod's size. 'Project Blue' consisted of repackaging Pepsi in blue cans and cost \$500 million. ('Turning Pepsi Blue', *The Economist*, April 13th 1996). Novgorod Oblast spent the equivalent of about \$60 million on education in 1996.

exams without paying for them. Second, all the money that is available from parents is concentrated in the big towns, so there is also a regional equity issue. Budgetary allocations may be equalized across raions, but as non-budgetary sources become more important so will the differences in funding between urban and rural schools.

How important are these additional sources of finance? Novgorod City Department of Education estimated off-budget sources to provide about 10% of total financing in government schools. In rural Shimsk Raion on the other hand the Head of the Education Division thought the idea of offering parents extra classes for a charge a bit laughable, given that many of the parents are unwaged while few of the teachers are qualified to teach extra languages and skills. He did say that it was common practice for parents to be mobilized to paint the classrooms and carry out basic repairs and also to make a donation to the cost of materials, adding that it was a practice he was opposed to, but that if the raion could not afford to do the work itself it could hardly object. Putting pressure on the parents was a better alternative to dirty classrooms and broken bookshelves. This attitude seemed to sum it up. The fact that schools are turning into mini-businesses out to exploit parents for everything they can is disturbing, but at the same time it is not clear what options they have.

5. Conclusions

The main aim of this paper was to explore the extent of differences in the provision of education between raions in Novgorod Oblast. To some degree the paper's findings are optimistic. First, despite considerable disparities between raions in own revenues raised, disparities in final revenues and hence in budget expenditures per capita turn out to be relatively small. The oblast has a strong transfer mechanism to support poorer areas, and those differences in final revenues which remain are better explained by the minimum budget calculated for each raion by the oblast than by the raion's own initial economic position.

The result is that raion disparities in budgetary expenditure on education are also lower than might be expected. Disparities that do exist are hard to interpret as in part they may represent the impact of one-off expenditures on essential repairs rather than a persistent trend towards higher spending in some raions over others. The urgency with which repairs are required could affect not only how a raion chooses to spend its revenues, but also the level of revenues themselves; as although theoretically transfer allocations are determined by formula, in practice funds available are insufficient and the oblast is forced to prioritize. Naturally it gives

precedence to the expenditures it considers to be most pressing. This could mean that disparities are less unfair than they appear. Furthermore, neither budgetary nor non-budgetary measures of disparity revealed a bias against rural areas.

However, the paper also points to some more worrying tendencies. First, it confirms that education expenditures are at a disturbingly low level. If budgetary expenditures are fairly even across raions, it is because in all areas they are close to the same subsistence level in which only the very most essential items are covered. Resources are earmarked for wages, maintenance or urgent repairs before they have even arrived in raion or school budgets. There appears to be almost no money available for equipment, furniture or school supplies.

This situation is leading schools to engage in frantic fund-raising activity, actively encouraged by the oblast authorities, who see no other solution. Schools seem to be exploiting every possible opportunity to raise money and in-kind assistance from parents. This is understandable, but raises serious concerns about both individual and regional equity, as parents able to make gifts which will benefit the whole school community (televisions, computers) will all be found in the main urban centres. Schools in Novgorod City in particular are likely to benefit from this type of assistance. On the other hand, pupils in rural areas at least all find themselves in the same boat. Their schools may be in worse condition, but they do not face unfair competition from children with richer parents.

Finally, however, we need to ask how typical Novgorod is. How much of this scenario is likely to be unique and how much generalizable to other areas? The formula mechanism used to determine transfers to raions is based on the federal transfer formula and as such is likely to be standard. However, in Novgorod the transfer fund is simply formed from the transfers the oblast itself receives from the federal fund, and how widespread this is as a practice is not clear. If it is the norm, the implications are interesting, as it would mean that poorer regions like Novgorod would automatically have stronger internal redistribution systems.

In terms of education expenditure, evidence of both the severe lack of funds and the attempts by schools to supplement their incomes just confirms reports from other parts of the country. For example, the Examiners' Report of the OECD Review of Education Policy in Russia lists as cause for concern a series of cases similar to those observed in Novgorod (OECD, 1997, especially pp.63-64). It mentions the prevalence of special clubs and extra-curricular activities for children whose parents can afford to pay; 'desirable' schools which admit pupils on condition that parents make a substantial donation to the school; and cases of teachers tutoring students, including their own, for pay. What is not so clear is whether in all regions oblast and raion authorities are so forthright in encouraging schools to engage in this type of activity. Certainly the granting of budget autonomy to school institutions, which is an

important prerequisite to encouraging schools to find their own funds, appears to be proceeding much more quickly in Novgorod than elsewhere. More than this, the OECD Review discovered that some oblasts actually have laws prohibiting schools from fund-raising (OECD, 1997, p.65). This practice (though a contravention of federal law) should help prevent some of the unfair practices outlined above, but, as the Examiners' Report argues, at the cost of aggravating poor financial conditions yet further. It seems that there may be a split between oblasts which try to preserve equity of provision even if this means deteriorating standards for all, and those like Novgorod which, for better or worse, maintain that the urgency with which additional funding is needed justifies the exploitation of any source.

Appendix A

Terms of the formula for allocation of equalizing transfers to raions in 1996⁴¹

Round 1: Regions in need of support

Raions are classified as 'in need of support' if their predicted per capita revenue in the year in question is less than the predicted average per capita revenue in the oblast as a whole. Predicted revenues are calculated by taking 1995 revenues and adjusting for changes in tax and retention rates for 1996 (expected changes in the economy do not appear to be taken into account).

In practice all raions classify as such, as the average revenue level is calculated to include all revenues staying in the oblast, among them those passed up to the oblast level. The raion's theoretical transfer is then calculated as :

$$1. \quad T1_R = [1 - (REV_R / REV_O)] * EXP_R * POP_R$$

where:

$T1_R$ = total transfers to raion R in stage 1;

REV_O = predicted per capita revenues in the oblast as a whole (including those going to the oblast budget);

REV_R = predicted per capita revenues staying in the raion;

EXP_R = per capita expenditures estimated to be needed in the raion (the 'minimum budget'); and

POP_R = the raion population.

The level of transfer per capita is thus a positive function both of the degree to which raion per capita revenues are expected to fall below oblast per capita revenues, and of the level of per capita expenditures estimated to be needed in the raion. The latter (the minimum budget) is calculated by taking expenditures in 1991 and adjusting for inflation, for changes in raion responsibilities, for changes in federal norms on social assistance and benefit payments and for changes in the numbers of school children and orphans.

Round 2: Regions in need of considerable support

In the second stage raions are labelled 'in need of considerable support' if their revenues including first stage transfers are still going to be insufficient to meet their estimated necessary expenditures. In that case they are allocated the difference, that is:

$$2. \quad T2_R = EXP_R - (REV_R + T1_R)$$

where $T2_R$ are total transfers to raion R in the second stage. (If necessary expenditures are less than revenues including first stage transfers, naturally no transfer is made.)

⁴¹ As explained to me in the Budget Department of the Finance Committee of the Novgorod Oblast Administration, and with the assistance of the Budget Department note on 'Method for calculating sum of financial assistance (transfers) from the Fund for Financial Support to local authorities in 1996'.

Adjusting for total available funds

The total transfer made in theory is in then simply the sum $T_{1R} + T_{2R}$. However, the role played by the minimum budget in both stages of the formula means that there is no guarantee that total transfers to be made will be matched by available funds, as minimum budgets are calculated quite independently of oblast revenues. So the sum $T_{1R} + T_{2R}$ really determines, not a fixed rouble sum, but the share the raion should receive of the funds that are available in practice. In other words, despite the law, raions will only be sure of covering their minimum budgets if transfer funds allow. In Novgorod the oblast authorities take the transfers which they receive from the *federal* transfer fund (the Federal Fund for Financial Support to the Subjects of the Federation), and simply pass them on to the raions using this formula.

Appendix B

List of main officials met

Oblast Administration

Nina Fyodorova, Deputy Head, Oblast Administration

Education Committee

Vladimir Averkin, Chair

Tatyana Pavlova, Deputy Chair

Nina Ivanova, Head of Finance Department

Finance Committee

Tatyana Belova, Head of Budget Department

Vera Yakolevna, Chief Accountant

Economics Committee

Vladislav Alexeev, Department of Development of Small Enterprises

Raion Administrations

Novgorod City Administration

Natalya Ribnikova, Deputy Chair, Education Committee

Shimsk Raion Administration

Nikolai Golubev, Head, Department of Education

Valdai Raion Administration

Head of Finance Committee

Chief Accountant

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