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Russian Federation

Poverty Assessment

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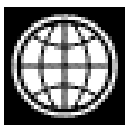
Poverty Reduction and Economic Management Unit
Europe and Central Asia Region



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CURRENCY AND EQUIVALENT UNITS

(Exchange Rate Effective May 11, 2004)
Currency Unit = Rubles (RUB)
1 RUB = US$0.028
US$1.00 = 28.95 Rubles

ACRONYMS AND ABBREVIATIONS

ARV	Antiretroviral
BEEPS	Business Environment and Enterprise Performance Survey
CANCEIS	Canadian Census Edit and Imputation System
CEA	Centre of Economic Analysis
CIS	Commonwealth of Independent States
CGE	Computable General Equilibrium
CPI	Consumer Price Index
DfID	Department for International Development, UK
DVO	Tertiary Education in Russia
EU	European Union
EBFs	Extra-Budgetary Funds
EBRD	European Bank for Reconstruction and Development
FDs	Family Diaries
FDI	Foreign Direct Investment
FSSS	Federal Service for State Statistics
HA	Housing Allowance
HBS	Household Budget Survey
HDI	Human Development Index
HIV/AIDs	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
HH	Household
HUS	Housing and Utility Services
GDP	Gross Domestic Product
GFS	Government Financial Statistics
GOR	Government of Russia
Goskomstat	State Committee of the Russian Federation for Statistics
GRP	Gross Regional Product
IISB	Institut Integrierte Systeme und Bauelementetechnologie, Fraunhofer
ILO	International Labour Organization
LFS	Labour Force Survey
MFN	Most-Favored Nation
MHI	Mandatory Health Insurance
MLSD	Ministry of Labor and Social Development
MSL	Minimum Subsistence Level
NOBUS	National Survey of Household Welfare and Social Program Participation
NSS	National Sample Survey
OECD	Organization for Economic Cooperation and Development
ONS	Office for National Statistics, United Kingdom
PDs	Personal Diaries
PMT	Proxy-Means Test
REB	Russian Economic Barometer
RER	Real Exchange Rate
RF	Russian Federation

RLMS	Russian Longitudinal Monitoring Survey
SAE	Small Area Estimation
SMEs	Small- and Medium-Sized Enterprises
SUSENAS	National Socio-Economic Household Survey (Indonesia)
SSB	State Statistical Bureau
TANF	Temporary Assistance for Needy Families
TB	Tuberculosis
UA	Unemployment Assistance
UKDA	UK Data Archive
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
VAT	Value Added Tax
VTSIOM	Russian Public Opinion Survey Center
WHO	World Health Organization
WTO	World Trade Organization

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

Introduction

The report is based on analysis of the main facets and dynamics of poverty in Russia since 1997. The analysis was conducted over the past two years by Russian and international experts in the framework of the first stage of the program on "enhancing the measurement, monitoring, and analysis of poverty" - a collaborative project by the World Bank, the United Kingdom Department for International Development, and the Russian government team comprising the Ministry of Labor and Social Development, the Goskomstat, the Ministry of Economic Development and Trade, and the Ministry of Finance.

The main advantage of this programmatic poverty assessment relative to its predecessors is twofold. First, all previous attempts at the analysis of poverty in Russia have had to rely on the Russian Longitudinal Monitoring Survey (RLMS) data, and few other publicly available irregular surveys. For the first time, this report has been able to utilize the vast micro data of the Household Budget Survey (HBS), a regular Goskomstat survey of forty nine thousand Russian households, which has been in existence since 1952. In addition, this report presents practically the first poverty-related analysis of the data collected under the NOBUS - the Goskomstat's survey of household's access to social services carried out in 2003. Emphasizing the indispensable role of access to data, which was generously provided to the team of experts by the Goskomstat, we shall note that the methodology applied in this report, as well as results obtained on its basis remain the sole responsibility of the World Bank.

The second advantage is that, being programmatic, the poverty assessment both analyzes poverty on the basis of available data, and sets the stage for further improvements in monitoring poverty in Russia, including recommendations on improvements in sampling, survey data collection and processing. In this venue, it is worth mentioning that this is an interim report, with the final poverty assessment report, scheduled for 2007, utilizing data of the HBS, which will be adjusted and improved for better poverty monitoring. Moreover, this report is by no means a Poverty Reduction Strategy. Of course the sheer fact that this report draws on the analysis of a much larger dataset, than previously, makes its results far better suited for formulating poverty reduction policies. However, some of these policies will have to rely on a more detailed analysis of specific policy options. Hence the recommendations in this report are more of a sketchy roadmap of pillars of a poverty reduction strategy than a specific and detailed action plan.

Following an overview of the report's main findings, Part I examines the nature of poverty, both nationally and regionally, to identify the groups with a high poverty risk. Part II examines the growth-poverty linkages through the labor market, as well as the contribution of growth and inequality to the recent poverty reduction. It also explores the expected impact of accession to the WTO on overall growth and poverty. Part III of the report examines the scope for improving social policy in ways that will have a direct impact on the poor: the safety net, the housing and communal sector, and the education and health sectors. The final chapter of the report deals with improved monitoring of poverty outcomes on the basis of the Household Budget Survey.

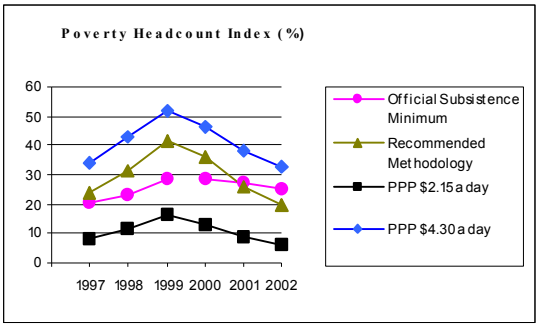
Pillar 1: Growth is essential for poverty reduction

Following the 1998 financial crisis, a steep drop in consumption occurred across all income groups. This drop was even greater for the poor. In 1999, due to the collapse in incomes and jump in inequality, poverty levels reached an all time high for the transition period. Four out of every ten people slipped into poverty, not being able to meet nutritional and other basic needs.

Luckily, economic rebound after the crisis was both impressive and broad-based--albeit uneven--across both sectors and regions. This increased the demand for labor and led to significant wage increases, reduced unemployment, and increased hours of work. In addition to higher earnings, households benefited from the improved fiscal position of the government, resulting from higher oil revenues. The government was able to substantially reduce arrears in wages and social benefits, raise pensions and public sector wages, as well as public spending on social policies, which was drastically cut in real term in the aftermath of the 1998 crisis. It is important to note here that government social spending has so far been pro-cyclical, exacerbating the negative impact of the downturn but strengthening the positive household impact of the recovery. Although the recovery period was accompanied by a consumption increase for everyone, the increase was greatest for the poorest groups, making the 1999-2002 growth pro-poor.

All this led to a dramatic reduction in poverty. Russia succeeded in cutting poverty in half between 1999 and 2002, from 41.5 percent in 1999 to 19.6 percent in 2002 (Figure A). Yet one out of every five people was still poor in 2002, leaving no room for complacency by the authorities. Hence the desire on their part to further halve the poverty incidence by 2007.

Figure A: Trends in Poverty, 1997-2002: Headcount Index (%)



The goal of cutting poverty in half is potentially achievable but very difficult. It would take a uniform per capita consumption growth of at least 5 percent per annum to achieve the desirable reduction in the incidence of poverty. However, if consumption growth was only 3 percent per annum poverty would be reduced by only about a third.

Moreover, increasing inequality would substantially weaken the poverty reduction impact of a given rate of growth. If growth is not distributed evenly, then the poverty impact will be attenuated. A growth rate of 5 percent accompanied by increasing inequality will have a smaller impact on reducing poverty than the same growth rate evenly distributed. While inequality may increase as returns to education increase and wages become increasingly decompressed—positive developments as market forces become entrenched—attention will need to be paid to the extent to which the poor are sharing in growth.

The transition has been accompanied by increasing inequality in asset ownership and returns to education, generating increasing levels of consumption and income inequality. This contributes to poverty, and has been weakening the poverty-reducing impact of recent growth. Russia is already at the high end of inequality among the CIS countries, even if its inequality is still moderate by broader international standards. In 2002, the Gini index of inequality in Russia was 36.8 percent for consumption and 40 percent for expenditure.

To achieve a sustained growth rate of 5 percent in consumption, GDP would have to increase at a higher rate than 5 percent. Further output increases will need to be achieved by expanding the capital stock and devoting a larger share of output to investment rather than consumption. In addition, consumption is likely to rise less than incomes in the future, as households start to increase their savings rate. While this would be good for sustaining growth in the long run, it implies that GDP will have to grow faster than consumption to realize poverty reduction goals.

Future growth will be much more of a challenge given that the key drivers for growth and poverty reduction since 1999 may have run their course:

- Capacity utilization increased by about 20 percentage points between 1997 and 2003, and future growth will require expanding the productive capacity of the economy.
- The real exchange rate depreciated by about 40 percent between July and October of 1998, propelling recent growth, but has since appreciated in real terms close to its levels before the devaluation.
- The high oil price benefited the economy in the past three years. However, it is risky for a development strategy to rely on continued high oil prices, given the price uncertainty. An oil price drop would depress output and increase poverty.

Thus, diversifying the economy is essential for achieving sustainable growth, and related policies constitute the first pillar of the poverty reduction strategy. They include: (i) improving the business environment, and, in particular, leveling the playing field to expand job creation at small and medium enterprises; (ii) reducing the tax burden, which, in turn, requires much higher efficiency in public service provision, (iii) sweeping changes in technical regulations and their enforcement, (iv) ensuring independent judiciary and the rule of law, and (v) completing accession to the World Trade Organization (WTO). Accession to the WTO is an important part of the growth and reform agenda, as it is likely to provide substantial benefits to Russia (about 7 percent of the level of Russian consumption in the medium term and considerably more in the long term). Moreover, unskilled labor is expected to obtain a higher return from accession than capital, and the poor will gain even slightly more than the average Russian household.

Pillar 2: Targeted interventions for deep pockets of poverty

Identifying the most vulnerable groups is important for designing policies that would reach deep pockets of poverty that may be resilient to benefiting from general economic improvements. The groups with the highest rates of poverty are the rural population, those living in small and remote towns, the children, the unemployed, those living in households with primary education or less, and those living in certain depressed regions of the Federation:

- About 30.4 percent of the **rural population** lived in poverty in 2002, while only 15.7 percent of the urban population was poor. Living in **small and remote towns** also carries a higher risk of poverty than living in large urban areas;
- While the national incidence of poverty was 19.6 percent, **children** younger than 16 years old have a much higher incidence of poverty (26.7 percent). This justifies child welfare projects and supports the targeting of social assistance to families with children;
- One out of every three **unemployed persons** was poor compared to one out of every five persons in the population at large;
- Those with **primary education** were 50 percent more likely to be poor than the general population;

There are large **regional differences** in the incidence of poverty, which varied between 3.1 percent and 55.6 percent in 2002.

It is important to recognize that interventions properly targeted at the above groups will reach those most severely affected by poverty, but may not necessarily reach a majority of the poor. The composition of the poor is different from the above profile:

- The majority of the poor comprises families, where at least one member works. About 88 percent of poor individuals live in such households;
- About one-third of the poor live in households with no children, another third live in households with one child, and the remaining third live in households with two or more children. Poverty programs based solely on targeting households with many children will miss a large number of the poor;
- A majority of the poor live in urban areas: 58.5 percent of the poor live in urban areas, owing to a simple fact that 73.2 percent the Russian population lives in urban areas.

To summarize, the majority of the poor are working urban families with children, where bread-earners receive low wages. Noteworthy, a high share of workers with wages below the official poverty line is concentrated in education, culture, health, and other public services. For this majority, the growth with rising wages would most likely suffice to increase income, and hence consumption to above the poverty line.

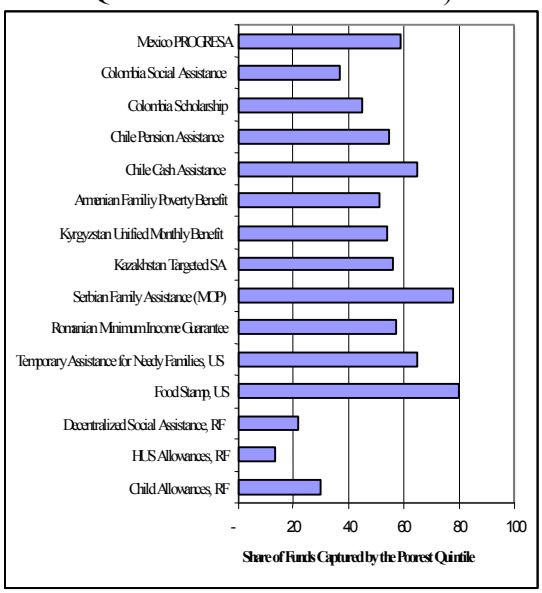
Pillar 3: Enhancing the poverty impact of social policies

The government policy has a huge untapped potential to reduce poverty through redistributive social spending. Privileges that benefit the rich more than the poor account for about 4 percent of GDP. Phasing out these regressive subsidies, and substituting targeted social assistance for them would constitute an important pillar of the government poverty reduction strategy.

However, the **targeting performance of the programs specifically aimed at the poor needs to be dramatically improved**. Currently, the two programs that have the largest share of poor among their beneficiaries are the child allowance program and the decentralized social assistance programs. Yet even these programs have only about 30 percent and 28 percent, respectively, of their beneficiaries from the poorest quintile, while about half of the beneficiaries come from the richest 60 percent of the population. Moreover, with the exception of the child allowance, the average benefit received by the rich is larger than the average benefit received by the poor. Figure B illustrates the comparatively poor performance of the targeted assistance programs in Russia.

Figure B: Comparative Targeting Performance

(Share of Funds Captured by the Poorest Quintile in Selected Countries)



The system of decentralized social assistance programs needs to be strengthened through improved financing and better targeting instruments. The report recommends introducing proxy-means testing as an instrument to substantially reduce the current leakage of funds to the non-poor. Also, it is also recommended to transform the unfunded mandate of the decentralized social assistance

programs into one core program that is federally funded and monitored but locally implemented. The targeting threshold should also be made consistent with the funding availability so that it reaches the poorest households.

Social spending should also become more targeted, and increased in some areas, to address emerging deprivation in access to education and healthcare. If these issues are not tackled in earnest, a vicious circle of reproducing the underclass of poor might develop. The most worrisome trend here is that, despite Russia's strong position in terms of compulsory education enrollment and completion, children from poor households have less access to pre-school and post-compulsory education, which is increasingly determined by income and wealth. Children who begin behind their peers in basic learning skills tend to remain behind. The lowest income adult populations have two to three years of schooling less than the highest income populations. This has a direct negative impact on their chances in life. As returns to earnings have been decompressed, children of the poor have a higher than average risk of becoming poor adults.

Similarly, deprivation of quality health care is a concern for the poor who have worse health outcomes than better-off people. This situation reflects causality in both directions: poverty breeds ill-health, and ill-health keeps poor people poor. Illness may have a substantial impact on income. The situation has been recently aggravated by the development of the private (even if informally) healthcare. The most worrisome aspect of this is the increasing burden on families to pay informal out-of-pocket for received care. Private expenditures are estimated to be from 30 percent to 55 percent of the total spending on health. Moreover, for the poor, out-of-pocket payments for healthcare constitute a disproportionately high share of consumption.

In conclusion, the analysis in this report lead to broad directions for reform rather than an action plan for implementing a specific set of policies. zThis applies to the range of recommendations form ensuring sustainable and broad-based growth through economic diversification, interventions targeted at the deep pockets of poverty, to enhancing efficiency of the social protection system and provision of public services. This said, the sectoral recommendations are summarized in the policy matrix below.

Sectoral Policy Recommendations Matrix

Issue	Policy
Access to quality education – particularly at pre-school and post compulsory levels -- is increasingly being determined by income	Priority to setting modern standards and measuring their achievement; improving the relevance of secondary vocational programs; and earmarking funding for remedial programs where performance is lagging.
Funding for education in Russia is inequitably allocated	Funding of education should be allocated on the basis of transparent per student formulas; universal fees should be established for higher education; and non-educational subsidies should be poverty-targeted.
Deteriorating Health Outcomes	Public health interventions to close health gaps and protect vulnerable sub-populations and to control risk factors for infectious and non-communicable diseases
Costs of health care increasing through out-of-pocket expenses, disproportionately hitting poor and vulnerable, and impacting on treatment compliance and access to basic services	Formalizing informal payments through a standardized co-payment system and developing explicit exclusions for the poor and vulnerable. Make private supplementary insurance more accessible for the emergent middle income groups.
Lack of equity in health expenditure across regions.	Change the regional allocation formula for health expenditure to better reflect number of population and health needs. Improving the pooling of resources at the federal and regional levels. This helps reduce the fragmentation of funding sources, allowing for redistribution from healthy to sick, and rich to poor.
Poor targeting of non-contributory social protection resources to the poor.	Reform the system of privileges to ensure equitable access to subsidized goods and services, and reduce the scope of labor-based privileges. The freed-up resources can be reallocated to other poverty alleviation programs. Improve efficiency of the targeted social assistance programs by using a proxy-means test formula, instead of the current formal income-test
Necessity to improve cost-coverage of housing and utility tariffs, while protecting poor households	Revise the formula used to calculate the housing allowance to improve targeting. Also, consider using a proxy-means test to determine program eligibility. Alternatively, improve the targeting performance by considering additional criteria for program eligibility, related to housing conditions or endowment with key durables or real-estate.

OUT-OF-POCKET PAYMENTS AS A SHARE OF CONSUMPTION, REGARDLESS OF SERVICE OR CARE SETTING. THE BURDEN OF OVERVIEW OF REPORT'S MAIN FINDINGS

A. SUSTAINED AND BROAD-BASED GROWTH IS ESSENTIAL FOR POVERTY REDUCTION

A1 POVERTY AND INEQUALITY OUTCOMES

1. Figure 1 shows the trends in poverty as based on Household Budget Survey (HBS) data using (i) the official estimates, (ii) a recommended methodology developed in Chapter 1, and (iii) international poverty lines of $2.15 and $4.30 per capita per day, in purchasing power parity (see Box 1). Regardless of the measurement methodology, the trends tell a consistent story. The report relies largely on the recommended methodology, but also reports official estimates.

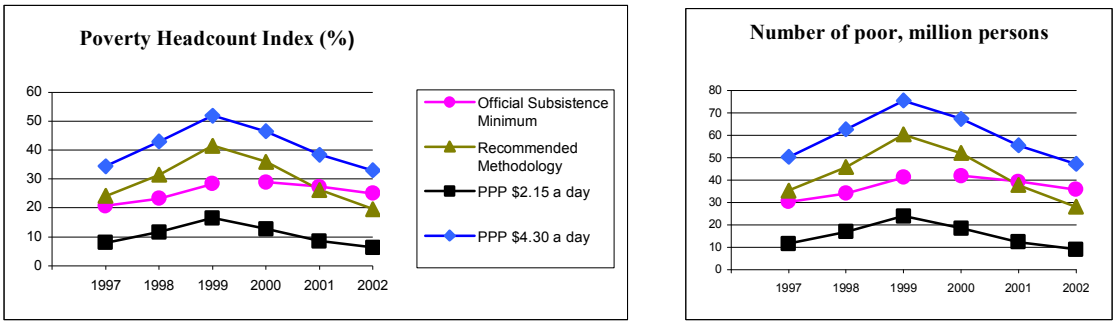
2. In 1999, it is estimated that four out of ten people were living in poverty. Poverty levels peaked in 1999, as the transition recession and the 1998 financial crisis caused incomes to collapse and inequality to increase. **Since 1999, there has been a dramatic reduction in poverty. Russia succeeded in cutting poverty in half between 1999 and 2002**, from 41.5 percent in 1999 to 19.6 percent in 2002. About 30 million people have escaped poverty in this period, according to the methodology recommended in this report.

Box 1: Poverty Estimates

The official estimates of poverty use the official poverty line for identifying poor households on the basis of their "money income," a measure adjusted to national accounts based on a model. The official poverty line (subsistence minimum level) was adopted in 1992 and used through 1999. A revised line has been used since 2000. Given the change in the official methodology for poverty estimation in the year 2000, which led to the higher poverty lines and therefore higher poverty estimates, the official estimates of poverty are not strictly comparable before and after the year 2000.

This report develops a methodology for poverty estimation that relies on data on household consumption from the household budget survey (HBS) and a regionally consistent poverty line based on household behavior observed in the HBS. The recommended poverty line varies by individual and region to take into account regional price variation, differences in needs due to climatic factors, as well as economies of scale. It averaged 1,056 rubles per capita per month in 2002. This is equal to $3.54 per capita per day in purchasing power parity. The third estimate of poverty is based on international poverty lines equal to $2.15 and $4.30 per capita per day in constant purchasing power parity.

Figure 1: Trends in Poverty, 1997-2002: Headcount Index (%) and Number of Poor People



Source: Chapter 6, Table 6.3.

3. **Inequality increased between 1997 and 1998, but then declined somewhat over the subsequent period**. The Gini coefficient in consumption is the measure most used for international comparisons of inequality; it increased from 37.0 percent in 1997 to 39.2 percent in 1998, before declining to 36.8 percent in 2002. It is noteworthy here to mention that inequality in expenditure, incomes, or assets are higher than those consumption inequality.

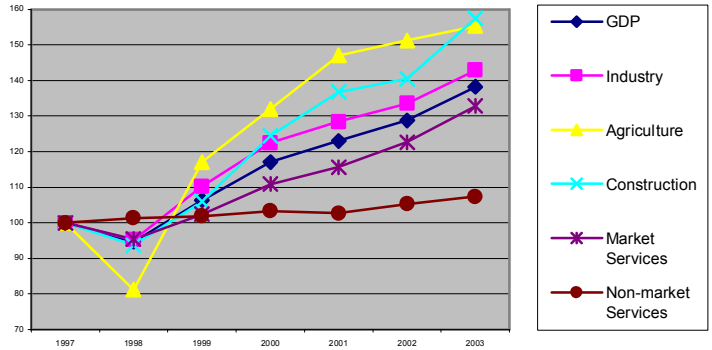
A2 EXPLAINING THE OUTCOMES: GROWTH-POVERTY LINKAGES

4. **Russia's macroeconomic performance was impressive over the five years following the 1998 crisis**. The cumulative growth rate over 1999-2003 reached 37.5 percent, a higher growth rate than that of most countries in the OECD or in Central Europe and the Baltics (Chapter 4). Important features of this growth are the following:

- ***All sectors have been growing, with the pre-crisis "losers"--agriculture, industry, and construction--leading growth during this period*** (Figure 2). Agriculture benefited from record crops several years in a row, and also benefited from increased production by agricultural enterprises, owing to import substitution and to increased production on subsistence plots. Construction boomed, primarily in response to an increased demand from the non-residential sector. Within the industrial sector, the natural resources (oil and gas) sector has boomed significantly in the past few years, driven by rapidly increasing international oil prices.[1]

[1] However, the exact contribution of the natural resources sector is underestimated by the national accounts. The transfer pricing for tax avoidance induces firms to transfer value added from the industrial sector (oil and gas) to the trade sector via grossly inflated margins. See World Bank, *Transition Meets Development* (2004).

Figure 2: Economic Recovery Since 1998



Source: Goskomstat

- ***Almost all regions benefited from the recovery, albeit at a different pace.*** All but one region increased their per capita Gross Regional Product (GRP) in the period 1999-2002. Some regions which had fared very poorly in 1998 (e.g., Ingushetia Republic) performed very well in the subsequent period.

5. The impressive rebound from the crisis has been driven by a set of complementary factors.

- ***The devaluation of the ruble*** by about 40 percent in the aftermath of the 1998 crisis in real terms sparked wide-scale import substitution. Firms also benefited from lower real costs of domestic inputs (in particular, real wages, electricity and natural gas tariffs).
- ***The bulk of capacity had not been utilized in the main producing sectors*** at the time of the crisis because of a prolonged pre-crisis contraction in output. This facilitated a rapid increase in output as soon as the devaluation took place.
- ***Higher oil prices*** (from early 1999 on) ensured higher export values, a constant inflow of foreign exchange, and higher government revenues (the oil and gas sector contributes up to 40 percent to federal budget revenues).
- ***Prudent macro-management and fiscal stability*** following the lessons from the Russian crisis, and the subsequent imposition of a hard budget constraint on enterprises provided the enabling environment for private sector growth.
- ***The government also initiated structural reforms*** in order to achieve ***higher efficiency in public services delivery and a more favorable business climate***, which comprise the core of the government's pro-growth policy.

6. **The recovery increased the demand for labor, especially in the private sector and among smaller firms.** It also created more jobs and reallocated labor to higher productivity jobs (Chapter 5). For the first time since the transition began, the rate of job creation exceeded that of destruction in the manufacturing sector as of 1999. There was a first-time net employment increase in large establishments. Yet employment in smaller and more dynamic private sector firms grew even faster. While large establishments continue to dominate the employment scene, new private sector firms start as small establishments that are more dynamic in job creation. The share of the "state and municipal" establishment in total employment was reduced from 38.1 percent in 1998 to 36.9 percent in 2002, yet it is still high.

7. The increased demand for labor was met by reduced unemployment, higher working hours, and significantly higher productivity and real wages.

a) ***The rate of unemployment reached a peak in 1998 , but then declined steadily as a result of the recovery (Table 1).*** Between 1999 and 2002, the number of employed workers increased by 4.6 percent.

Table 1: Unemployment Rate, 1997-2002

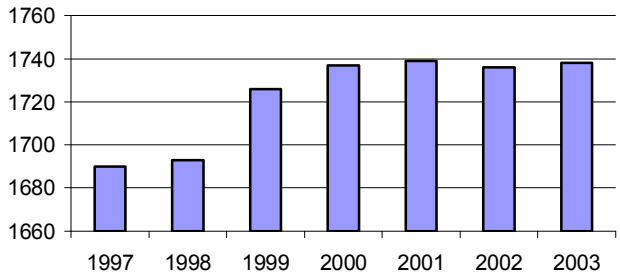
	1992	1997	1998	1999	2000	2001	2002
Unemployment Rate (%)	5.2	11.8	13.2	12.6	9.8	8.9	8.6

Note: The table refers to age group 15-72 years. See Chapter 5 for more detail.
[1] Beginning in 1999, the numbers include those self-employed at subsistence land plots.
Source: Goskomstat, Russia in Figures, 2003, p. 76.

b) ***The average number of hours actually worked per worker increased during the economic recovery.*** The higher labor demand was partly met by a significant reduction in involuntary leaves and less reliance on reduced work schedules and, to a lesser extent, by increases in the duration of a regular working day. These factors contributed to an increase in the average hours actually worked per worker in medium and large establishments by 2.5 percent between 1998 and 2002 (Figure 3).

c) ***Increased labor productivity accounted for about two-thirds of the increased output in the non-agricultural sectors between 1999 and 2002, while increased working time accounted for the remaining one-third.*** It is estimated that non-agricultural output increased at a rate of about 6 percent per annum between 1999 and 2002. Labor productivity accounts for about 4 percent of this increased output, and increased working time accounts for the remaining 2 percent. Sectorally, industry and construction had the highest rates of productivity increase, followed by agriculture, and then by market services. Non-market services had the lowest growth rate in productivity but the highest increase in employment expansion.

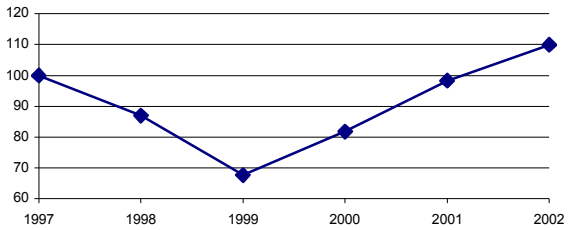
Figure 3: Average Working Time, Hours per Year per Worker, Medium and Large Enterprises, 1997-2003



Source: Labor Force in Russia, based on Survey, Goskomstat.

d. The average real wage rate increased markedly after 1999, following a significant drop in the previous period. The high rates of productivity increase led to rapid increases in the wage rate (by 62 percent over the 1999-2002 period), offsetting the loss in the previous two years (Figure 4). As of 2002, the real wage rate exceeded its 1997 value by about 10 percent. As these developments illustrate, the Russian labor market has adjusted much more on the wage side than on the employment side, both in the downturn as well as the upturn.

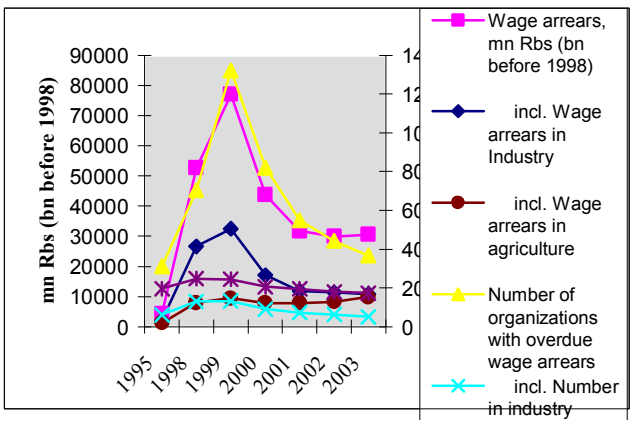
Figure 4: Real Average Wage Rate Index (1997=100)



8. **The government contributed to the reduction in poverty during the recovery period through several channels:** (i) achieving macroeconomic stability and fiscal prudence which made economic growth possible; (ii) introducing structural reforms that led to significant improvements in the perception of the business environment between 1999 and 2002; and (iii) promoting policies that directly improved household living standards in the economic recovery period, by increasing social spending and public sector wages, and by reducing arrears in wages and social payments**,** as follows.

- ***Reduced arrears in wages and social payments***. Arrears in payment of wages and social benefits were used when the government was short of funds. These payment arrears had an adverse impact on household welfare. The arrears peaked in 1999 when the government finances were under extreme stress. The improved fiscal situation after that, largely due to higher oil revenues, led to a dramatic reduction in these arrears as well as in the number of organizations with such arrears (Figure 5).

Figure 5: Wage Arrears, 1995-2003



Source: Labor and Employment in Russia, Goskomstat (2003), p.445.

- ***Increases in public sector wages since 1999***. The public sector employs about a third of the labor force and is known to have a compressed wage structure and very low wages for some employees. Given the improved fiscal position, there have been several noticeable increases in public sector salaries in the past three years. This has had a positive impact on the incomes of low paid public servants.
- ***Increased public sector spending on the social sectors since 2000, following a sharp reduction***. Public sector consolidated spending on the social sectors (social protection, health, and education) was not protected during the economic downturn. The consolidated spending on health, education, and social protection was cut by a sizable 10 percent of GDP between

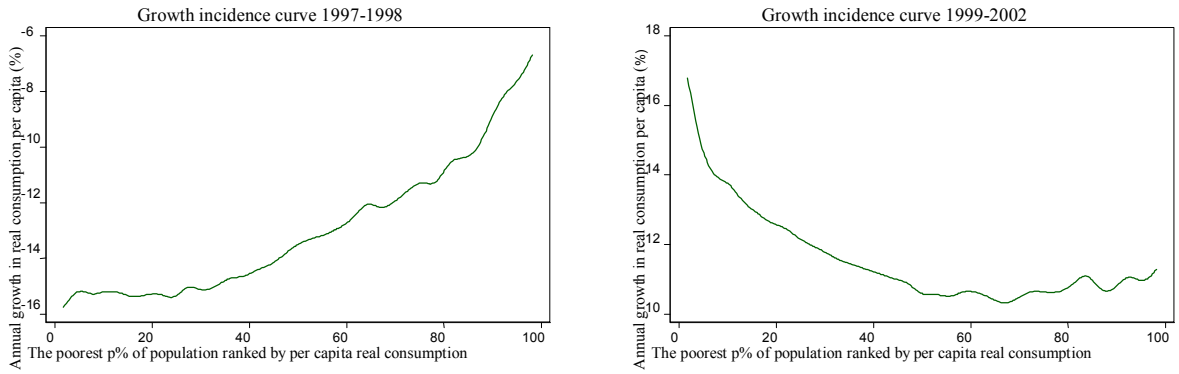
1997 and 2000. As government finances were squeezed, the government reduced the absolute and even the relative share of spending in the social sphere, in addition to building up arrears in wages and social benefits. Instead of stabilizing the negative impact of the shock, government spending acted to exacerbate it. The increase in government revenues after 1999 enabled the government to increase social sector spending by 5 percent of GDP, to reach about 20 percent of GDP in 2002 (Table 2). However, while the government increased its spending on the social sectors as of 2000, spending on education and health as a share of GDP is still significantly below OECD and regional averages.

Table 2: Enlarged Budget Social Expenditure is Pro-Cyclical, 1997-2002 (% of GDP)

	1997	1998	1999	2000	2001	2002
Education	4.6%	3.6%	3.0%	2.8%	3.1%	3.9%
Health	3.5%	3.4%	2.9%	2.8%	2.9%	3.2%
Social Protection	16.0%	13.3%	9.7%	8.9%	10.9%	12.6%
Total (of 3 sectors)	24.10%	20.30%	15.60%	14.50%	16.90%	19.70%

9. **The net effect of these mutually reinforcing developments is that the financial crisis hit the poor especially hard, while the economic recovery was pro-poor.** The living standard of the poor worsened both absolutely and relatively between 1997 and 1998, owing to collapsing incomes and worsened inequality. Figure 6 shows the growth in annual per capita consumption for different cumulative percentiles of the population. It shows a steep drop in consumption for all groups between 1997 and 1998, and this drop was even greater for the poorest segment. In contrast, the 1999-2002 recovery period was accompanied by a consumption increase for everyone, but the increase was greatest for the poorest groups. Thus, the 1999-2002 growth was definitely pro-poor. Changes in household consumption have been driven by trends in earnings, by aggregate economic changes that directly influenced the labor demand, and by economic policy that has been pro-cyclical, exacerbating the negative impact of the downturn but strengthening the positive household impact of the recovery.

Figure 6: Anti-poor Crisis and Pro-poor Recovery, 1997-2000



10. **The wide swings in poverty over a short time period are relatively unique, and require policy attention to enable greater household consumption smoothing.** The swings in poverty over a short time period are very large. The number of poor people increased from 35.3 million in 1997 to 60.5 million in 1999 and then decreased to 28.1 million in 2002. Several factors have contributed to these wide swings, as the economic situation first worsened, and then recovered:

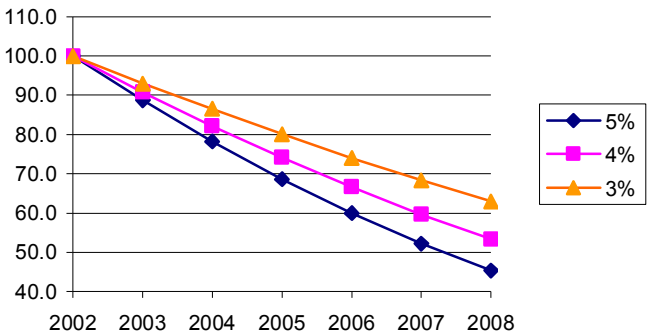
- ***Poverty is shallow,*** with a large number of people concentrated around the poverty line (see also Section B). This creates a situation in which a given change in economic conditions will lead to large swings in the number of poor people.
- ***In addition, households were not able to rely on the financial system to smooth their consumption***. Households adjusted to the downturn by reducing non-food expenditures. The share of consumption spent on food increased from 54.9 percent in 1997 to 69.7 percent in 1999, and then declined to 51.1 percent in 2002. The large swings in poverty and the difficulties in smoothing consumption point to several areas that need attention to facilitate consumption smoothing in the future***. Rebuilding the financial institutions and people's confidence in them is an important anti-poverty policy instrument,*** as it would permit households to improve consumption smoothing through greater use of savings instruments.

11. **Ultimately, macroeconomic stability and the prevention of crises are key to preventing poverty from increasing and to further poverty reduction**. Russia's recent economic performance has been marked by large swings in macroeconomic variables. Between 1997 and 1999, the average real wage rate fell by a third and per capita consumption fell by a little more than a quarter, and both more than fully recovered three years later.

A3 CUTTING POVERTY IN HALF BY 2007 IS A POTENTIALLY ATTAINABLE — BUT VERY CHALLENGING — GOAL

12. **Sustained and broad-based growth is the key element in a strategy to cut poverty in half by 2007 from its level in 2002.** Growth was the driving force behind the significant recent poverty reduction***. It would take a high level of uniform per capita consumption growth of at least 5 percent per annum, and even more in terms of GDP growth rate, to reduce the incidence of poverty by almost half between 2002 and 2007. At 5 percent annual growth in consumption, the incidence of poverty would fall to 10.2 percent by 2007.*** If consumption growth is only 3 percent per annum, however, poverty would be reduced by about a third (Figure 7).

Figure 7: Simulation of Poverty Trends for Different Growth Scenarios
(Headcount Index,1997=100)



13. **Increasing inequality would substantially weaken the poverty reduction impact of a given rate of growth**. If growth is not distributed evenly, then the poverty impact will be attenuated. In the example discussed above, a growth rate of 5 percent accompanied by increasing inequality will have a smaller impact on reducing poverty than the same growth rate evenly distributed. While inequality may increase as returns to education increase and wages become increasingly decompressed—positive developments as market forces become entrenched—attention will need to be paid to the extent to which the poor are sharing in growth. It is important, therefore, to monitor

inequality levels and develop a better understanding of the determinants of inequality and the policy levers that could influence it.

14. **To achieve a sustained growth rate of 5 percent in consumption, GDP would have to increase at a higher rate than 5 percent**. As the economy grew from its depressed state in 1998, households responded by strongly increasing their consumption, particularly for non-food items. The strength of the response may not continue into the future. Further output increases will need to be achieved by expanding the capital stock and devoting a larger share of output to investment rather than consumption. In addition--and given that households have bounced back from the low point of the financial crisis--consumption is likely to rise less than incomes, as households start to increase their savings rate. While this would be good for achieving and sustaining growth in the long run, it implies that GDP will have to grow at a faster rate than the required 5 percent consumption growth to cut poverty in half by 2007.

15. **Ensuring sustained and broad-based growth in the medium term will be much harder than achieving the growth that took place over the 1999-2003 period**. Growth is almost always faster when economies are rebounding from a severe crisis. Future growth will be much more of a challenge given that the key drivers for growth and poverty reduction since 1999 may have run their course and may no longer be as effective:

- The growth already achieved was driven by an initial condition (in 1998) of very low utilization capacity, which permitted rapid output increase relatively inexpensively and without substantial new investment. Capacity utilization increased by about 20 percentage points between 1997 and 2003, and future growth will require expanding the productive capacity of the economy.
- The real exchange rate depreciated by about 40 percent between July and October of 1998, propelling the recent growth episode, particularly in import-substituting industries. However, the real exchange depreciation has run its course, and the ruble has appreciated in real terms close to its levels before the devaluation.
- The economy has been fortunate because of the high oil price for the past three years. But the oil price is at a record high level now. Given the uncertainty over future prices, there are serious risks to any development strategy that heavily relies on high oil prices. Indeed, the economy's heavy exposure to the natural resource sector is a major source of concern, as an oil price drop could cause negative shocks, depress output, and increase poverty.

Thus, diversifying the economy by type of business is essential. This requires reforming business entry requirements and leveling the playing field to expand the share of small and medium enterprises. It also requires significant reforms to improve the business environment and to reduce the tax burden, which would require much higher efficiency in public service provision. Also needed are sweeping changes in technical regulations and their enforcement, ensuring the rule of law, and completing accession to the World Trade Organization (WTO). These structural reforms are essential for diversifying the economic base, reducing the vulnerability to oil price fluctuations, and contributing to higher sustainable growth rates that would increase wages and reduce poverty.

16. **Accession to the WTO is an important part of the growth and reform agenda, as it is likely to provide substantial benefits to Russia (about 7 percent of the level of Russian consumption in the medium term and considerably more in the long term).** An innovative computable general equilibrium model that incorporates all 49,000 households from the HBS has been utilized to simulate the impact of Russia's accession to the WTO on aggregate welfare, as well as on different types of households (Chapter 7). In the long term, an improvement in the return to investment should lead to expanding the capital stock and incomes considerably. The returns to the three factors of production (unskilled labor, skilled labor, and capital) will increase, though the

highest increase will be for skilled labor and the lowest for capital, which combines both fixed and mobile capital.

17. **The vast majority of Russian households are expected to gain from WTO accession**. Given that unskilled labor is expected to obtain a higher return from accession than capital, the poor will gain at least as much as the average Russian household from WTO accession. Rural households are expected to gain slightly less than the average urban household. Workers are likely to gain more than capital owners. One important aspect of the accession is that there will be short-run costs for workers who lose their jobs, which are expected to be much less than the medium-term gains. These costs will have to be addressed by the social protection system.

18. This necessitates increasing efficiency of the social protection in particular, and social policy, in general (including better retraining programs). Efforts in this direction would constitute a much more sustainable approach to containing unemployment, relative to the current attempts by many sub-national governments to substitute low-paid--and predominantly redundant--jobs in the public sector for those lost at enterprises undergoing restructuring (See World Bank 2004). In addition, faster growth of the SME sector--also required for making growth sustainable, as discussed in paragraphs above--would serve as an important cushion for transitory labor shedding during economic adjustment induced by WTO accession.

B. UNDERSTANDING THE NATURE OF POVERTY

B1 POVERTY PROFILE

19. The poverty profile is based on the 2002 HBS data set, analyzed with the recommended poverty measurement methodology.

20. **Poverty is widespread but shallow in Russia**. In 2002, the headcount ratio of poverty was 19.6 percent of the total population. The average poor person's consumption was about 26 percent below the poverty line. Furthermore, there is a large concentration of the near-poor just above the poverty line. Small shocks can increase poverty significantly. To illustrate, if consumption were to fall uniformly by about 10 percent, the number of poor would increase by about 50 percent at the expense of the former near-poor.

21. **The rural population, those living in small and remote towns, the children, the unemployed, those living in households with primary education or less, and those living in certain regions of the Federation are the groups in the population that have the highest rates of poverty.** Identifying these vulnerable groups is important for designing policies that would reach these deep pockets of poverty that may be resilient to benefiting from general economic improvements.

- ***Rural populations are more likely to be poor***. About 30.4 percent of the rural population was estimated to live in poverty, while only 15.7 percent of the urban population lived in poverty.
- ***Living in small and remote towns carries a higher risk of poverty than does living in large urban areas.***[2] In Moscow City, a much smaller fraction of 6.6 percent was estimated to live in poverty, while other urban areas had a poverty incidence of 17 percent.
- ***Children have a higher risk of falling into poverty.*** Children younger than 16 years old have a poverty rate of 26.7 percent—substantially higher than the national average. Younger children have an even higher risk of falling into poverty than older children. This provides a

[2] This finding is based on the NOBUS survey, which clearly shows that the smaller the size of the urban community, the greater is the incidence of poverty.

poverty rationale for child welfare projects and for the targeting of social assistance to families with children.

- ***The unemployed are more likely to be poor than the employed.*** One out of every three unemployed persons is poor compared to one out of every five persons in the population at large.

- ***Those in the urban areas with at most primary education are 50 percent more likely to be poor than the general population.***

- ***Individuals with several poverty risk factors face a much higher risk of falling into poverty.*** For example, the children of the unemployed in rural areas have a poverty incidence of about 40 percent, much higher than that for the rural population, for children, or for the unemployed as a whole.

22. **The majority of the poor are working families, with children, with secondary and vocational education, who live in urban areas**. While these groups do not have a significantly elevated poverty risk—in contrast to the vulnerable groups identified above—they comprise a large share of the population and therefore of the poor.

- ***The majority of the poor are in working families, where one or several members work.*** About 88 percent of poor individuals live in households where at least one member works.

- ***About one-third of the poor live in households with no children, another third live in households with one child, and the remaining third live in households with two or more children.*** Poverty programs based solely on targeting households with many children will miss a large number of the poor.

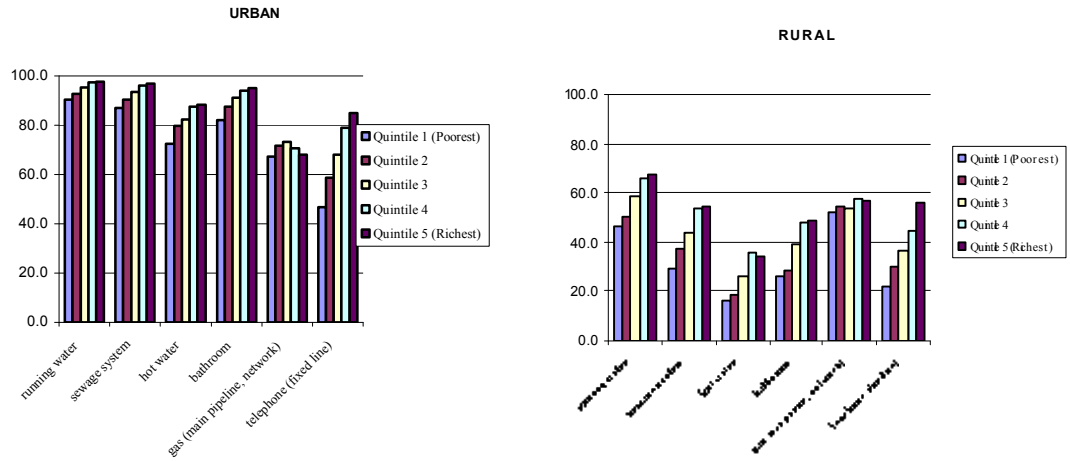
- ***A majority of the poor live in urban areas.*** About 58.5 percent of the poor live in urban areas. While a rural individual is almost twice as likely to fall into poverty as an urban person, the majority of Russia's population (73.2 percent) live in urban areas.

23. **Low wages and low productivity are a major cause of poverty**. A high share of workers with wages below the official poverty line are concentrated in agriculture, education, culture, health, and other public services. Workers in these sectors are vulnerable to poverty.

24. **Inequality aggravates poverty**. The transition has been accompanied by increasing inequality in asset ownership and in returns to education, generating increasing levels of consumption and income inequality and contributing to poverty and weakening the poverty-reducing impact of growth. Russia is at the high end of inequality within the CIS countries, though its inequality is moderate by broader international standards. International comparison is usually carried out for the Gini index of inequality in consumption or income. In 2002, the Gini index for consumption inequality in Russia was 36.8 percent. Adjustments to the large spatial variations and to different needs of the household and economies of scale in household size would reduce the Gini index to about 33 percent. It needs to be pointed out that income inequality (from the RLMS dataset) was higher at 42 percent in 2002. Similarly, expenditure inequality was 40 percent. Asset inequality is harder to measure, but it is likely to be much higher than inequality in consumption or income.

25. **There are inequities in access to basic infrastructure services, to the benefit of urban areas and richer households**. A major dimension of inequality in endowment with modern housing amenities is between urban (well endowed) households and rural (poorly endowed) households. This reflect lower network infrastructure in rural areas, which may be justified in the case of a dispersed rural population. Lower rural access to infrastructure network may be partially compensated by other sources, such as water from wells, gas from propane tanks, or septic tanks for sewage. Within each area of residence, however, the richer households have better amenities compared to the poorer quintiles (Figure 8), but these inequities are not as large as found in most other countries.

Figure 8: Access to Basic Infrastructure Services, 2002

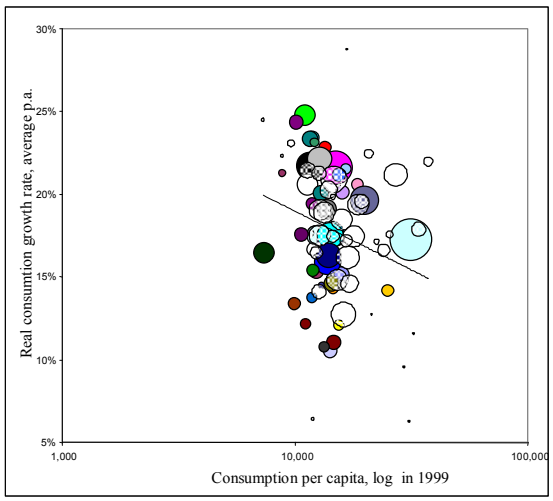


B2 REGIONAL PROFILE OF POVERTY AND INEQUALITY

26. **Regional differences in socioeconomic conditions and living standards are very large**. Gross Regional Product (GRP) per capita in the richest region is 67 times that of the poorest region in nominal terms and 33 times in real terms, when regional price differences are accounted for. Real consumption per capita in 2002 in the richest region was three times that in the poorest region. The poorest regions include some regions in the North Caucasus, South Siberia, and Central Russia. The richest regions include resource-rich regions in Siberia, the Far East, and the European North, and also Moscow City.

27. **However, the regions did not diverge with the after-crisis recovery, which was broad-based and benefited both rich and poor regions.** Inequality among the regions remained stable in the 1997-2002 period, and declined somewhat. Overall inequality in consumption can be decomposed into two components: inter-regional inequality and intra-regional inequality. Using the Theil measure of inequality, it can be shown that the inter-regional inequality was high in the 1997-98 period, but declined subsequently. Moreover, the richer regions did not grow more rapidly with the recovery, nor did households in richer regions increase their consumption more rapidly than those in poorer regions. Figure 9 plots for all regions the growth rate in consumption per capita during 1999-2002 versus its level in 1999; the bubble size represents the region's population. The average trend line slopes downward, indicating that regions with low initial per capita consumption had a greater consumption increase in the 1999-2002 period than richer regions.

Figure 9: Convergence across Regions of Russia, 1999-2002, Consumption per Capita



28. **Within-region inequality accounts for most of the inequality in Russia**. About 10 percent of aggregate inequality in consumption in the Russian Federation can be attributed to inter-regional inequality, while the remaining 90 percent is due to within-region inequality. The implication is that federal policies should encourage regions to monitor and develop policies to keep the within-region inequality in check. However, given the relatively large differences in socioeconomic conditions, it is important to continue to continuously monitor and address regional differences, as needed.

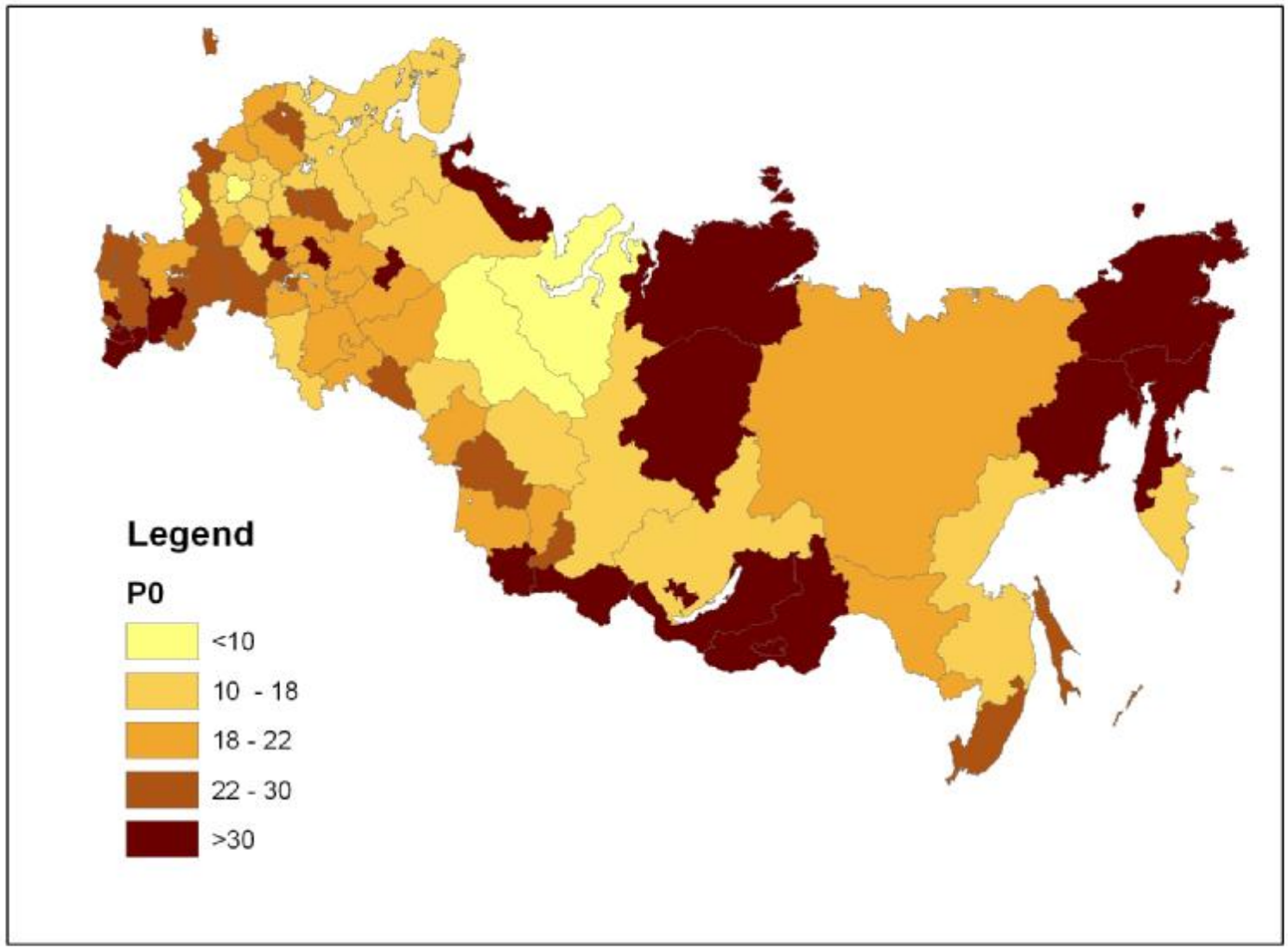
29. **There are large regional differences in the incidence of poverty**. These differences varied in 2002 between 3.1 percent and 55.6 percent. Figure 10 shows a map of the regional distribution of the incidence of poverty. While some of these differences are attributed to different characteristics of the regions in terms of urbanization, education, and employment, large regional differences continue even when these characteristics are accounted for. Persons with the same characteristics are three time more likely to be poor in the Daghestan oblast or in Tuva Republic compared with persons in the rich Tumen oblast or in Moscow City.

30. Most of the poor live in regions whose GRP is close to the national average, despite the large regional differences in poverty. Figure 11 shows that the poorest regions have a small population, and thus they have only a small fraction of the total number of poor people. Thus, ***growth policies for the "average" regions would reach the majority among Russia's poor***. These policies, however, will not necessarily address the special needs of those deep pockets with the highest incidence of poverty. Those deep pockets of poverty require targeted policies and interventions that take into account the profile of the poor in the poverty-stricken regions. In general, the poorer regions are those that are more rural, have fewer households with multiple earners and more households with unemployed adults, and have households with large numbers of children.

31. Regions that are poorer have a higher population share of the groups that are at greatest risk of poverty. The composition of the poor varies somewhat across regions, depending on the region's economic status. However, poverty risk factors do not vary across regions substantially.

- The risk of poverty is systematically higher in ***rural areas*** in both wealthier and poor regions. However, wealthier regions have fewer rural residents, and as a result, poverty is predominantly urban in wealthier regions, and rural in poorer regions.

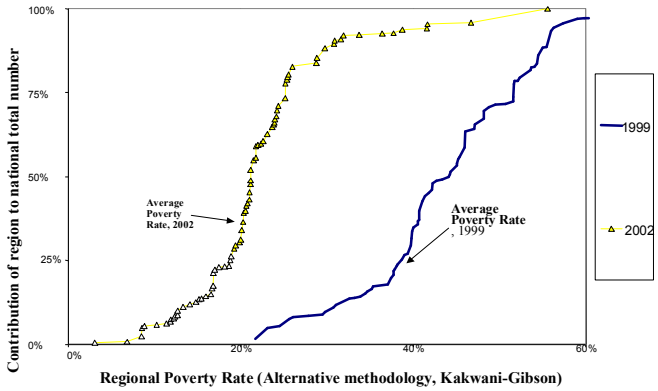
Figure 10: Poverty Map of the Russian Federation, 2002: Regional Headcount Index of Poverty



Source: HBS 2002

- ***The labor market*** profile of the poor varies by region, according to the region's poverty level. The majority of the poor everywhere are working families, but in regions with a higher poverty incidence fewer families have multiple earners; poorer regions also have more unemployed among the poor.
- The poverty profile across regions does not differ much by ***education levels*****,** with risks of poverty moving in parallel with the regional incidence of poverty for all education groups.
- The analysis of the regional poverty profile by ***number of children*** reveals that families with children are the majority among the poor in all regions.

Figure 11: Regional Concentration of Poverty, 1999-2002



32. **A proper balance between universal and region-specific policies is required**. The similarities in the poverty profile across regions mean that common policies targeted to certain common characteristics (i.e., child allowances) would reach the poor across the whole spectrum of regions. On the other hand, certain groups of poor require region-specific policies. Of particular note is the concentration of poor in rural areas in the poorest regions. Strategies to promote rural growth, development of backward areas, and increase incomes of the rural population in the poorest regions would be the most appropriate way to help to target the poorest.

C. IMPROVING THE PERFORMANCE OF SOCIAL POLICIES

33. Strategies aimed at broad-based and sustainable growth, as well as policies that are sensitive to both where the poor live and who they are, are important elements of a poverty reduction strategy. Improvement in the government delivery of social services in the sectors that directly affect the poor is the third important element of a poverty reduction strategy. There are four reasons for the importance of addressing the social policies as a key element in a poverty reduction strategy. First, the positive developments of GDP growth and the deep reduction in consumption poverty have been accompanied by some negative and critical developments in some non-income dimensions, such as the increasing inequities in health status and the increasing incidence of HIV/AIDS among the young and potentially productive workforce. Second, while overall consumption inequality has not increased recently, underlying forces in the form of the increased disparity in enrollment in non-compulsory education and the inequality in access to quality education are increasingly differentiated by income group, with negative consequences over the long term for the economic mobility of the poor. To the extent that access for the poor to higher education is compromised, the poor are unlikely to develop as much of their human capital as the rich. As the returns to education are growing, this means that poverty and inequality may be transmitted from one generation to the next and that an underclass of poor is developing. Third, it is important to develop policies that protect the poor from the adverse consequences of important reform initiatives, such as increasing the cost recovery in the housing and

communal services sector or gaining accession to the WTO. Fourth, it is important to increase the poverty reduction impact of scarce public funds and to improve the targeting of social assistance.

C1 IMPROVING THE TARGETING OF SOCIAL ASSISTANCE

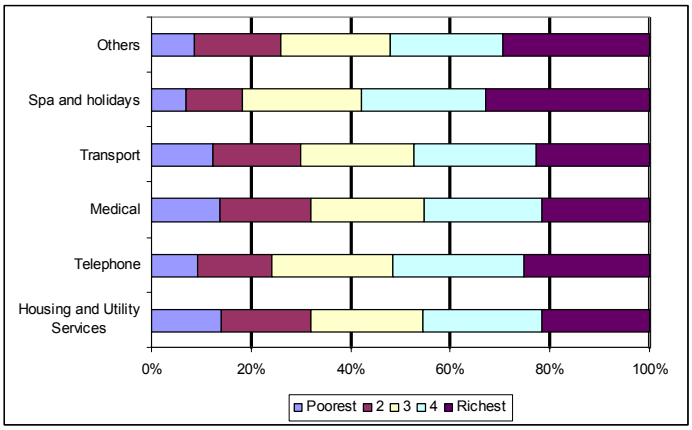
34. **Social protection programs are an important component of the government's poverty reduction strategy.** In 2002, consolidated government spending on social protection programs accounted for 12.6 percent of GDP. Moreover, many citizens are eligible for subsidies whose costs are only partly covered by the budget, and partly by the providers (parastatals in housing and utility services, transport, health and some other sectors). The quasi-fiscal cost of these subsidies adds another 2 percent to the overall social protection bill. About two-thirds of social protection spending finances social insurance programs: pensions (6.3 percent), and other programs providing benefits in case of sickness, maternity, or unemployment for contributors. These programs do not have an explicit poverty alleviation mandate, but some benefits (such as the minimum pension) are designed to reduce the poverty risk. Non-contributory social assistance programs and subsidies channel an additional 5.9 percent of GDP, of which 3.9 percent is through the enlarged budget of the government and another 2 percent is in quasi-fiscal subsidies.

35. **The non-contributory programs include two broad components: targeted social assistance and subsidies to privileged citizens**. The subsidies or privileges are subsidized access or free access to a wide range of services and goods, such as exemptions or discounts from rent or utility payments (20 percent of the population); telephone services (11 percent); medicines, medical appliances and medical services (9 percent); urban, commuter and long-distance transport (20 percent); and vouchers for sanatoriums, spas, child care facilities, and summer camps (1 percent). The targeted social assistance (TSA) includes three main programs: (i) child allowances; (ii) allowances for housing and utility services; and (iii) targeted social assistance programs provided by regional and local government. An estimated 45 percent of all households benefit from the privileges, and 42 percent of the households benefit from the targeted social assistance.

36. **The budget allocation marginalizes the programs targeted to the poor in favor of the inefficient system of privileges.** Spending on the targeted social assistance programs that are targeted to the poor was merely 0.4 percent of GDP in 2002, while spending on various privileges was more than ten times higher at 4.3 percent of GDP. The richest households obtain the largest benefit from the various types of privileges (Figure 12).

Figure 12: Utilization of Privileges, by Type of Privilege and Quintile

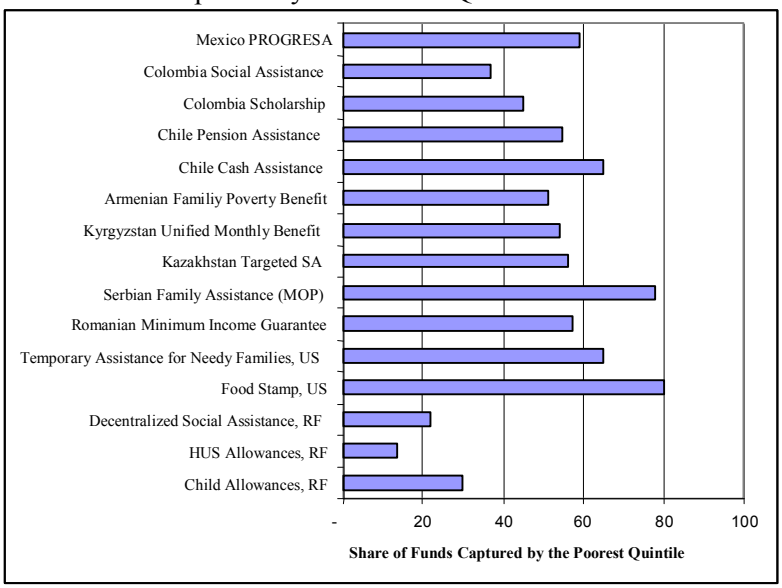
% of households from a given quintile which used a particular type of privilege



Source: NOBUS 2003.

37. **Moreover, the targeting performance of the programs specifically aimed to help the poor is very low**. The two programs that have the largest share of poor among their beneficiaries are the child allowance program and the decentralized social assistance programs. These programs reach only about 30 percent and 28 percent, respectively, of their beneficiaries from the poorest quintile. About half of the beneficiaries of the targeted social assistance programs come from the richest 60 percent of the population. With the exception of the child allowance, the average benefit received by the richest quintile is larger than the average benefit received by the poorest quintile. Figure 13 illustrates the fact that the targeted assistance programs in Russia perform very poorly compared with other programs from various countries.

Figure 13: Comparative Targeting Performance
(Share of Funds Captured by the Poorest Quintile in Selected Countries)



38. **Policymakers have prioritized the improvement of the targeting of the social safety net**. The analysis suggests the following specific recommendations to improve this targeting:

- Scarce resources from untargeted, regressive privileges that capture the majority of funding should be reallocated toward targeted social assistance programs, which currently channel only a small fraction of the funding.
- **Proxy-means testing is also recommended to be used to substantially reduce the current leakage of funds to the non-poor.** The system of decentralized social assistance programs needs to be strengthened through improved financing and better targeting instruments. This requires transforming the unfunded mandate of the decentralized social assistance programs into one core program that is federally funded and monitored but locally implemented. The targeting threshold should also be made consistent with the funding availability so that it reaches the poorest households.
- The adequacy and the targeting performance of the child allowance program should be strengthened. This program has the best targeting performance, but it is under-funded (0.2 percent of GDP in 2002) and the adequacy of the benefits is very low and the benefits have been eroded with inflation. The targeting of this program could also be improved with the adoption of proxy-means testing.

C2 REFORMING THE HOUSING AND COMMUNAL SERVICES SECTOR

39. **Reforming the system of housing and utility services has been—and continues to be—an important area of reform**. From 1992, the government has declared the goal of achieving full recovery of costs by residents' payments, while simultaneously protecting low-income families. This goal continues to be affirmed, though the deadline for achieving it has slipped. Almost a decade after the start of the reform, in 2000, the average cost recovery for housing and utility services was only 54 percent, up from 10 percent in 1992.

40. **The government relies on two subsidization mechanisms: tariff discounts for privileged citizens, and housing allowances aimed at limiting the share of household budgets that goes to housing and utility (HUS) expenditures**.

- A large number of **HUS privileges** were introduced in Russia after 1992, supporting particular occupational groups. Privileges were provided to people of particular occupations, such as customs officers, militiamen, prosecutors, army officers, judges and others. More than 10 new laws provided for the reduction of rents and utility rates for particular groups of citizens 1991 through 2002. Households receiving privileges pay only part of their housing bill - typically 50 percent, and sometimes 0 percent. About one-third of the population benefits, given its privileged status, from subsidized access to housing and utility services.
- **Targeted housing allowances** were introduced in 1994 to limit the burden placed by utility expenditures on the family budget, in response to an anticipated increase in rents and utility tariffs. Currently, housing allowances are available to families whose cost of rent and utilities (based on norms) exceeds 22 percent of the total family income (lower in certain regions). An amendment to the HUS legislation in 2003 improved the poverty alleviation outcomes of the housing allowances. If the family's per capita income is below the regional official poverty line, the admissible burden is adjusted downwards by a coefficient equal to the ratio of the family income to the poverty line.

41. **Reform of the systems of housing and utility payments remains important for a number of reasons**.

1. Payments by the various levels of government absorb a large share of government resources. The budgetary costs of discounted HUS tariffs for privileged citizens for 2002 was 2.3 percent of GDP, almost six times the amount spent on targeted social assistance programs. The total fiscal and quasi-fiscal costs associated with HUS tariff policy represents about 3 percent of GDP.
2. There remain a number of unfunded mandates that compromise efforts to reform the housing sector. While the federal government has mandated reductions in housing and utility costs for various population groups, it has not provided the necessary funds to the local authorities to accomplish this task. The result is that the utility providers have effectively subsidized part of the cost reductions.
3. While the transfer payments play a role in mitigating poverty, they are neither well targeted nor very effective at reducing poverty (See Table 3).
4. Unfunded mandates are a problem, particularly for local governments, as well as for the utilities that are forced to absorb the costs of the unfunded mandates.

Table 3: Coverage of Social Protection Programs, by Type
(Persons in recipient households benefiting, directly or indirectly, from the program)

	Total	Quintiles				
		Poorest 20%	2	3	4	Richest 20 %
Housing allowances	6%	6%	8%	8%	6%	4%
Housing privileges	32%	26%	35%	35%	36%	28%

Note: The coverage estimates were weighted by the household weights and household size. Based on NOBUS 2003.

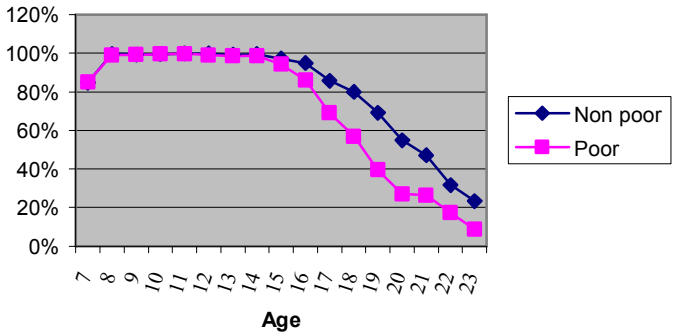
42. A micro-simulation model has been used to assess the distributional and poverty impact of various options and scenarios for reforming the housing sector. A summary of the key conclusions is presented here.

- Eliminating the housing privileges would substantially reduce the cost of housing reduction subsidies – and would not increase poverty significantly. Virtually all of the reduction in housing costs goes to households in the upper deciles.
- Moving to the federal standards of a 22 percent marginal tax rate on income calculated in the maximum social rent would yield a modest cost savings, with some declines in welfare.
- Improving the take-up so that every household eligible for an allowance received one would improve living standards at the bottom of the distribution and would reduce poverty—but at high cost.
- The transition to full cost coverage of the utilities would significantly increase public spending on housing allowances—but would yield substantial revenues in the form of additional housing and utility payments.
- Full cost coverage would significantly lower standards of living and worsen poverty if it were not accompanied by other measures to protect the poor. Households in the first and second deciles would need to decrease other expenditures by 17.7 and 10.6 percent, respectively, to pay for the increased cost of housing. Poverty would increase by about 4 percentage points. Thus, additional measures will be needed to mitigate the negative poverty impact of moving to full cost recovery—including expanding the take-up of the housing allowance program among the poorest. Growing income would also help the poor cope with full cost recovery in the long run.

C3 EDUCATION AND POVERTY

43. **Transition has increased inequality in educational access and outcomes**. Russia inherited an education system from the Soviet Union that provided broad access to education, regardless of ethnic background, gender or geographical location. An important legacy from the Soviet period is that nearly 100 percent of Russian children continue to complete compulsory education. However, despite this strong position in terms of compulsory enrollment and completion, children from poor households have less access to pre-school and post-compulsory education, which is increasingly determined by income and wealth. The poor's more limited access to kindergarten and pre-school programs is a serious policy concern because children who begin behind their peers in terms of basic learning skills have a tendency to remain behind. Children from lower income households in Russia are also more likely to discontinue their education after the compulsory levels (Figure 14). The lowest income adult populations had two to three years of schooling less than the highest income populations in 2003. The tendency of children and young adults from low income groups to discontinue their education after compulsory levels, and to have lower levels of education attainment, has a direct negative impact on their chances in life. As returns to earnings have been decompressed, children of the poor have a higher than average risk of becoming poor adults.

Figure 14: Children from Poor Households Have Lower Enrollment in Non-Compulsory Education, 2003

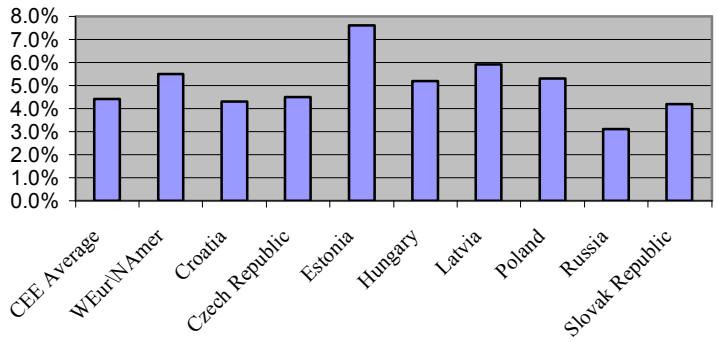


Source: NOBUS 2003.

44. **Poverty in Russia is also having an increasing impact on access to high quality and relevant educational programs.** Low income in Russia has become, for many students, a constraint to access to the type and quality of education that will promote better life chances and thus help to break an increasing cycle of poverty in the country. As in most countries with open enrollment policies, children from wealthier households tend to enroll disproportionately in more competitive programs, in schools that tend to send more students to higher education, and in better resourced schools. Recent research has shown that access to computers, to the internet, to challenging curricula and to foreign languages was found to be lower among low income families. In addition to the problems it faces in general education, low income has been shown to be a barrier to entering high quality university programs. Recent research has shown that as few as 15 percent of children from poor families were accepted into a higher education institution, while almost 80 percent of those from better-off families gained university admittance. Inequality in terms of access to better schools and programs at all levels is being further increased by a growing incidence of informal payments, compounded by a rise in privately financed education and tutoring, to which more affluent households have easier access.

45. **Funding for education in Russia is inequitably allocated**. The fiscal consolidation following the 1998 financial crisis was largely achieved at the expense of social spending. Although spending as a share of GDP is now increasing, it continues to be low in comparison with OECD countries, as well as in comparison with the Baltic States and most Central and Eastern European countries (Figure 15). Moreover, education funding is unequal across Russia's regions, leading to inequalities in access and quality. In view of the unequal spending per capita by both government and households, there is a strong argument for targeting funding earmarked for education–particularly from the federal level–to address inequalities.

Figure 15: Education Expenditures as Percent of GDP



46. Key policy recommendations in education are the following:

- Adequate and equitably distributed public financing should be provided, together with incentives for increasing the efficient use of public funding. Allocating recurrent funding for education on the basis of per student funding formulas is an important step for promoting an efficient and equitable allocation of resources at the regional level.
- ***The targeting of remedial programs and other investments aimed at poor and disadvantaged groups should be improved*** at both the federal and regional levels.
- Although it is politically difficult, Russia's long-standing policy of granting free admission to higher education institutions only to the best students, who come predominately from the higher socioeconomic levels, should be challenged. While admission to higher education institutions should continue to be granted on the basis of academic merit (standards should not be lowered), decisions on who is exempt from fees and who will receive non-educational subsidies such as student board, housing and transportation should be made on the basis of need and not only academic merit.
- Capacity should be developed in the education administration to analyze and use poverty data and indicators provided by other government or non-governmental sources in order to monitor the relationship between poverty and education and take action where necessary.

C4 HEALTH AND POVERTY

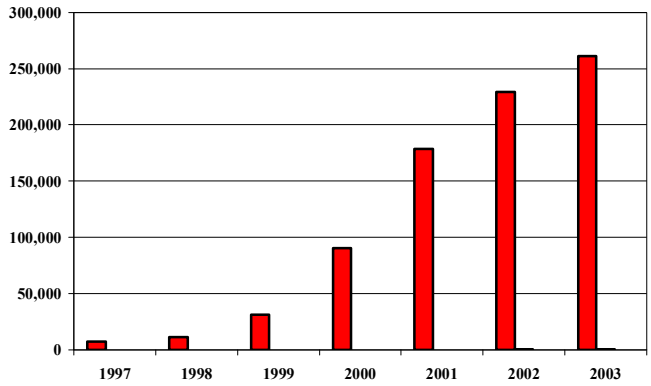
47. Within Russia, poor people have worse health outcomes than better-off people. This situation reflects causality in both directions: poverty breeds ill-health, and ill-health keeps poor people poor. Illness may have a substantial impact on income and may even make a difference between being above the poverty line or below the poverty line. Furthermore ill health is associated with substantial health care costs. Health status and economic growth and development are also linked. Lagging health outcomes add significantly to lowered productivity, (for example, in terms of sick leaves, absenteeism, and outputs). Investments in health (along with education) are essential for labor productivity.

48. The health status of people in Russia compares poorly with that in many middle-income countries.

- Life expectancy has been declining since the mid-1980s, with a particular fall since the transition years of the early 1990s, and again since the 1998 economic crisis.
- Over three-fourths of the decline in life expectancy during the transition was due to an increased mortality rate for young adults during their productive years (25-64 years).

- Infectious diseases, thought to be under control in the late 1980s, have resurged in the Russian Federation since transition. The incidence of tuberculosis (TB) is 10 times that of most EU countries.
- The incidence of HIV/AIDS is also growing, mostly among the young, and the disease is spreading rapidly to the general population through sexual contacts and blood transfusions. The trend in HIV cases is a serious threat to the long-term economic growth and welfare prospects of the country (Figure 16).

Figure 16: Officially Reported Cases of HIV in the Russian Federation, 1997-2003



Source: Federal AIDS Center, Moscow, 2004.

- The poor are also more likely to engage in risky behaviors that further contribute to the poor health status. The frequency of heavy use of vodka and other hard spirits decreases as income increases.

49. **The public health sector is in need of restructuring and modernization. Public sector expenditures on health, measured as a share of GDP, have fluctuated between 3.0 and 4.0 percent since 1995, with some drops after the 1998 crisis.** Russia's public sector spending for health care, as measured by share of GDP, is low if compared with EU countries, which spend from 6-8 percent of GDP on average, but not significantly low compared to middle-income countries. Perhaps more worrisome is the misallocation of funds within the sector: the bloated public health care infrastructure has too many beds and too many physicians, which drains resources away from needed equipment, supplies, and pharmaceuticals. While employment in the health sector historically may have been used as a safety net for assuring regional employment, today it is hurting the quality of services. In addition, the health sector suffers from a fragmented financing and delivery system which wastes further available resources. Inequity in the availability of resources across regions is growing. Per capita public spending variations, even when adjusted for variations in input prices, are currently more than sevenfold across the 89 regions. Relative funding levels do not reflect need.

50. **The private health care sector is growing, but is not always recognized by policymakers, and is not always integrated or well-regulated.** The most worrisome aspect of private sector growth is the increasing burden on individuals and families to pay out-of-pocket for care at the point of service. Fees are both formal and informal, for all types of services. Private expenditures are estimated to be from 30 percent to 55 percent of all spending on health. The NOBUS 2003 survey found that about 35 percent of all households paid for health care or health services when seeking hospital care. At the same time, the poor and lower income groups pay more in out-of-pocket fees is affecting compliance with medical regimens and with basic access to services. The lower income groups are disproportionately hurt.

51. **Recommendations in the area of health are as follows**:

1. It is important to address out-of-pocket payments that hurt the poor and medically vulnerable (e.g., the disabled) by formalizing informal payments through a standardized co-payment system and developing explicit exclusions for the poor and vulnerable. The public benefit package can be made more transparent, and consumers more knowledgeable about what is covered by public funding. Private supplementary insurance should be made more accessible for the emergent middle income groups.

2. Efficiency in the financing and delivery system should be improved, through the restructuring of infrastructure and personnel. Equity in health expenditure could be enhanced by improving the regional equity of public funding, and improving the pooling of resources at the federal and regional levels. This would help reduce the fragmentation of funding sources, allowing for redistribution from the healthy to the sick, and from the rich to the poor. In addition, there is a need to unify and re-configure the benefit package of guaranteed services.

3. There is a need for public health interventions to close the health gaps and protect the poor and the vulnerable sub-populations, and to control risk factors. This could include:

    a) Policies to increase cross-sectoral benefits (e.g., road safety in the transport sector), and pragmatic policies to control excessive consumption of alcohol, especially among the lower income groups
    b) Policies to stimulate the adoption of healthier practices by individuals, such as tobacco taxes on cigarettes and other tobacco products
    c) Sufficient public sector resources for HIV/AIDS control, and a reduction in the cost of anti-retroviral drugs.

D. CONCLUSION

52. The three elements of a proposed strategy for attacking poverty are: (i) broad-based and sustainable growth, (ii) targeted interventions to improve the situation in the deep pockets of poverty that may not receive much benefit from economic growth, and (iii) improvement in the redistributive social policies. Some specific components of these broad strategies are addressed in the report. An important element of the poverty strategy will also have to be the monitoring of both poverty and the impact of government policies. The collaborative program of poverty work places a high priority on these improvements on the basis of improving the official Household Budget Survey in terms of its sampling, coverage, and data quality, as well as on increasing open access to the data sets in line with international standards.

PART I. NATURE OF POVERTY

In order to design a sound poverty reduction strategy, it is essential to understand the nature of poverty in Russia. This part of the report examines the nature of poverty measurement, which is the basis for examining the specific of poverty in Russia. It also spells out a profile of poverty in order to capture the special features of poverty that would help design targeted interventions. Given the size of Russia, a special feature of poverty is its spatial and regional dimension, which is examined in detail here as well.

***Chapter 1** is methodological in nature, but is very important given the increased policy attention to the quantitative targets of poverty reduction. It briefly reviews the official methodology for poverty measurement, identifies specific areas where improvements can be made, and proposes an alternative methodology for poverty measurement. The recommended methodology is based on using survey-based estimates, that rely on consumption as a welfare measures and adopt an objective and regionally consistent poverty line. To facilitate the consideration of this recommended methodology, the implications of adopting it are spelled out as well.*

*In order to examine the scope for targeted interventions, **Chapter 2** examines the specifics of the poverty profile in Russia, along three dimensions: (i) who is at risk of poverty; (ii) who are the poor; and (iii) causes for poverty. The chapters concludes that those with a higher than average risk of falling into poverty are those living in rural areas or small towns, the children, and the unemployed. Yet, most of the poor people are found among working families with children in average regions. Given the links of inequality and poverty, the Chapter also identifies Russia as a country with moderate inequality at the international level, though its level of inequality is at the high end for CIS countries.*

*The regional dimensions of inequality and poverty are examined in **Chapter 3**. The chapter documents the large inter-regional differences in socio-economic conditions, but also points out that most of the inequality is within regions. The incidence of poverty is greater in regions that have lower average outputs, higher unemployment, or lower wage rates. Though there are large differences in the incidence of poverty among the regions, most of the poor live in the average populous regions with levels of poverty not substantially different from the national level. Thus, a poverty reduction strategy should aim for broad-based growth in average regions, to be complemented by targeted interventions for a small subset of regions with very high incidence of poverty, and at the same time adopting federal policies that encourage the regions to fight poverty within the region.*

CHAPTER 1. IMPROVING THE POVERTY MEASUREMENT METHODOLOGY

Poverty measures in Russia are used in formulating public policy, in administering social protection programs, and in pursuing analytical research at the national and regional levels. The government adopted its first official poverty methodology in 1992, relying on an absolute poverty line that is grounded in a nutritionally based food basket, supplemented by an allowance for non-food needs. The poverty methodology was updated in 2000, with a normative basket for both food and non-food goods and a greater regional differentiation in the determination of poverty. Official poverty estimates are calculated by Goskomstat using the Household Budget Survey (HBS), which was improved substantially in 1997, and an imitation model that ensures conformity with macro aggregates.

Despite its achievements in improving poverty monitoring, the current methodology has several drawbacks. The welfare aggregate is income-based, derived from expenditure data and subjected to various adjustments to conform to aggregates from the national accounts. The poverty line is normative with prescribed baskets for both food and non-food goods, and is regionally inconsistent. This chapter briefly reviews the official methodology for poverty measurement, identifies the areas for its improvements, proposes an alternative methodology directly based on survey data, with a consumption-based welfare aggregate and an objective poverty line grounded in household behavior, and spells out the implications of adopting the recommended poverty methodology. Serious consideration of the proposed methodology is important, in view of the fact that the Russian government has made attacking poverty a major objective over the next four years.

1.1. The poor numbered 31.8 million people in 2003, representing 20.4 percent of Russia's population, according to official estimates. A key policy objective of the government in the second Putin presidency is to fight poverty. This is a clear example of using official poverty measurements in the formulation of broad public policy. Poverty measurement is also used in the administration of targeted social assistance, and in policy research at the national and regional levels. The new Labor Code declares a goal of eventually equalizing the minimum wage with the subsistence minimum level (as the poverty line is called). The subsistence minimum level is also invoked in the policy debate on the minimum pension for retirees, as well as in the determination of the level of stipends, allowances, and other social payments.

A. THE OFFICIAL POVERTY MEASUREMENT METHODOLOGY – BRIEF OVERVIEW

1.2. **The Household Budget Survey (HBS) since 1997 is a credible source for analyzing poverty and inequality nationally, and is the only such source for monitoring the poverty profile at the national and regional levels.** The calculation of official poverty estimates is based on HBS data. The HBS is a continuous survey, initially introduced in 1952. It was substantially improved and revised in 1997 as follows, in line with international practice: (i) the revised HBS relies on the household, rather than the family, as the unit of observation; (ii) the sampling was revised to have a random stratified sample representative of the whole population, as well as in every region for rural/urban subgroups, on the basis of the 1994 Microcensus, rather than employing the earlier quota sampling; (iii) the questionnaire design was revised substantially. The HBS sample consists of 49,000 households drawn from the whole country, with data collected for each quarter. The period under analysis in this report is therefore the period since 1997, which ensures the comparability of the

analysis. This period is also important from a policy perspective as it encompasses changes in welfare before, during, and after the Russian financial crisis of 1998. Chapter 12 focuses on the use of the HBS for poverty monitoring and on current plans for improvement.

1.3. **Income is used as the welfare aggregate.** Though the HBS does not collect income data, the official methodology for poverty estimation requires the use of an income measure, given that the law defines the minimum subsistence level on the basis of income**.** An estimate of the increment in financial assets is derived, and is added to cash expenditure to generate the variable "money income".

1.4. **An "imitation model" is used to derive national and regional poverty estimates, instead of direct reliance on the survey data**. Unlike the practice in other countries, poverty headcount estimates in Russia are *not* directly based on the survey data. Instead, the "imitation model" is used: the mean per capita money income estimated from macroeconomic data is combined with the money income inequality data from HBS. The model produces a single number, an estimate of the number of people with a per capita income below the subsistence minimum in a given region.[1]

1.5. **The weights are re-calculated to correct for non-response errors and ensure conformity with macro aggregates**. The poverty profile is produced from the survey, but following adjustments to the weights, to achieve conformity to the macroeconomic data on income. As richer households are believed to have a higher non-response rate, a correction is introduced by Goskomstat by raising the weight attached to the richer households while lowering the weight for the poorer ones. The official poverty profile is produced from the HBS data with the updated weights.

1.6. **The official poverty line was first adopted in 1992 and was revised in 2000**. The official poverty lines were established under guidelines developed by the Ministry of Labor and Social Development. The poverty line is the cost of meeting certain food and non-food requirements that are deemed necessary for individuals to maintain health and minimum activity levels, both personal and social, taking account of the geographic setting (notably the climate). The food portion of the subsistence minimum is calculated as the cost of an officially adopted food basket that satisfies nutritional requirements, at current prices. The non-food component of the poverty line was calculated during the 1992-99 period in proportion to the total cost of the food basket on the basis of a specified food share. Three primary changes were introduced in the new poverty line methodology adopted as of 2000. First, elements of the food basket were revised. Second, the non-food component of the minimum subsistence level is calculated as the cost of a normative basket of essential non-food goods, services, and payments. Third, the subsistence minimum was given greater regional differentiation with more zones for food and non-food baskets, and with each of the 89 subjects adopting its regional basket, subject to federal guidelines. The updated poverty line is more generous than the older poverty line, which leads to higher poverty estimates according to the new methodology.

1.7. **The food baskets are based on nutritional requirements for calories, proteins, fats, and carbohydrates for various groups of individuals: infants, children aged 1 to 6, children aged 7 to 15, adult males aged 16 to 59, adult females aged 16 to 54, and retired people (males aged 60 and older and females aged 55 and older).** According to the revised poverty line as of 2000**,** the baskets vary across the 16 geographical zones of Russia, to account for caloric differences by climatic zones and for regional differences in food consumption patterns. Nutritional requirements are higher by about 15 percent for the coldest arctic regions, compared to the more temperate southern regions.

1.8. **Three zones for non-food goods and three zones for services/utility baskets are defined, as of 2000, according to climatic conditions in Russia**. The basket for non-food goods provides detailed expert-specified quantities to be consumed by various groups of individuals. These groups are similar to the groups used in the construction of the food basket, except that separate baskets for non-food goods are defined for elderly men and women. The service basket consists of consumption norms for seven main utilities. While the food and non-food baskets are defined at the individual

[1] The national level estimate of the poverty headcount index is obtained from a separate model. Thus, according to official data published by Goskomstat, the sum of poor population in all regions is not necessarily the same as the estimate of national poverty, which is also officially published by Goskomstat. This inconsistency is a serious challenge for the regional analysis and monitoring of poverty based on official data.

level, the service baskets are defined on a per capita basis. Every item in the non-food bundle has an approximate usage time that varies for different age-gender groups.

1.9. **The actual compositions of goods and services that enter the regional baskets are determined by local governments**. An inter-ministry expert committee reviews the draft consumer baskets submitted by the local governments and provides recommendations to the federal government, which makes the final decision on the composition of the regional baskets. The expert committee evaluates the nutritional composition of every regional basket as well as the composition of the non-food components.

1.10. **The specific poverty line is calculated for each quarter, using prices collected by Goskomstat from 200 cities**. In the fourth quarter of 2000, the components of the subsistence were: 50 percent for food, 25 percent for other goods, 19 percent for services, and 6 percent for mandatory payments.

B. DRAWBACKS TO THE OFFICIAL MEASUREMENT METHODOLOGY

1.11 There are three important elements to establishing a poverty estimate: setting a credible poverty line, determining what aggregate to measure welfare, and then coming up with a statistically reliable population estimate. There drawbacks to the Russian method on all three counts.

Problems Concerning the Official Poverty Line

1.12 **The official food baskets are normative, and are selected by nutritional experts rather than on the basis of household consumption patterns.** The official methodology rightly adopts an absolute poverty line that is based on the cost of basic needs, and in particular the need to satisfy the nutritional requirements. The official methodology allows for variation among various demographic groups on their needs adequate nutritional intake. Since actually nutritional intake is difficult to monitor to determine whether a household is poor or not, the expenditure on food is usually taken as the measure as whether a household can satisfy the nutritional requirement. The cost of the calorie intake of the food basket is therefore calculated here using local prices and food conversion factors. The calorie cost of the basket varies across regions and demographic groups. Thus, the quality and hence the economic costs of baskets are not uniform. For example, children appear to have higher calorie costs than adults. When the underlying average calorie costs for each region and each individual are calculated using the estimated population share, the calorie costs of children are 20 to 30 percent higher than those of the adults in the same region. This is because the normative food basket for children tends to reflect the wishes of experts more than the actual consumption patterns of the population. It is preferred internationally to derive the food basket from the actual consumption habits of low-income people, rather than having it specified it by nutritional experts.

1.13 **The official non-food baskets are normative, and are chosen by experts rather than on the basis of household behavior.** Constructing the non-food basket is a more difficult task than designing the food basket. The Ministry of Labor and Social Development (MLSD) has constructed the official basket on a purely normative basis. The basket provides very detailed quantities of non-food items that should be consumed by different types of individuals. The basket has been constructed in detail to take into account the needs of active males, active females, retired persons and children. This process obviously entails substantial value judgments as people have different judgments of needs. Whose judgment should be adopted? While poverty measurement is not an easy task, it should be as objective as possible. To achieve this end, it would be best to rely on the consumption patterns that are readily observable through the household budget surveys.

1.14 **The official food poverty lines are inconsistent across regions.** Each region's determination of its subsistence minimum is subject to federal guidelines and approval. In order to make legitimate inter-regional comparisons of poverty, the poverty lines should be consistent across regions. This means that two individuals with the same standard of living but living in different regions should be identified as either poor or non-poor. To assess the welfare level provided by two

different baskets, these can be evaluated in the local prices of both regions. If the resulting total costs of both baskets in local prices are comparable, the baskets would be likely to yield the same level of welfare. Using this concept, a background paper by Ravallion and Lokshin carries out this comparison and finds that the consistency of the poverty lines across regions is not satisfied in a majority of these comparisons. The lack of consistency is partly due to built-in assumptions in the framework law that guided the adaptation of regional poverty lines to take into account climatic differences. But the inconsistency of poverty lines for the same climatic zones indicates that the observed inconsistency is also due to the manipulation of poverty methodology at the local level.[2]

1.15 **The non-food component of the official poverty line does not capture the economies of scale that result from individuals living together.** The non-food goods and services are defined on a per capita basis and thus do not capture any savings from those individuals living together in a household and sharing the consumption of such public goods as housing or durable goods. International experience suggests that households can save up to a third of their income through such economies of scale. This should lead to a per capita poverty line that declines with household size, but this is not the case with official non-food components. Thus, official estimates will be biased toward indicating greater poverty for larger households.

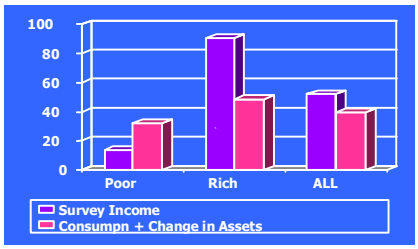
Problems Concerning the Welfare Aggregate

1.16 **Though official poverty estimates rely on income for measuring poverty in order to achieve consistency with the official guidelines on poverty lines, the derived income measure has inconsistencies with regard to the official poverty line.** The law defines the minimum subsistence level as the *income* needed to attain a certain standard of living. However, income data are not collected directly in the HBS, and are likely to be under-reported in an economy with a large informal economy. Given that the HBS collects data on expenditure, Goskomstat calculates the "cash income" of a household by adding net savings to the cash expenditures. An inconsistency arises in this calculation, as the cash expenditure includes the value of actual spending on durable goods, while the official guidelines for the subsistence minimum account for the use value of some of these goods. For example, the official annual subsistence minimum includes only one-eighth of the cost of a woman's winter coat, assuming that each woman needs such a coat every eight years. But in reality a household does not spend one-eighth of the coat price every year; in fact, the cash expenditure variable would include either the full cost of a coat or zero.

1.17 **The calculated income measure is biased, given that the net savings are underestimated for richer households.** The household expenditure data measurement is among the most rigorous and detailed internationally, given that it relies on each household's maintaining a diary for 2 weeks and a log book for 11 weeks per quarter. However, the measure for net savings is very crude and is based on recalling aggregated transactions in financial assets. This makes the net saving data subject to significant recall error, in addition to the likely incentive to under-report savings, especially for richer households. When both income and expenditure are measured directly, international evidence suggests the unreliability of estimating savings as changes in financial assets. A household survey in Pakistan permits the derivation of an asset-change measure of savings along with the estimate of consumption, to derive cash income in the same way as is done in the HBS. The results are very different from those obtained directly from income questions in the survey. In particular, the income of the rich was understated by 50 percent, and the income for all households was understated by 25 percent (Figure 1.1).

[2] Details of the method used for the utility consistency test can be found in "On the Utility Consistency of Poverty Lines" by Martin Ravallion and Michael Lokshin, 2003.

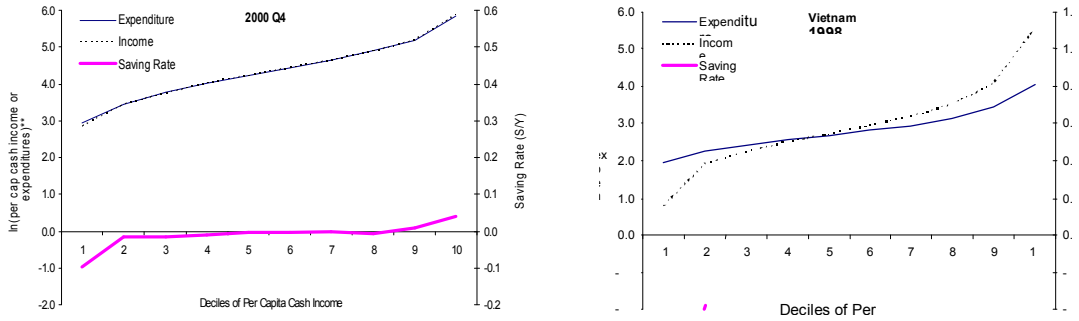
Figure 1.1: Household Income in Pakistan: Direct Versus Derived Income



Source: Calculated from data in Kochar (2000) based on Pakistan LSMS survey.

1.18 **The biased estimates of savings in Russia and the resulting understatement of incomes for richer households are evident in the relation between expenditure and estimated income when compared to the pattern in other countries, such as China, New Zealand, and Vietnam**. The gap between income and expenditure increases after the third decile in other countries, while expenditure and income in Russia appear very close together, except for the very richest and poorest deciles (see Figure 1.2). Moreover, the saving rate estimated from the HBS appears stable for various quarters in the period 1997-2000, despite serious imbalances accompanying the Russian financial crisis in 1998. This casts further doubt on the credibility of the net saving estimate.

Figure 1.2: Patterns of Expenditure and Estimated Saving in Russia and Vietnam



**1997 ruble values divided by 1000, all log values the have value of five subtracted to balance the two y-axes.
Decile 1 saving rate is -0.53 in 1998Q3.

Problems Concerning the Reliable Population Estimate from the HBS Sample

1.19 **Adjustment to the income variable to ensure consistency with macro aggregates leads to extreme re-weighing, by raising the weights for the rich and lowering them for the poor.** The income aggregate derived from the survey is usually lower than a similar aggregate of household welfare derived from national accounts. In general, it is better not to modify the household level data for consistency with national accounts. But even if such an adjustment is to be made, the manner in which it is carried out by Goskomstat creates extreme weights leading to biases for various HBS indicators. The micro-based estimate is lower than a similar estimate from the national accounts for two reasons: (i) a higher non-response rate by richer households; and (ii) under-estimation of net savings and therefore of estimated income from the survey. Goskomstat considers only the non-response factor in its adjustment by attaching higher weights to richer households and lower weights to poorer households, and applies the new weights for all HBS indicators. This procedures creates extreme weights, unusual for similar household surveys in other countries. For example, in the last quarter of 2000, the five households with the largest sample weights have the same effect on calculated statistics as did approximately 5,400 households with the smallest (non-zero) weights. This extreme discrepancy between weights implies statistical and budgetary inefficiency. The largest-to-smallest weight in Moscow is 220 to 1, whereas it is 3 to 1 in Jakarta for a comparable Indonesian

survey. The understatement of the saving leads to the understatement of the cash income variable, which, in turn, causes a reliance on extreme weight adjustment in order to reconcile the survey estimates of income with the estimates coming from macroeconomic sources.

C. RECOMMENDED POVERTY MEASUREMENT METHODOLOGY

1.20 Given the shortcomings of the existing poverty lines and the income aggregate used for measuring poverty, this section outlines the features of the recommended improvements to both the welfare aggregate and the poverty line. In general, a full transition to survey-based poverty monitoring is recommended. To carry out such monitoring, a consumption measure of welfare is recommended and the various reasons for this recommendation are addressed. It is also recommended that Russia adopts an objective, regionally consistent, and absolute poverty line. The economies of scale in household size and the equivalent scales by age and gender can be applied either to the poverty line or the welfare aggregate. As the Russian practice incorporates equivalent scales and regional adjustments in the official poverty line, the adjustments to household composition and size and to regional prices are made in the recommended methodology in the poverty line. Moreover, it is recommended that non-monetary indicators of poverty are monitored in addition to monetary poverty.

It is Recommended that a Full Transition be Made to Survey-based Poverty Monitoring

1.21 **It is recommended that poverty estimation and monitoring be based fully on survey data instead of using the imitation model**. The official poverty rate is currently produced for the federation and for each region by an imitation model that relies on a money income average obtained from macroeconomic accounts and on an inequality estimate derived from the HBS data and additional modeling assumptions. The HBS data are first used to calculate the shares of each decile, separately for the urban and rural population and for the total population. The decile shares are then used to calculate an estimate of the variance or inequality, using a lognormal model for interval approximation. This inequality measure is then used by the imitation model, along with the money income from the national accounts to produce the poverty rate. The official regional poverty rates are then computed by the application of regional poverty lines using the imitation model. Similarly, the national poverty rate is calculated by applying the model at the national level. One problem with the imitation model is that the number of officially counted poor in the country as a whole is not necessarily the same as the sum of officially counted poor in all the regions. A more important issue is that this imitation model approach is not practiced by other countries and the resulting poverty estimates may ultimately be driven more by trends in the national accounts and modeling assumptions than by actual observed patterns in the HBS.

It is Recommended that Consumption be Adopted as the Welfare Measure

1.22 It is important to note that no single indicator can capture the entire multidimensional aspects of poverty. It is well known that there is more to deprivation than income and consumption. The "capability" approach proposed by Sen (1980, 1985) is an attempt to recognize that fact. Despite their imperfections, however, income and consumption remain dominant welfare measures in poverty analysis today because they can be easily interpreted and more often than not they are highly correlated with "capabilities." There is a widespread view among economists that household consumption is better than income as a welfare indicator for poverty measurement. This also underlies the strong international practice of greater reliance on consumption-based welfare indicators than income (see Box 1.1 on international practice).

Box 1.1: Consumption Welfare Measures are Preferred Internationally

The general international practice is for increasing reliance to be placed on consumption or expenditure-based measures for poverty analysis. For example, in a compilation of household surveys from 88 developing countries, which was originally constructed for establishing world poverty counts in the year 2001, 52 of the surveys used expenditure as the welfare measure and 36 used income. The only region with a high reliance on income surveys is Latin America, although even in that region there is an increased use of expenditure surveys for poverty measurement. In major developing countries, consumption-based measures dominate poverty analysis. For example, official poverty counts in India are based on the National Sample Survey (NSS), which only collects information on consumption expenditures. In Indonesia, the *SUSENAS* survey collects information on both income and consumption, but poverty measurement is always based on the consumption estimates. In China the situation is a little more complex. Prior to 1998, poverty was measured using the household income data from the national rural sample survey, even though this survey also collected expenditure data. However, since 1998 the State Statistical Bureau (SSB) has changed to dual criteria, using both the income and the expenditure data.

1.23 **Consumption is *theoretically* preferred to income in measuring current and long-term welfare.** In principle, the best measures of a household's long-term economic resources are either wealth or permanent income. The present value of expected labor earning, which is an important component of wealth, is unobservable. While current income is observable, it has both permanent and transitory components and the latter components obscure any ranking of households based on permanent income.[3] As a result of transitory income change, income-poor households could include those who have suffered temporary reductions in their incomes. Because their permanent income remains high, such households will have high ratios of expenditures to current income. On the other hand, high-income households will include those with temporary increases in income that result in low ratios of expenditures to income. If an individual knows that a reduction in her/his income is transitory, that individual would not immediately adjust her/his consumption level. And a household could save or not save and have some sort of informal support network to smooth consumption over time. Thus, consumption is a better measure of permanent income because consumption is less influenced by transitory income fluctuation and therefore is more stable.

1.24 **On practical grounds, consumption is measured more accurately than income.** First, survey questions on income typically require a longer reference period to capture seasonal agricultural incomes if compared to those of consumption. This increases the likelihood of recall errors. Also, high inflation affects estimates if respondents report values from the time of the transaction. Second, household income is hard to construct for self-employed households and for those working in the informal sector because it is difficult to separate business costs and revenues. While consumption data are not immune to these problems, they are not as severe for consumption data. Third, questions about consumption are usually viewed as less sensitive, especially if respondents are concerned that the information on income will be used for taxation purposes and if a substantial portion of household income is provided by illegal or similar activities. As a consequence, survey-based estimates of income are often substantially less than those of consumption. While it is possible that consumption is exaggerated and income accurate, studies suggest that income is more likely to be underestimated than consumption is to be overestimated.

1.25 **It is recommended that the consumption measure for poverty analysis is calculated on the basis of recommendations made by Deaton and Zaidi (2002) and guidelines established by the International Labor Organization (2003)**. This would usually include the use values of durable goods and housing, but the HBS data has not collected the information required for calcutaing these use values. In this case, the broadest possible welfare measure excludes the purchase value of durable goods. Box 1.2 explores the implications of various options of of treating durable goods in the welfare aggregate. The recommended consumption measure can be calculated from Goskomstat's indicators as "Cash Expenditures" plus in-kind receipts and minus the following items: (i) intermediate

[3] For example, the home ownership rate in the United States is 30 percent among those considered income-poor but only 15 percent for those considered consumption-poor.

consumption; (ii) taxes; (iii) other expenditures (alimony, gifts, advance payments); (iv) food gifts; and (v) durables purchases.

Box 1.2: Treatment of Durable Goods when their Use Value cannot be Estimated

This report's recommendations, which are based on Deaton and Zaidi, 2002, are in line with the guidelines established by the ILO (2003) on the treatment of durable goods for household welfare. According to the ILO document, "when the consumption expenditure aggregate is to be used for welfare analysis.., the consumption approach is conceptually preferable." This approach calculates the use value of durable goods and fixed assets like housing, instead of the actual spending on durables in the welfare aggregate. This is in contrast to the acquisition approach, which adds the whole value of the durable good during the reference period while ignoring the use value of goods acquired prior to the reference period. Given the FSSS's acceptance of the ILO recommendations, any future design of the HBS should collect the needed information on durable goods to permit calculating their use value.

A challenge arises given the available HBS data for the period 1997-2002 does not include information required for calculating the use value of durable assets. Thus, the welfare aggregate calculated in this report excludes the use value as well as the purchase value of durable goods. This is in line with the recommendations by Deaton and Zaidi (2002) and general practice of the World Bank and other welfare analysts. The key rationale for this convention is to generate a consistent poverty profile, so as households with large purchases of durable goods in the reference period do not appear unnecessarily richer than they really are. Using the RLMS dataset, Decoster and Verbina (2003) demonstrated a limited impact of omitting durable expenditure altogether compared to calculating the user cost of durable goods. We use the NOBUS (2003) dataset, which has the required information, for additional sensitivity analysis here.

With exclusion of the use value of durable goods, the NOBUS estimate of the poverty headcount index is 23.1 percent and the Gini index of inequality is 32 percent. The sensitivity analysis leads to the following conclusions:

- The use value of durable assets is about 10 percent of the consumption welfare aggregate, calculated in accordance with Deaton-Zaidi or ILO, and this ratio is roughly the same for all deciles of the population. This reflects the endowment the poor of household durable goods, a special feature in Russia.

- However, purchase of new assets is significant only for the rich. For poorest three deciles, the average cost of purchased durable goods is less than 3 percent of the total purchases. In contrast, the those in the richest decile spend half of their purchases on durable goods.

- For the same poverty line, the addition of the use value of durable goods will generate a poverty estimate of 18.3 percent, while a re-application of the poverty line recommendations made in this report would yield a poverty headcount index of 24.6 percent.

- The estimates of inequality are almost identical for the consumption aggregate with and without the use value of durable goods. However, the Gini coefficient of expenditure, when the full value of purchases is added, is much higher at 44 percent.

- Excluding the use value of durable goods is better than including the full purchase value of durable goods in predicting the appropriate welfare position or poverty status of the household. Excluding durable goods permits a proper identification of the poverty status in almost 97 percent of the cases, while including the full purchase value of durable goods leads to correct identification of the poverty status in only 82 percent of the times.

Moreover, if the purchase value of durables is added to the welfare measure for the HBS dataset used in this report, and with the same poverty line, estimates of poverty for the period 1997-2002 would decrease by an amount in the range of 1.1 and 1.6 percentage points. The Gini coefficient of inequality would increase by about 2 to 3 percentage points, given the greater spending on durable purchases by the rich. However, the trends in poverty and inequality are similar to those established in the report.

1.26 **Further improvements can be made to the consumption aggregate with improvements in HBS data collection**. In particular, improvements can be made in the following areas:

- There is a need to account for the *imputed use value of durables*, which requires collecting information on the durables purchase value, estimated resale value, and date of acquisition.
- Estimation of i*n-kind consumption* from gifts and self-produced food is currently made by applying a regional average 'unit value', where this unit value is based on the reported ratios of purchase values to purchase quantities. This method could lead to biases that are difficult to estimate, given needed detailed information are held at the oblast level and therefore unavailable. Further improvements can also be made by collecting data on the quality of self-produced goods and on the household's own estimate of the value of self-produced goods. The revised HBS survey should also permit estimation of employer-provided and government-provided subsidies.

It is Recommended that an Objective, Regionally Consistent, and Absolute Poverty Line be Adopted

1.27 This section recommends changes in how the poverty line is constructed. It is recommended that Russia should continue to adopt an absolute poverty line, that captures the absolute cost of basic needs and does not vary in the short–run with changes in welfare. The recommend improvements are mainly driven by making the official poverty line objective in reflecting observed household behavior, and in calculating both the food and the non-food components of the poverty line. A desirable poverty line would be consistent across regions and should account for individual needs by age and sex, equivalent adult scale, economies of scale, differences in regional cost of living, and consumption patterns. To meet this objective, a calorie-based food poverty line is constructed, and the non-food poverty line is then derived from household consumption behavior. The proposed poverty thresholds are constructed at the regional level for the year 2002, and then adjusted for earlier years using the CPI.

1.28 **The official calorie requirements by age and gender are taken as a starting point in deriving the food poverty line.** The official nutritional requirements are specified for individuals by age and gender, for active males aged 16-59; active females aged 16-54; retired persons; babies less than 1 year old; children 1-6 years old; and children 7 to 15 years old. Moreover, the climatic variations of the nutritional requirements are also taken into account. Given the expert view of the nutritional requirements, the food basket that satisfies these requirements is assumed to be what households actually consume, as implicit in their behavior captured by the HBS. The food poverty line is then taken as the cost of satisfying the calorie requirements, which is calculated as the calorie requirement multiplied by the calorie cost. The average per capita calorie requirements for each region and each type of individual are calculated using the population shares from the HBS 2002. The computed average *per capita daily calorie requirement for the whole population is equal to 2283 calories*.

1.29 **The calorie cost increases with consumption, and is equal to 8.2 (and 10.1) rubles per 1,000 calories for the poorest (and second poorest) quintile in 2002.** The actual calorie intake of each household is calculated by converting the household's consumed food bundle from the HBS in 2002, using readily available food calorie conversion factors. The household-specific calorie cost is then the food expenditure divided by the calorie intake. The calorie cost varies with the standard of living: the richer the household, the greater will be the calorie cost. Using the recommended consumption measure, the population is divided into five quintiles. The calorie costs for each quintile are presented in Table 1.1. The households in the first quintile spend 8.2 rubles on food in order to be able to consume 1,000 calories. As expected, the calorie cost increases monotonically when moving from a lower to a higher quintile. Richer households buy more expensive calories.

1.30 In order to determine the poverty line it is necessary to decide on a reference group whose consumption pattern (or calorie cost) is used to build an adequate poverty line. The reference group

should contain the population that can generally be regarded as poor. Consequently, the food poverty line using the calorie cost of 8.2 rubles (per 1,000 calories) from the lowest quintile is defined as the food poverty line, and the calorie cost of 10.1 rubles (per 1,000 calories) from the second quintile can be taken as a basis for a higher poverty line. The calorie requirement multiplied by the reference calorie cost is the food poverty line.

Table 1.1: Calorie Cost by Quintiles, 2002

Quintiles	Rubles per 1000 calories
Quintile1	8.2
Quintile2	10.1
Quintile3	11.5
Quintile4	13.1
Quintile5	17.0

1.31 **The recommended federal food poverty line in 2002 would be 570 rubles per capita per month, while a higher monthly food poverty line would equal 703 rubles per capita.** Regional food poverty lines are calculated using spatial price indices to account for the food price variation. To ensure the regional consistency of poverty lines, they should vary according to price differences only and not according to the region's standard of living. The real cost of calories is then taken as the same constant standard of living across different regions. Spatial price indices measure the relative costs of living in different regions and communities. Given the unit record data of the HBS 2002, the spatial price indices for each of the 88 regions was computed, with the federal index set at 100. The oblast-specific food poverty line is then calculated as the federal food poverty line multiplied by the spatial price index (see Annex Table A1.1 for the year 2002). The food poverty line is equal to the calorie requirement multiplied by the calorie cost, adjusted for spatial price variation and averaged across quarters. (Annex Table A1.2 shows the food poverty line for each region.)

1.32 **Adjustments are made to take account of economies of scale in non-food poverty lines.** The mean non-food poverty line involves seven components (see Table 1.2). Each component has a different degree of economies of scale, which will be adjusted using the economies of scale parameter between 0 (common or public good) and 1 (individual or private good). The assumed scale parameters are: 0.9 for clothing and footwear; 0.0 for housing, water, electricity and gas; 0.0 for furniture and household equipment; and 1.0 for health. The variable used for transportation and for communication is the number of working adults divided by household size while that for education is the number of children divided by household size. If the scale parameter is 1, every household will be allocated the same per capita expenditure of the mean non-food poverty line. If the parameter is equal to 0, each household is allocated the mean non-food poverty line multiplied by the average household size.

Table 1.2: Average Non-food Poverty Line by Components: Rubles per Person per Month

Items of expenditures	Poverty line		Higher poverty line	
	Value	% share	Value	% share
Food	570.3	54.0	702.5	56.2
Clothing and footwear	196.5	18.6	211.4	16.9
Housing, water, elect. & gas	129.6	12.3	154.1	12.3
Furniture & household equipment	19.7	1.9	24.0	1.9
Health	26.1	2.5	33.4	2.7
Transport	66.3	6.3	71.4	5.7

Communications	23.2	2.2	27.8	2.2
Education	23.9	2.3	26.3	2.1
Non-food	485.5	46.0	548.5	43.8
Total	1,056	100.0	1,251	100.0

1.33 **The regional cost of living adjustment is also made to the non-food poverty line.** The non-food component of the poverty line is adjusted to take account of the cost of living differences in non-food items of consumption across oblasts. This adjustment is made using estimated spatial price indices for non-food items of consumption (see results in Annex Table A1.1). The non-food poverty line is multiplied by the non-food spatial price index compared against the base index of 100 for the federation. Finally, the per capita total poverty line in each oblast will be equal to the sum of the food and non-food poverty lines. (Annex Table A1.2 indicates the non-food and total poverty lines by oblast.)

1.34 **The non-food poverty line is derived from standard consumer theory, as the non-food expenditure when the per capita food expenditure equals the per capita food poverty line.** This method avoids making normative judgments regarding the components of the non-food requirements. Applying this method yields a federal non-food poverty line of 486 rubles per capita per month. Therefore, **the estimated monthly federal poverty line would be 1,056 rubles per capita in 2002, with a higher poverty line estimate of 1,251 rubles per capita per month.** The implied food share in the poverty line is 54 percent. Table 1.2 shows the components of the federal poverty line and those of the higher poverty line.

1.35 **Using the recommended welfare aggregate and the recommended poverty line (of 1,056 rubles per capita monthly), 19.6 percent of Russia's population was estimated to be poor in 2002. Using the higher poverty line (of 1,251 rubles per month), an estimated 29 percent of Russia's population fell below the poverty line in 2002.**

Poverty Measurement Can Benefit from Encompassing Non-monetary Aspects

1.36 **Non-monetary indicators can complement the monetary welfare measures and offer a more comprehensive poverty assessment.** Deprivation and poor living conditions are important attributes of poverty. Thus, the set of poverty indicators should cover such dimensions as health, education, employment, and assets. The use of such multi-criteria poverty lines helps identify the poorest category of households that should be regarded as the priority target for social welfare projects. This broader concept of poverty could be incorporated in a revised program for the HBS. Non-monetary forms of poverty and social exclusion also involve access to resources such as information, rights, the environment for human habitat, and the quality of housing. (More detail is provided in Chapter 12.)

D. IMPLICATIONS OF THE RECOMMENDED METHODOLOGY

1.37 **Adopting the recommended welfare and aggregate and poverty lines will lead to different estimates of welfare and poverty.** The recommended consumption aggregate is lower than the official "money income" but the recommended poverty line is also lower than the official poverty line. The poverty estimates derived on the basis of the recommended methodology are currently lower than the official estimates, but the trend in poverty change is also sharper under the recommended methodology. Inequality under the recommended methodology is also lower than the official estimates which are driven by an imputation model.

1.38 **The recommended consumption aggregate is lower than the money income.** As Table 1.3 shows, the recommended consumption aggregate is lower than the official "money income" variable utilized by Goskomstat for poverty measurement. The significant difference is partly attributable to the fact that the income variable includes an estimate of net savings and expenditures on durable

goods, but is mostly due to adjustments made by an imputation model to ensure consistency with aggregates from the national accounts.

Table 1.3: The Recommended Consumption Measure is Lower than the Official Money Income, 1997-2002

Rubles per capita, monthly average	1997[1]	1998	1999	2000	2001	2002
Money incomes, published	942	1,012	1,659	2,281	3,060	3,888
Recommended consumption aggregate	518	601	925	1,205	1,700	2,159

(1) Thousand rubles.

1.39 **The recommended poverty line is lower than the official subsistence minimum level**. Table 1.4 shows the difference between the recommended poverty line and the official subsistence minimum level. The difference is large, which demonstrates that the official level is quite generous when evaluated against the methodology advocated here, which is widely practiced in numerous countries.

Table 1.4: The Recommended Poverty Line and the Official Subsistence Minimum Level, 1997-2002

Rubles per capita, monthly average	1997[1]	1998	1999	2000	2001	2002
Subsistence minimum level [2]	411	493	908	1,210	1,500	1,808
Recommended poverty line	273	345	655	793	940	1,056

(1) Thousand rubles.
(2) Since 2000 the methodology used to calculate the subsistence minimum has been changed.

1.40 **The estimated headcount index of poverty according to the recommended methodology is in the same order of magnitude as the official poverty estimate, but demonstrates a sharper trend: it increases faster during the financial crisis, and declines faster during the economic recovery.** Given that the recommended welfare aggregate and poverty line are both lower than the official indicators, the resulting headcount index of poverty could be higher or lower according to the recommended methodology. Table 1.5 demonstrates that the official methodology estimates that one-fourth of the population was poor in 2002, while the recommended methodology estimates that about one-fifth of the population was poor. A key difference between the two methodologies is the greater sensitivity of the recommended methodology to economic trends. Since the official poverty estimates are intermediated by a complex imputation model, this could have a built-in force toward greater stability.

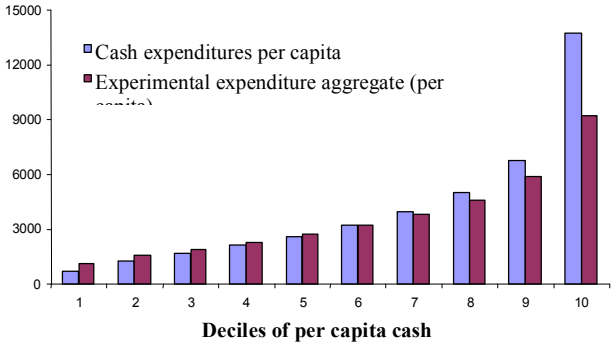
Table 1.5: Poverty Estimates According to Official and Recommended Methodologies, 1997-2002

Headcount Index of Poverty (%)	1997[1]	1998	1999	2000	2001	2002
Official measurement methodology [2]	20.7	23.3	28.3	28.9	27.3	24.2
Recommended methodology	24.1	31.4	41.5	35.9	26.2	19.6

(1) Thousand rubles.
(2) Since 2000 the methodology used to calculate the subsistence minimum has been changed.

1.41 **The level and trends of inequality are different for the money income and the recommended consumption aggregate**. The official trend of inequality in money income is very simple: the reported Gini coefficient of money income has been about 0.40 for several years. This is largely a result of modeling assumptions and is not fully reflective of underlying data, such as the cash expenditure. The Gini coefficient of the "cash expenditure" indicator in the fourth quarter of 2000 was equal to 0.45. The inequality of the recommended consumption aggregate is much lower, and was estimated at 0.36 for the fourth quarter of 2000. Inequality is lower for the recommended consumption aggregate; the differences between the two variables (e.g., durable expenditure, gifts, intermediate consumption, taxes) increase rapidly for richer households (see Figure 1.3).

Figure 1.3: Cash Expenditures and Recommended Consumption Indicator



Source: HBS 2000

Challenge for Implementation

1.42 **A key challenge to implementing the improved poverty measurement methodology is to de-link the poverty measurement methodology from the eligibility criteria, at the individual level, in the legal framework for providing targeted social assistance.** The Russian Federation uses the same methodology for poverty identification and measurement and for the determination of the eligibility of low-income families for targeted, income-tested federal benefits such as the child allowances (since 2000) or, to some extent, the allowance for HUSs[4] (since 1994). This close linkage between poverty measurement and social policy is not common in other countries (see Box 1.3 on the experience in the United States). Currently, Goskomstat aims to measure poverty according to the legal definition of the subsistence minimum level and the legal stipulation of those eligible to receive targeted social assistance. This explains the derivation of an "income" measure despite the general difficulty in measuring income and the unavailability of income data in the HBS, which requires problematic indirect derivations of an income variable.

Box 1.3: De-linking Poverty Monitoring and Eligibility Criteria for Social Assistance in the United States.

In most countries, the function of poverty monitoring is de-linked from the eligibility criteria for targeted social assistance. The United States provides an illustrative example of this de-linkage. The United States like Russia, has an official methodology for measuring poverty. A major concern for poverty monitoring in the United States is that poverty measurement is consistent across space and over time. Poverty analyses are an important ingredient in the development of federal and state-level welfare *policy*. However, for most welfare programs, *eligibility* is not linked to the federal poverty line but is determined by the availability of budgetary resources from the federal and state levels.

Cash assistance in the United States is provided under the program known as "Temporary Assistance for Needy Families" (TANF), with a strong emphasis on helping needy families to achieve economic independence. Three key features help promote self-sufficiency through an "active" welfare policy: (i) work requirements; (ii) a 5-year lifetime welfare time limit; and (iii) support for, and links to, other key complementary social and work services, such as child care, transport subsidies, and employment services. Many U.S. states also impose additional conditionalities geared toward behavioral change and long-run investments in human capital, such as requirements involving school attendance or achievement, immunizations and health screening. The income test for TANF is linked to state-level income thresholds, which vary from 25 percent to 200 percent of the federal poverty line, supplemented by asset-test and behavioral conditionalities.

[4] Other means-tested benefits, financed and implemented from regional or local funds, use different eligibility criteria, generally expressed as a fraction of the regional poverty line.

1.43 **The linkage of poverty measurement and targeted social assistance generates several tensions**. First, it is not conceptually correct to provide poor households with transfers that are equal to the shortfall below the poverty line. If this were to occur, it would create a disincentive to work for households just below the poverty line, who would effectively be facing a 100 percent marginal tax rate: any increase in their income would be fully compensated by a reduction in social transfers. Second, there is an inherent tension between the adequacy of the program benefit and its budgetary cost. Russia's political choice was the adoption of a generous poverty line, and the design of programs with extensive coverage but low benefit adequacy (see chapter 8 on the social safety net). Generous poverty lines imply that programs need to cover a larger group of beneficiaries, siphoning resources away from the less-informed poorest groups of the population. Furthermore, when budgetary resources become scarcer, the typical response is the erosion of program benefits or payment arrears, which again tends to affect the poorest more than other groups. A more conservative poverty line based on the actual consumption patterns of the poor, as advocated in the present report, would help focus more social assistance resources on the poorest group, and would also have a larger impact on poverty if it were accompanied by improvements in program implementation.

1.44 **There is a need for improved measurement methodology and improved targeting criteria of social programs.** For national policy making, it is important to have a sound methodology of poverty measurement in order to assess the welfare of the population. However, government programs do not need to necessarily use the same definition of poverty at the household level in providing benefits as is currently the case. Who gets benefits depends on the particular objective of the program and the resources available. Clearly if the provision of household-level benefits remains tied to the official definition of poverty, revising the poverty methodology will be very difficult. Delinking them will mean better poverty measurement and allow one to program resources for poverty alleviation more effectively. The link between poverty status and social programs should be maintained at the aggregate level to in designing the poverty programs and resource allocation among these programs. But the delinkage discussed here would allow the criteria for household-specific transfers to be tied more closely to the to the program goals aside from the household-specific official poverty status. In any case, it is impossible for the government to survey the entire population and collect needed information to know individual poverty status. Thus, the government has to devise means to determine who should receive resources in an efficient and equitable manner. Poverty monitoring based on objective criteria would allows government and citizens to see how well the government programs are performing in that respect.

CHAPTER 2. POVERTY PROFILE

Reducing poverty is a priority of the Russian Government. According to official data, the well-being of a large share of Russia's population is below the minimum standards of modern Russian society. But asking "how much poverty exists?" is only the first step. To develop policies to reduce poverty one must also ask "who are the poor?," and "why are people poor?". This chapter provides answers to these questions.

A. UNDERSTANDING POVERTY

2.1 ***"Poverty as unacceptable human deprivation" affects many people in Russia***.[5] To measure poverty, one has to define what deprivation is and what is unacceptable. Here, positions of analysts differ in Russia as well as in the global economic debate. This report accepts the view of poverty as encompassing low levels of consumption, and develops an objective absolute poverty line as a minimum living standard. Such a definition of poverty has already a long tradition in the Russian literature.[6] As poverty is ultimately a measure of welfare in a given society, the finding presented in chapter 1, according to which every fifth Russian is poor in an absolute sense, is deeply disturbing. It provides motivation to study poverty dynamics, its relationship with economic development, and its characteristics to design better policies. The Russian Federation is particularly rich in information and analysis of poverty levels and trends during the transition period. In Box 2.1**,** we review the most important surveys implemented during the last decade to track various definitions of poverty. Although they use different methodologies and concepts, they all agree that poverty numbers are high.

2.2 **The definition of poverty used in this report – material deprivation -- has important limitations, in terms of its content and coverage**. In terms of coverage, poverty is not only low consumption of commodities; it is also low levels of other individual capabilities as health, nutrition education, and empowerment. Someone who is poor on the basis of consumption may not be poor in terms of education, and vice versa Given the difficulties of measuring the latter, a reasonable solution is to monitor selected non-income indicators alongside with income ones. However, even selected non-income data are limited. Experimental efforts to measure welfare in these dimensions suggests that poverty also affects a significant fraction of the population (Prokofieva, 2003). ,In addition, homeless, institutionalized population (such as residents of elderly homes or orphanages), and IDPs (internally displaced persons) are often excluded from a household survey sample, while being often characterized by high poverty (Ovcharova and Rimashevskaya, 2003). For these reasons measures of poverty presented in this report may undercount the poor in Russia. Yet they capture poverty as a mass phenomenon, as a plight of a typical household, and as an economic and social phenomenon that is subject to the set of policies developed at the national and regional level.

[5] 2000 World Development Report.
[6] See Prokofieva (2003) for a recent review.

Box 2.1: Data Sources to Measure Poverty in Russia

Russia has many surveys that capture one or more dimensions of poverty:

- **The Household Budget Survey (HBS)** is the main data source used in this report, and a key data source for official poverty numbers for Russia as a whole and its regions. Chapters 1 and 3 give a thorough description of the survey. GKS has been using HBS data to estimate poverty since 1992. However, as explained in chapter 1, the official methodology uses the primary survey data to a minimum extent, relying instead on models and imputations. This report is the first application of internationally comparablepoverty measurement to the HBS primary data.
- **The Russian Longitudinal Monitoring Survey (RLMS)** has until now been the key source of information to monitor poverty and inequality. The survey is nationally representative; is a multi-topic, integrated survey; has a panel element, which allows tracing the movements of households over time in and out of poverty. Despite its advantages and accessibility, the RLMS has remained somewhat outside the realm of official sources on the living standards of the population.
- **The VCIOM (The All-Russia (Levada) Center for Public Polls) survey** is a smaller scale opinion poll of about 2,400 randomly selected adults in a two-stage stratified sample. It collects some socio-economic information about households (employment, sources of income, level of incomes), but focuses primarily on subjective perceptions. The survey was first conducted in 1989, allowing comparisons to the pre-transition period. No other nationally representative survey in Russia has this feature.
- Sociological/qualitative research relies on a number of **smaller scale local surveys** (i.e. panel survey of the Taganrog population, targeted surveys of certain groups, etc.). Normally such research offers very interesting insights into the coping strategies, inter- and intra-family relations etc, but allows little comparability over time or only limited generalizations to the population.

The Survey of Household Welfare and Participation in Federal Programs (NOBUS 2003) is the newestintegrated household survey carried out by the GKS and the Ministry of Labor and Social Development, with technical assistance and financing from the World Bank. The survey has a sample of about 44.5 thousand households, and is representative both nationally and for 46 larger subjects of the Federation. The survey captures differing aspects of household welfare (material as well as non-monetary), and government policies.

2.3 **Poverty is shallow. While it is quite widespread, it is not severe: most of the poor have levels of consumption, which are close to the poverty line**. The baseline poverty number used in this report is poverty headcount of 19.6 percent of the population in 2002. Though the headcount is the headline figure for poverty measurement, it has a number of pitfalls. To address them , other measures such as the depth and severity of poverty are used to assess the average gap between consumption of the poor and the poverty line, and whether a significant number of households fall considerably below the poverty line (Box 2.2). In 2002, poverty depth was 5.2 percent, meaning that an average poor person in Russia had a shortfall of consumption about 26 percent of the poverty line. Poverty severity was 0.02. If the poor had been equally distributed below the poverty line the severity of poverty in Russia would have been equal to 0.035. Thus poor tend to group closer to poverty line, rather than across the entire spectrum of low consumption ranges. Both measures suggest that, on aggregate, poverty in Russia is neither deep, nor very severe.

Box 2.2: Aggregate Measures of Poverty

This report relies on three aggregate measures to three aspects of poverty: incidence, depth, and severity. These are captured by three standard Foster-Greer-Thorbecke (1984) aggregate poverty measures. The incidence of poverty is measured by the headcount index or ratio (P0). It simply estimates the percentage of population that is poor. While the headcount ratio is easy to interpret, it does not say anything about the depth or severity of poverty. The depth of poverty is measured by the poverty gap ratio (P1) that is defined by the mean distance below the poverty line as a proportion of that line, where the mean is formed over the entire population, counting the non-poor as having zero poverty gap. Thus, the sum of poverty gaps, which is aggregated across all individuals, reflects the minimum amount of consumption that needs to be transferred to pull all the poor up to the poverty line. The severity of poverty index (P2) represents the mean of the squared proportionate poverty gaps. Unlike the head-count ratio and the poverty gap ratio, it takes into account inequality among the poor. The severity of poverty index is sensitive to the distribution of consumption among the poor, in that weights in the calculation are more heavily given to those whose consumption falls far below the poverty line. Thus, the severity of poverty index is more sensitive to change in welfare of the ultra poor, i.e. , those with extremely low consumption below the poverty line, than it is to those just below the poverty line.

The poverty measures are defined: $P0 = \frac{q}{n}$; $P1 = \frac{1}{n}\sum_{i \in Q}\frac{(z - y_i)}{z}$; $P2 = \frac{1}{n}\sum_{i \in Q}\frac{(z - y_i)^2}{z^2}$;

where n = total population, q = number of individual with consumption y_i less than the poverty line z.

2.4 **Shallow poverty does not mean that all poor are alike; there are some deep pockets of poverty, and there is also considerable concentration of population just above the poverty line.** Taking only the food poverty line, one finds that almost 4 percent of the population had such an extremely low level of consumption falling below that line in 2002. On the other hand, adding a higher poverty line, which has also been developed as part of the recommended methodology, one finds that an additional 9.3 percent of the population falls between the two poverty lines. It is worth noting that although the higher poverty line is set at 18 percent above the baseline, poverty increases by 48 percent. The group whose consumption falls between the baseline and the higher poverty line is called "near poor" in this chapter.

2.5 **Subjective estimates of poverty in Russia show both similarities and differences with the objective assessments**. Peoples' perceptions of poverty often differ from the economic reality, as they are driven by expectations, norms and beliefs. Russia is not an exception from that rule. The VCIOM data described in Box 2.1 report "subsistence minimum" and "poverty line" as they are perceived by Russia's population. The VCIOM data show that subjective subsistence minimum (2,600 Rubles per capita per month in 2002) is perceived more as a "reasonable" standard, rather than a welfare minimum. The latter is given by a subjective poverty line which averaged according to respondents' views around 1,600 rubles per capita per month in 2002. The big difference between the two subjective indicators reveals that the population distinguishes different degrees of poverty. The subjective assessment data over an extended period provide useful supplementary information on living standards. According to VCIOM surveys, 40 percent of population considered their income below their subjective "subsistence minimum", while only 10 percent were poor, according to the average subjective "poverty line" in 2002 (49 percent and 19 percent, respectively in 1999). However, the subjective assessment of poverty line is tightly linked to the household living standards. VCIOM estimates that for each Ruble in increase of household income, its reported subjective poverty line increases by 0.20 Rubles. The poor and the rich have different standards of what they call "poverty". Thus, poverty looks different to different people, and subjective indicators cannot substitute for objectively defined poverty.

B. POVERTY PROFILE

2.6 The poverty profile is a description of poverty focused on two related yet different questions: "who is at risk of poverty?", and "who are the poor?" By examining which population groups face higher risk of poverty, one can gain insights into the factors associated with poverty and identify the groups with high incidence of poverty. But as some of these risk factors only affect a small share of the population, a group with a high poverty risk does not necessarily account for a large fraction of the poor. The second part of the poverty profile examines the composition of the poor and shows which groups are over-represented among the poor. Both parts of the poverty profile have important policy implications. The first: "who is at risk?" helps to reveal causal factors of poverty, and design policy interventions that are most likely to help the targeted group. The second: "who are the poor?" helps to identify factors and policies that will likely affect the majority of the poor.

Who is at Risk of Poverty?

1. *The major characteristics associated with poverty are location, the demographic composition of the household (especially the number of children), and unemployment.*

2.7 **Rural households are much more likely to be poor.** The risk of being poor is 30 percent in rural areas, compared to 17 percent in urban settlements (excluding Moscow, as a positive outlier) (Table 2.1). Rural poverty is also slightly more severe than urban poverty. On average, the consumption of the rural poor is 28 percent below the poverty line, compared to 25 percent for urban dwellers. While rural population represent about one quarter of total population in Russia, rural inhabitants account for over 40 percent of the poor.

Table 2.1: In Russia Poverty has a Rural Face

	Poor, Incidence	Depth of poverty	Severity of poverty	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
Urban	15.7	3.9	1.5	8.5	58.5	67.0	73.2
Moscow	6.6	1.1	0.3	7.4	3.1	7.3	9.2
Other Urban	17.0	4.2	1.6	8.7	55.4	59.7	64.0
Rural	30.4	8.6	3.5	11.5	41.5	33.0	26.8
Total	*19.6*	*5.1*	*2.0*	*9.3*	*100.0*	*100.0*	*100.0*

Source: HBS 2002

2.8 **Small towns also have high poverty**. The number of towns in Russia with less than 20,000 inhabitants is much bigger than would be considered normal on the basis of international comparisons – (*From Transition to Development* World Bank 2004). The HBS data available for this analysis do not allow identification of the urban community below the oblast level. However, the NOBUS allows such identification. Table 2.2 clearly shows that the smaller the urban community is, the higher the incidence of poverty. The incidence of poverty in urban communities with less than 20,000 inhabitants is twice that in cities with a population exceeding a million people. (The NOBUS-based poverty estimates are different from those from the HBS given a different survey instrument and questionnaire design.)

Table 2.2: Poverty is Pervasive in Small Urban Communities as Well

	Poverty Headcount	Contribution to Poverty
1 million people and more	12	8
500,000-999,900 people	13	5
250,000-499,900 people	16	7
100,000-249,900 people	16	7
50,000-99,900 people	21	7
20,000-49,900 people	21	8
Less than 20,000 people	25	12
Rural	39	45
Total	23	100

Source: NOBUS 2003

2.9 **The regional dimensions of poverty differ considerably.** There are large differences in the level of poverty across Russia's regions, as can be seen in the map in Figure 2.1. The subjects of the Federation with a poverty incidence exceeding 40 percent in 2002 are Dagestan, Ignushetiya, and Kabardino-Balkariya Republics in the South; Tuva, Ust-Ordyniskiy, and Agniskiy Buriatksiy Autonomous Okrugs in Siberia; and Komi-Permyatski Autonomous Okrug in the Volga. At the other end of the spectrum, the regions with a poverty incidence of less than 10 percent are Moscow City, Tula and Belgorod Oblasts in the Center; St. Petersburg City in the Northwest; and Khanty-Mansiyskiy and Yamalo-Nenetsky Autonomous Okrugs in the Urals. One peculiarity of Russia's poverty is its spatial heterogeneity: poverty is not concentrated in any particular part of the country, in contrast to what is found in other countries, most of which have contiguous pockets of poverty. The map in Figure 2.2 calls attention to another important point that is discussed further in Chapter 3: the regional concentration of poverty. As many of the poorest regions are sparsely populated, they account for only a minority among the poor. Figure 2.2 presents the distribution of the poor population in Russia in 2002, with each dot on a map representing 20,000 poor individuals. The highest concentration of the poor is observed in the center of European Russia and the North Caucasus, while many regions in Siberia and the Far East have relatively fewer people and thus fewer poor individuals.

2.10 **Children, especially small children, face higher risk of poverty** compared to adults or elderly. While demographic factors are a mere symptom of the true causes of poverty, they are useful in identifying vulnerable segments of population. In Russia, children face a risk of poverty that is 36 percent higher than the average (Table 2.3). While this evidence justifies child-focused poverty interventions, it puts in question the efficiency of public programs targeted to children, such as the child allowance.[7] The elderly have the lowest risk of poverty – one quarter lower than the national average – a sign that the income protection offered by pensions is effective in helping the poor overcome poverty.

Table 2.3: Children Face Greater Risk of Poverty

	Poor, Incidence	Depth of poverty	Severity of poverty	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
Children (bellow 16)	26.7	7.4	3.0	10.4	24.9	20.4	18.3
Working	18.8	4.9	1.9	8.9	62.0	62.1	64.8
Elderly	15.1	3.5	1.2	9.7	13.0	17.5	16.9
Total	*19.6*	*5.1*	*2.0*	*9.3*	*100.0*	*100.0*	*100.0*

Source: HBS 2002

2.11 **The risk of poverty over the life cycle is highest in childhood**. Over the life cycle, poverty tends to peak during childhood (for all age groups from 0 to 15 years old); for the working-age cohort it is highest at 35-40 years old, and finally, during old-age, it is highest for those over 70 years old (Figure 2.3).

[7] The low adequacy of the program, eroded continuously since 1998, cannot provide an effective shield against poverty for this vulnerable group. See Chapter 8 for more details.

Figure 2.1: Poverty Map of the Russian Federation, 2002: Regional Headcount Index of Poverty

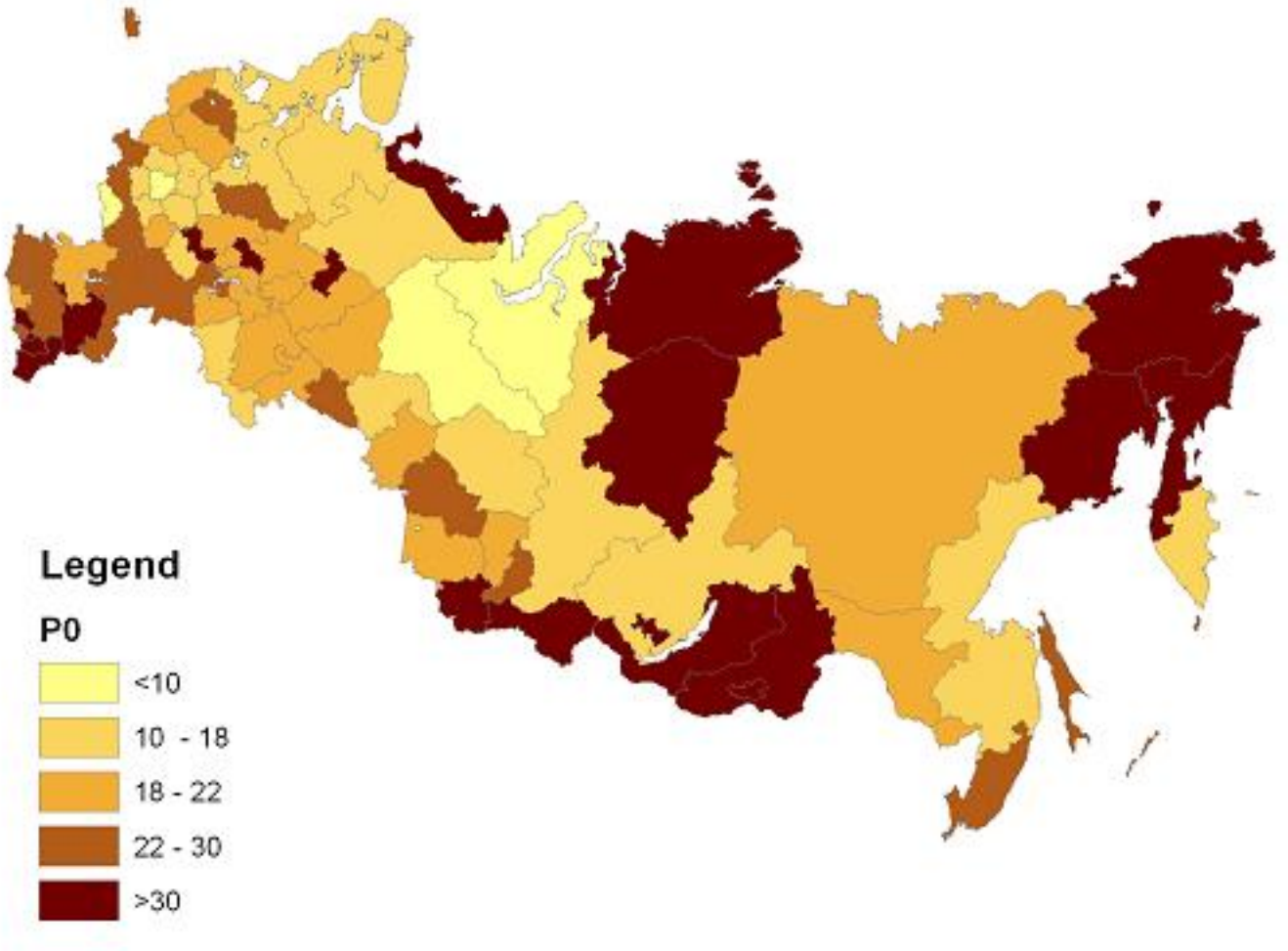
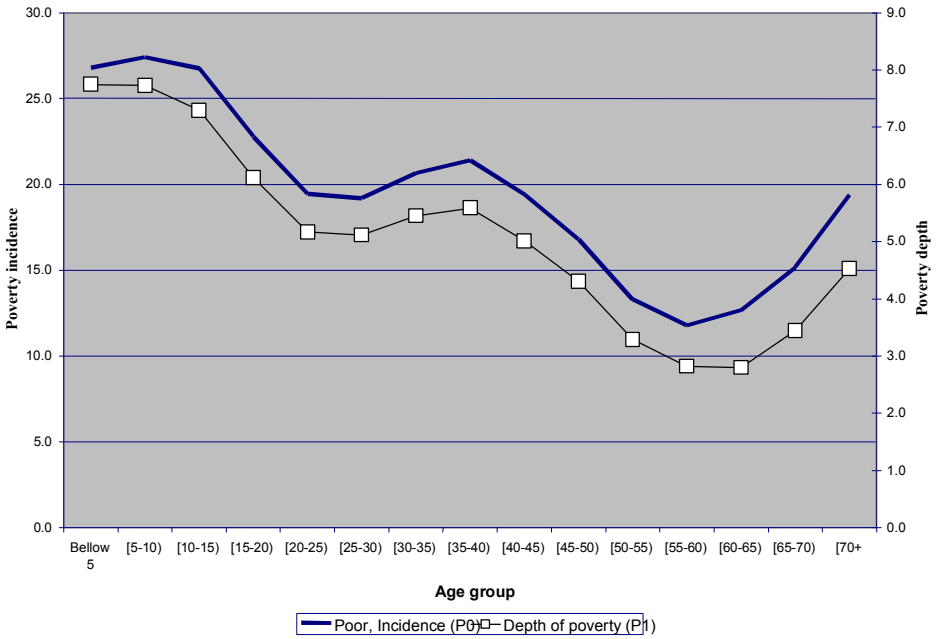


Figure 2.2: Poverty Map of the Russian Federation, 2002: Distribution of the Poor (one dot is equal to 20,000 poor individuals)

Source: HBS 2002

Figure 2.3: The Risk of Poverty Over the Life-Cycle



Source: HBS 2002

2.12 **The unemployed and working pensioners are at two poles.** One of the persistent poverty pockets in the Russian Federation is the unemployed. In 2002, the risk of poverty among the unemployed was 65 percent higher than the national average (Table 2.4). At the other extreme, the working elderly face the lowest risk of poverty -- about one third of the national average.

Table 2.4: Poverty by Employment Status

Employment of household members	Poor, Incidence	Depth of poverty	Severity of poverty	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
Wage employed	16.6	4.1	1.6	8.6	39.8	43.4	47.1
Self-employed	17.7	4.5	1.7	7.8	1.6	1.4	1.7
Working elderly	6.1	1.3	0.4	5.5	1.0	2.0	3.3
Unemployed	32.4	9.7	4.2	10.9	12.0	8.5	7.3
Children	26.7	7.4	3.0	10.4	24.9	20.4	18.3
Students	19.5	5.0	2.0	9.4	8.6	8.8	8.7
Other	17.4	4.0	1.4	10.7	12.0	15.5	13.6
Total	*19.6*	*5.1*	*2.0*	*9.3*	*100.0*	*100.0*	*100.0*

Source: HBS 2002

2. *<u>These vulnerable groups – the rural/small towns population, families with children, and the unemployed are not only the poorest, their poverty is also the deepest.</u>*

2.13 Tables 2.1-2.4 report a remarkably consistent pattern: all groups with higher poverty risk are also in deeper and more severe poverty. Moreover, the differences between groups are sharper on the basis of the poverty gap or poverty severity.

3. *<u>Households affected by a combination of risk factors face the highest risk of poverty.</u>*

2.14 For example, while rural poverty is higher than urban poverty for any demographic or employment group, it is particularly high among rural children (40 percent poverty incidence) or rural unemployed (44 percent poverty incidence) (Table 2.5).

Table 2.5: Households Facing Cumulative Vulnerabilities Face the Highest Risk of Poverty

	Urban		Rural	
	Poor	**"Near poor"**	**Poor**	**"Near poor"**
Age				
Children (bellow 16)	21.0	9.4	40.1	12.7
Working	14.9	8.1	30.4	11.5
Elderly	13.3	9.4	19.6	10.1
Total	*15.7*	*8.5*	*30.4*	*11.5*
Gender				
Male	15.9	8.6	31.7	11.8
Female	15.5	8.5	29.3	11.3
Total	*15.7*	*8.5*	*30.4*	*11.5*
Education (Q4)				
Primary or less	15.5	9.0	19.8	11.3
Secondary	13.0	7.9	26.0	11.2
Vocational	9.9	7.0	19.1	10.0
Higher	4.8	3.8	13.1	7.6
Total	*10.4*	*8.5*	*23.4*	*11.5*
Employment				
Wage employed	13.5	7.8	26.9	11.2
Self-employed	9.5	5.0	30.4	12.0
Working elderly	5.4	5.2	10.0	7.1
Unemployed	25.7	9.8	43.8	12.6
Children (bellow 16)	21.0	9.4	40.1	12.7
Students	15.6	8.8	31.2	11.4
Other	15.8	10.8	20.5	10.4
Total	*15.7*	*8.5*	*30.4*	*11.5*

Source: HBS 2002 or HBS Q4-2002

Who are the Poor?

1. *The majority of the poor are found in working families rather than in families with unemployed adults, are adults with secondary and vocational education rather than adults with only primary education, and are comprised of families with children rather than families without children*.

2.15 *Working families*, account for the largest share of poor even though they have lower incidence of poverty than the national average. The majority of the poor – 87 percent of the total number of poor – are found in working families, where one or several members work (Table 2.6).[1]

Table 2.6: The Majority of the Poor are Working Households

Household Employment	Poor, Incidence	Depth of poverty	Severity of poverty	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
One member working	22.3	6.2	2.5	9.3	**27.6**	24.3	24.3
2 or more working	18.0	4.5	1.7	9.1	**59.7**	63.3	65.0
Jobless households	47.3	15.3	7.0	12.7	6.8	3.9	2.8

[1] To analyze the link between labor market participation and poverty, we classify the households by the number of income-earners. The working families are split into two groups: those with one earner and with two and more earners. Jobless households are those in which at least one member is economically active, yet no adult is working. Non-working-age household are those in which everybody falls into one of the following categories: aged less than 18 years old, aged 18-24 and in education, aged 65 and over.

Non-working age households	14.7	3.2	1.1	10.2	5.9	8.6	7.9
Total	*19.6*	*5.1*	*2.0*	*9.3*	*100.0*	*100.0*	*100.0*

Source: HBS 2002

2.16 **Larger households *with children* are at high risk.** The risk of poverty is particularly high among households with three or more children: half of these households were poor in 2002. However, these households represent only 3.3 percent of the total population and hence contribute only 8.2 percentage points to the total poverty headcount (Table 2.7). While the risk of poverty rises sharply with the number of children, the majority of the poor with children come from households with one or two children. These households represent 59 percent of the poor. It is also important to note that one third of the poor come from households without children. Thus, a national policy focused primarily on protecting children against the risk of poverty would by-pass only one poor person out of three.

Table 2.7: The Largest Share of Poor is Found in Households with up to 2 Children

Number of children in household	Poor, Incidence (P0)	Depth of poverty (P1)	Severity of poverty (P2)	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
No children	13.6	3.2	1.2	8.4	33.1	42.7	47.7
1 child	20.3	5.2	2.0	9.5	34.9	34.3	33.8
2 children	30.8	8.5	3.4	11.8	23.8	19.2	15.2
3 or more	48.9	16.1	7.3	10.7	8.2	3.8	3.3
Total	*19.6*	*5.1*	*2.0*	*9.3*	*100.0*	*100.0*	*100.0*

Source: HBS 2002

2.17 ***Education* is a powerful shield against poverty**. In Russian Federation, as in most countries across the world, there is a negative correlation between the risk of poverty and the level of education of the household head (Table 2.8). The poverty headcount falls continuously, from households where the head lacks primary education (24 percent poverty headcount) to very low levels for university and post-university graduates (6 percent). This suggests the important impact that human capital accumulation has on individual earnings and on shielding households from poverty. However, as a result of the policies of free access to public education, the majority of the population has similar skills level. Hence the majority of the poor adults (83 percent of the total) have secondary or vocational education.

2. ***The profile of "near poor" does not differ significantly from the profile of non-poor. The population whose per capita consumption is between the recommended and higher poverty lines proposed in this report, the category of "near poor", is characterized by a similar profile as the non-poor or average population.***

Table 2.8: Education and Poverty Status

Education of all adults	Poor, Incidence	Depth of poverty	Severity of poverty	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
Primary or less	17.8	4.0	1.5	10.2	5.5	5.3	3.9
Secondary	17.4	4.4	1.7	9.0	45.4	39.9	32.8
Vocational	12.2	2.9	1.1	7.8	37.4	40.3	38.4
Higher	5.9	1.3	0.4	4.3	11.7	14.5	24.9
Total	*13.9*	*3.4*	*1.3*	*7.7*	*100.0*	*100.0*	*100.0*

Household head Education (Q4)	Poor, Incidence	Depth of poverty	Severity of poverty	"Near poor", incidence	Share of poor	Share of "Near poor"	Share of population
Primary or less	*24.1*	*6.0*	*2.3*	*12.0*	*4.7*	*4.2*	*2.7*
Secondary	*21.1*	*5.5*	*2.1*	*9.5*	*37.9*	*30.6*	*24.8*
Vocational	*14.3*	*3.5*	*1.3*	*8.5*	*44.6*	*47.6*	*43.1*
Higher	6.0	1.4	0.5	4.6	12.8	17.6	29.4
Total	*13.9*	*3.4*	*1.3*	*7.7*	*100.0*	*100.0*	*100.0*

Source: HBS 2002

C. WHY PEOPLE ARE POOR?

2.18 Russia's GDP per capita was 6 dollars a day in 2002 (at going exchange rate). This is well above any of poverty lines, be it official (around 3 dollars), or recommended (around 2 dollars) discussed in the previous chapter. If GDP were simply split equally between all residents, then poverty should have been zero in Russia according to any measure. The reality was that one in five Russians lived in poverty. Two factors explain why poverty is still widespread. Poverty exists in Russia because not all of the GDP can be consumed, and because income is not distributed equally such that many people have incomes far below the average. The aggregate data suggest that wages constitute about 40 percent of the GDP in Russia (even including the imputed "hidden components"). Social transfers account for about 10 percent of GDP over the recent period, and the entrepreneurial incomes and property incomes for another 10 percent. The discrepancy between GDP and money incomes of the population is a normal occurrence, and may represent both "healthy" (such as investment) and "unhealthy" factors (such as capital flight), but this discrepancy is quite large in Russia, and it is noteworthy that incomes of a typical household (wages and transfers) represent only a half of the GDP. This gap between macro data and household level welfare of the poor is further increased once the inequality between households is taken into consideration.

Low Real per Capita Incomes

2.19 **The previous section illustrated that the largest share of Russia's poor are found in working families living on low wages.** For the working poor, low real per capita consumption is a consequence of low wage and high dependency ratio.

2.20 **For the economically active population, a prime cause of poverty is the low wage in general, and the presence of a large proportion of workers with wages below subsistence minimum concentrated in particular sectors.** The average wage was around 4,108 rubles per month in 2002 - equivalent to 140 USD. Yet Table 2.9 illustrates that low wage was widespread in agriculture (affecting 75 percent of the employees), followed by public services (culture, geology, education and health).

Table 2.9: Share of Workers with Monthly Wage Below the Official Subsistence Minimum for a Working Age Adult is Uneven Across Sectors

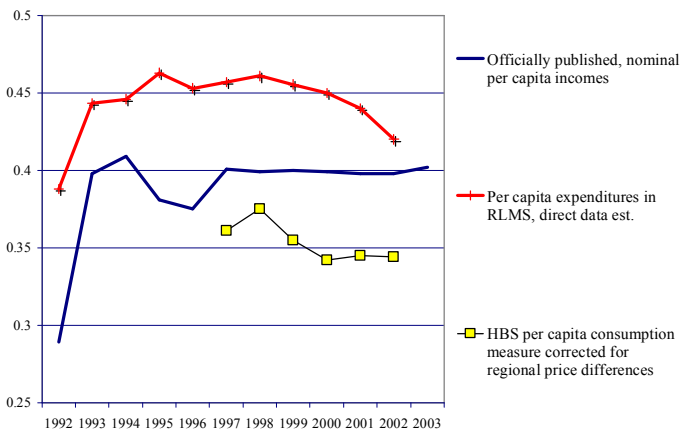
	1995	1999	2000	2001	2002
Industry	32.5	26.5	25.7	23.9	18.9
Agriculture	80.2	82	84.6	81.3	75
Construction	27.8	29.3	29	24.5	18.7
Transportation	15.5	19.2	20.6	16.2	11.5
Communication	30.5	37.4	37.1	29.1	24.2
Information services	26.1	31.1	33.3	29.3	18.1
Geology	65.4	58	58.8	51.7	43.4
Housing	35,7	38,9	39,2	36,3	29,3
Health care	63,7	67,2	65,7	61,0	38,8
Education	64,6	70,5	67,5	61,3	41,4
Culture	70,8	72,2	70,7	68,4	51,2
Science	53,7	49,6	39,6	29,1	21,6
Finance	28,5	23,4	20,8	12,3	8,9

Source: Goskomstat Enterprise survey

Inequality

2.21 **The large increase in inequality during the transition period is another cause of poverty**. The transition has been accompanied by increasing inequality in asset ownership, returns to education, and access to publicly financed health and education, generating increasing levels of inequality in consumption and income, and contributing to poverty. Compared to pre-transition period, the increase in inequality in Russia has been extremely high: the Gini index of nominal per capita income went up from 0.26 in 1992 to 0.40 in 2002 (official data) (See Figure 2.4). In most countries, with transition economies being a notable exception, changes in inequality over time are very small. The median change in income inequality in developing countries is 3 percentage points per each ten years of observations. An increase of 11 percentage points over a decade, as found in Russia, is close to record.

Figure 2.4: Estimates of Inequality Differs from Survey to Survey, Primarily Due to Methodological Differences



Source: Goskomstat, RLMS and Staff estimates based on HBS.

2.22 **The level of consumption inequality in Russia is high compared to countries in the CIS**

or Central and Eastern Europe, though Russian consumption inequality is moderate by broader international standards. Moreover, if proper adjustments for differences in the cost of living across regions are taken into account**.** Russia's inequality is moderate by broader international standards. Through the use of consumption data adjusted to the large spatial variations in prices, together with the methodology followed in other middle-income countries the Gini index for Russia is reduced to about 34 percent, a level not very different from that of other countries in transition and that of Turkey, for which exactly the same methods were applied (see Table 2.10).[2] It is important to note that inequality in income, expenditure, or assets is much higher in Russia than that of consumption inequality

Table 2.10: Inequality Indices for Selected Countries Based on Income and Consumption
(countries ranked by the Gini coefficient; calculated on per capita basis)

Country (year)	Income or consumption per capita p.a. (in US$)	Gini coefficient (%)
Income (with imputed rents where possible)		
Hungary (1999)	1,800	26
Slovenia (1998)	4,900	26
Bulgaria (1999)	**820**	**33**
Serbia (2002)	**1,480**	**33**
Macedonia (2000)	**1,205**	**34**
Croatia (1998)	**3,200**	**35**
Estonia (2001)	1,600	38
Bosnia and Herzegovina (2001)	**1,445**	**39**
Turkey (2002)	**1,290**	**47**
Albania (2002)		**58**
Consumption		
Bosnia and Herzegovina (2001)	**1,912**	**26**
Croatia (1998)	**3,854**	**27**
Serbia (2002)	**1,910**	**28**
Bulgaria (2001)	**1,159**	**28**
Albania (2002)	**668**	**28**
Macedonia (2000)	**1,049**	**31**
Turkey (2002)	**1,057**	**38**

Source: Milanovic (2003) in Bogićević B., Krstić G., Mijatović B., and Milanović B.. (2003) Siromaštvo i Reforma Finansijske Podrske Siromašnima (Poverty and Reform of the Financial Assistance to the Poor). Beograd : Centar za liberalno-demokratske studije : Ministarstvo za socijalna pitania, 2003 (Beograd : Goragraf). and staff estimates based on SLS data. Countries marked with bold have both income and consumption inequality data. Turkey JPAR (2004) and are from 2002 HICES.

2.23 **The somewhat moderate level consumption of inequality suggested in this report contrasts with the common perception that inequality is extremely high in Russia.** The estimates reported in this poverty assessment are consistently below previously published estimates, whether official or derived from the RLMS (Figure 2.4). Such differences relate primarily to different methodologies, in particular the following should be noted:

- Official estimates capture inequality in per capita incomes, more volatile and less precise than per capita consumption. For any given country, income inequality tends to be higher than consumption inequality.[3] Table 2.11 shows that for most countries where both income and consumption data are collected in a survey, consumption inequality is lower.
- Inequality estimates based on nominal, rather than real per capita consumption or income, tend to be higher, given that the cost of living is higher in richer areas. Official estimates of inequality are not corrected for regional price variation, and thus are higher than the estimates

[2] It should be pointed out that nominal *income* inequality (from the RLMS dataset) was higher, at 42 percent in 2002.

[3] Inequality is often assessed based on incomplete and insufficient income data, rather than consumption indicators that are more reliable.

presented in this report. The use of nominal rather than real values generates between one and three percentage points difference between Gini indices computed using the same data and methodology, as illustrated in Table 2.11.

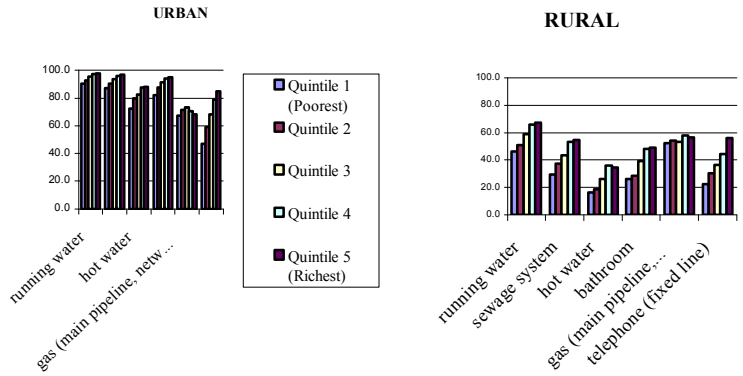
Table 2.11: Estimated Inequality is Lower for Consumption-based Indexes Versus Income-based Ones, and for Real Versus Nominal Consumption

Gini	1997	1998	1999	2000	2001	2002
HBS						
Cash income, nominal	0.47	0.46	0.46	0.45	0.46	0.45
Cash Expenditures, nominal	0.45	0.46	0.45	0.44	0.45	0.45
Cash Expenditures, real (deflated using subsistence minimum)	0.43	0.42	0.41	0.41	0.41	0.41
Disposable resources, nominal	0.44	0.43	0.42	0.43	0.42	0.42
Disposable resources, real (deflated using subsistence minimum)	0.41	0.39	0.39	0.39	0.39	0.39
Consumption, nominal	0.37	0.39	0.37	0.36	0.37	0.37
Consumption, real (using poverty line)	0.35	0.36	0.34	0.33	0.33	0.33
RLMS						
Existing expenditure variable, nominal		0.48		0.46	0.45	0.44
Existing expenditure variable, real		0.47		0.45	0.44	0.42
Consumption, nominal		0.42		0.40	0.39	0.39
Consumption, real		0.41		0.39	0.38	0.37
Existing income variable, nominal		0.47		0.43	0.42	0.42
Existing income variable, real		0.45		0.41	0.40	0.40

- The income indicator used in the estimation of official inequality figures include the purchase value of durables acquired during the reference period of the survey (the quarter). These highly volatile elements of consumption are excluded from the consumption indicator used in this report, in conformity with the international practice.
- The level of inequality found from the RLMS is higher than the one reported in this assessment because of the smaller sample size of the RLMS, which makes it less robust to the presence of outliers and measurement error. Given its larger sample, the HBS is better suited to monitor the evolution of inequality over time.

2.24 **Inequality in other dimensions of living standards is significant, such as access to running water, hot water, sewage system, gas, telephone or bathroom.** As illustrated in Figure 2.5, a major dimension of inequality in the endowment with modern housing amenities is between urban (well endowed) and rural (poorly endowed) households. Within each area of residence, however, the richer households have better amenities compared to the poorer quintiles.

Figure 2.5: Inequality in Access to Housing Infrastructure, Urban-Rural and by Quintile



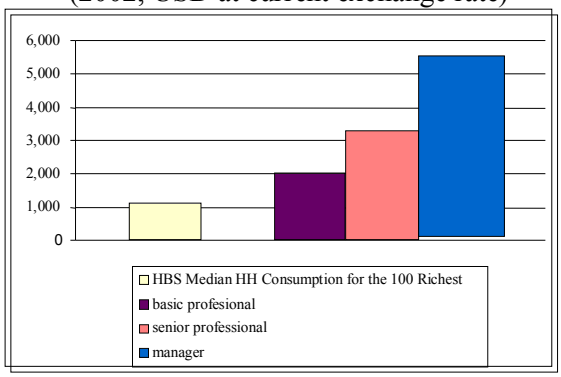
2.25 This brings about a point on whether HBS data fully capture the extent of inequality "at the top" of the distribution. Throughout the world, the problem of covering the rich with the household surveys is pervasive. Russia is no exception to that rule, so the international comparison of the inequality should not be affected by that factor. Box 2.3 presents the evidence that not only the rich, but also the upper-middle class is practically missed by the HBS survey. But even that in itself may not be a problem as far as inequality is regarded in the context of poverty analysis (see Ravallion and Mistaen 2003). What is more of a problem in this context is use of HBS data to assess the full extent of inequality in Russia. The on-going work on improvement of sample, interviewers training and organization of the survey may significantly reduce this bias and produce more reliable data on inequality (See chapter 12 for more details).

Box 2.3: Are Existing HBS Data Accurate Enough to Fully Capture the Extent of Inequality?

A simple consistency check with HBS data reveals that a significant fraction of the population may be missed by the survey field work. Using 2002 data and looking at the richest 100 households one gets some useful insights. First, only 3 percent of the "rich" in HBS data live in Moscow, which is believed to be a focal point for the rich in the country. Second, their consumption level seems to be pretty low as compared to the standards of upper-middle class. Thus, in 2002 the median consumption per household among the 100 richest in HBS was about $1000 at the current exchange rate per month or around $525 per capita. The data on net salaries of private companies on the "top of the market for skills" in Moscow (based on the job market survey conducted by the World Bank) for the same year report were at least twice as much even for basic professional levels. It would appear that HBS does not only misses the rich, it also fails to cover the upper middle class paid professional salaries by the competitive Russian and foreign firms.

Figure 2.6: Monthly Salary in Top Russian and International Firms Operating in Russia and Monthly Consumption of the Richest 100 Households in the HBS Data

(2002, USD at current exchange rate)



Source : HBS and World Bank.

2.26 **Inequality is an important determinant of poverty in any country, and it is also a significant factor which influences the dynamics of poverty and its responsiveness to growth.** Therefore, monitoring inequality and obtaining a more accurate measure of its level than is currently available is an important component of poverty monitoring. In the Russian Federation, inequality is monitored using inappropriate indices (such as the ratio of an average income of the top decile to the bottom decile) and deficient indicators of living standards. The decile ratio misses changes in inequality over the entire distribution of income or consumption. Looking at decile measures can be very informative, but should not be the sole inequality measure. This report argues that use of Gini index or other indices of inequality, as well as the use of proper welfare measures, and improvements of data quality would produce a more accurate assessment of inequality.

D. CONCLUSIONS

2.27 Poverty profile analysis presented in this Chapter leads to several conclusions:

1. Poverty in Russia is shallow with significant number of people located above and below the poverty line. Shallowness of poverty is closely linked with the moderate levels of inequality, and has both positive and negative implications. On the positive side, any upturn in the economic activity brings significant number of the poor out of poverty, on the downside any crisis moves large numbers of people in poverty. It also means that poverty in Russia is yet to develop in an large "underclass" excluded form the mainstream of society. But it also means that poverty remains a massive phenomenon, affecting (directly or indirectly) a large share of the population.

2. The major characteristics associated with poverty are location, the demographic composition of the household (especially the number of children), and unemployment. Based on these characteristics the poor can be identified for targeted interventions with a reasonable precision This has important implications for the design of poverty reduction policies that are developed further in the report.

3. The majority of the poor are found in working families with children. This finding puts labor market policies and family policies in general (such as child allowances) on the forefront of measures aimed at reducing poverty.

2.28 **The analysis of poverty presented in this Chapter provides a framework for the further discussion of the subsequent chapters of the report**. It highlights several aspects of poverty in Russia is its key underlying causes that would be analyzed in detail in the Chapters on Regional dimensions of poverty, the Chapter on Labor market dynamics, the Chapter on social safety nets etc.

CHAPTER 3. REGIONAL DIMENSION OF POVERTY

Regional differences in living standards explain variation of poverty across regions. The spread of regions around the mean determines the share of the population living in poor regions where living standards fall below the mean. Given a certain regional mean, inequality within a region would determine how many people will be poor in that region. Policy implications would be different if poverty is concentrated in only a few regions compared to a situation where poverty is present in all regions. In the system of fiscal federalism adopted by Russia, regional poverty directly affects the budgetary transfers from the Federal budget to the regional authorities. Large regional disparities in living standards represent serious policy concern, and may lead to significant pressures for policies aimed at regional equalization that may compete with the poverty reduction goals.

This chapter shows that there are large socioeconomic differences across Russia's regions, but inter-regional inequality in living standards has remained stable and has even declined somewhat in the economic recovery period since 1999. While inequality among regions is an important concern, inequality within regions dominates. There are large differences in the incidence of poverty between the extremes of rich and poor regions, but most of the population and the poor live in regions with poverty levels close to the national average. Labor market outcomes are found to be important correlates of regional differences in poverty: regions with higher unemployment and low wage levels have a higher incidence of poverty. Thus, a poverty reduction strategy should encourage the growth of the regions of Russia with average levels of poverty where most of the poor live and should also have targeted interventions for the regions with extremely high levels of poverty. Moreover, it is recommended that federal policy should induce regions to adopt policies that fight poverty within each region.

3.1 The structure of the Russian Federation as it emerged in the new Constitution (1993) consists of 89 politically equal members (subjects) of the Federation, including 21 national-territorial entities (republics), 55 administrative-territorial entities (territories and oblasts), two cities of Federal significance (Moscow and St. Petersburg), and 11 smaller national-territorial entities (autonomous regions and oblasts).[4] Annex Table A3.1 lists all regional population numbers based on the most recent Census of 2002.

3.2 The regions (or subjects of the Russian Federation) vary dramatically in size, but represent valid units of socioeconomic analysis owing to their role in the political structure. Subjects of the Federation vary dramatically in population size: from 10.4 million (in the largest region) to only 18,000 (see Annex Table A3.1). This chapter takes these regions as units of observation, ignoring these differences. This approach is justified by the fact that not only do broadly similar geographic, historic and social conditions prevail within each region, but also that regions are the agents of fiscal, structural and social policy in the Russian Federation. They have the right to levy local taxes, invest in local infrastructure, provide subsidies to enterprises, influence the business climate, legislate local social transfers, supplement federally mandated transfers, and provide housing and utility subsidies to

[4] This distribution is not set in stone, as the recent referendum on the merger of one small autonomous region (Komi-Permiatsky) with the largest region suggests.

households.

3.3 **Survey data (HBS and LFS) as well as most economic data available at the regional level form a basis for this chapter.**[5] The Household Budget Survey (HBS) is considered to be representative for each member of the Federation and therefore offers a wealth of data for an understanding of poverty dynamics. These data offer striking insights into the regional dimension of living standards. The Chapter utilizes methodology presented in Chapter 1 alongside standard official approaches. The analysis benefited from a joint work with the Goskomstat of Russia on regional aspects of poverty and inequality.

A. LARGE REGIONAL DIFFERENCES IN THE LIVING STANDARDS

The inter-regional differences in living standards are large in terms of socioeconomic conditions and gross regional products but are much less so in terms of consumption per capita and other measures based on household surveys. When large inter-regional price variations are taken into account, real inter-regional differences in output or consumption are also much less than those nominal differences.

3.4 **Socioeconomic development varies widely among Russia's regions**. An internationally comparable indicator that combines several dimensions of living standards was produced for the Russian regions by the UNDP in the 2001 Human Development Report for the Russian Federation. The Human Development Index (HDI) varied from 0.633 in Tuva Republic to 0.741 in Moscow. If the Russian regions are treated as countries, they would be found in positions ranging between rank 32 and rank 119 on a list of 173 countries for which HDI is computed. In other words, the differences across Russian regions are at least as large as the differences among a majority of countries in the world. At one end of the spectrum, Moscow is on a par with Portugal and Argentina, while at the other Tuva compares with Indonesia and Nicaragua. Because of this large spread, the position of the median Russian region (Kursk oblast) is well below the average for the entire country and is comparable to Sri Lanka, Azerbaijan, or Albania. A key component influencing these differences is the variation in output.

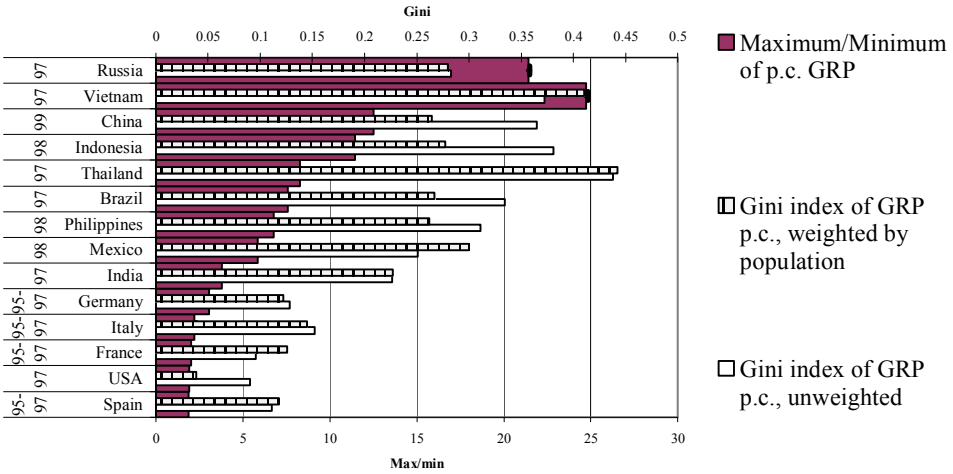
3.5 **Differences in output are extremely large between Russian regions but are less extreme when price differences are taken into account.** Annex Table A3.1 reports figures for per capita Gross Regional Product (GRP) in 2002 prices for 1997, 1999, and 2002. It shows that a region's nominal output varied 67 times between the richest and the poorest region. However, regional price differences are large and should be taken into account for inter-regional comparisons. For example, the same fixed basket of 19 food goods in December 2000 was worth 603 rubles in Ulianovsk oblast (the cheapest region) and 2,300 rubles in Chukotkski region (the most expensive region), with a national average of 750 rubles. Non-food prices also vary. Using the GRP deflator, one arrives at a more moderate conclusion regarding the extent of regional differences. Real GRP varied 33 times between the richest and the poorest region in 2002 – two times less than nominal value.

3.6 **Though inter-regional inequality in Russia is large, it is not extreme in the international context**. A comparison of the real per capita GRP of the region with the highest income with that of the region having the lowest income provides a quick, easy to comprehend and politically powerful measure of regional income inequality. If this measure is small (close to 1), then it would mean that the different regions have relatively equal incomes. But if this measure is large, then the interpretation is more problematic, as it does not tell us if the high ratio is due to substantial variation in the per capita GRPs or the presence of "outliers"– small regions with extremely peculiar economic conditions. Inequality measures, however, take into account the whole distribution, rather than the

[5] As of 1999, autonomous regions and oblasts are treated for statistical purposes at par with other members of the Federation. Prior to that, the autonomous regions and oblasts were considered as parts of the respective krais or oblasts. It should be noted that Chechnya is excluded from statistical data collection.

extremes. The Gini index, (see Annex 3.1 for definition) shows that regional inequality in Russia is comparable to the level observed in other large low and middle income countries. Figure 3.1 shows the Gini index for Russia around 0.28 for both weighted and unweighted distributions of GRP, which is below the value in Thailand and Vietnam, is similar to that in China, Indonesia, Mexico and Brazil, but is higher than that in India and most OECD countries. Thus, the assessment of regional inequality as being extremely high in Russia partly reflects the presence of outliers.

Figure 3.1: Regional Inequality in Output per Capita, Selected Countries, 1997

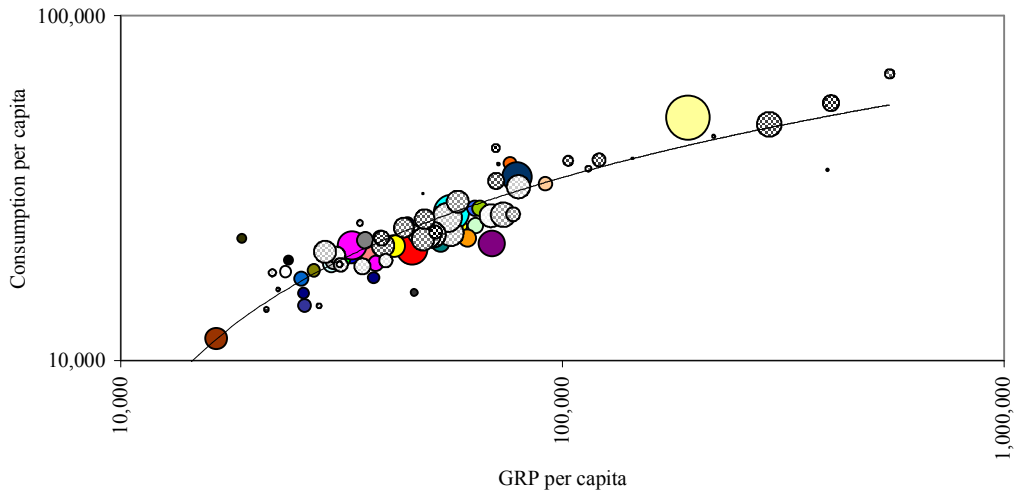


Note: All data correct for regional price differences using GRP deflators, where available.
Source: Shankar and Shah (2001).

3.7 **Statistics on living standards based on surveys indicate that inequality among Russian regions is substantial, but not critically high.** Annex Table A3.1 shows far less variation for indicators of household nominal disposable resources and nominal consumption per capita (with a spread of approximately 9 times and 6 times, respectively, in 2002). Correcting for regional price differences further reduces the spread, and Gini index for the entire distribution shows that inequality in Russia is not dramatically different from that in other large countries with a complex regional structure. Using poverty lines as spatial price deflators, one finds that in fact the variation between the maximum and the minimum was four times in case of real disposable resources and 3 time in case of real consumption in 2002. The Gini indices (weighted by population shares of regions) for regional per capita disposable resources and consumption are low, 0.117 and 0.096, respectively.

3.8 **There is a remarkable consistency between the GRP data and the survey-based consumption data at the regional level, despite differences in levels and dynamics**. For 2002, Figure 3.2 shows a very stable and expected relationship between the GRP and consumption at the regional level, whereby higher production leads to higher consumption, but to a decreasing degree. This relationship explains why regions so diverse in terms of production are much closer in terms of consumption. GRP computations, on the other hand, are based on production data and depend crucially on the formal location (registration) of the reporting units. Several resource rich regions are characterized by very high accounted value-added, which is in fact distributed and used elsewhere in the economy. Inequality in household consumption or income are more accurate measures of regional variation of living standards in Russia.

Figure 3.2: Survey Consumption per Capita to GRP per Capita in 2002
(Annual in Rubles)



Note: size of bubbles reflect regions' population.
Source: Goskomstat and HBS 2002.

Inequality Among the Regions has Remained Largely Stable.

3.9 **The assessment of changes in regional inequality also depends crucially on the data used; survey data point to a reduction in, or at least the stability of, inequality among regions.** Differences among regions increased during the early transition period (Hanson/Bradshaw, 2000), but opinions differ as to whether such differences were exacerbated during 1997-2002 or remained stable. In part it depends on whether income or consumption data are used. Table 3.1 shows that series for which the increase in inequality between regions is observed (marked in **bold**) are outnumbered by series for which stability or reduction in inequality is evident; the latter is especially true for survey based measures.

3.10 **The after-crisis recovery (1999-2002) was broad based and benefited both the richest and the poorest regions.** Annex Table A3.1 shows that all regions increased their real GRP between 1999 and 2002, with only one exception (Kamchatka oblast). Figure 3.3 reports the per capita values for a dozen of the richest and a dozen of the poorest regions of Russia during the crisis (1999) and in the latest year for which data are available (2002). Among the regions with the lowest GRP we find republics in North Caucasus, and regions in South Siberia and Central Russia (Ivanovo and Briansk). Among the richest regions we find resource-rich regions in Siberia, the Far East, and the European North, as well as Moscow city and a region in the European Center (Samara). Regardless of this heterogeneity and striking differences in 1999, all of the regions have benefited from growth during 1999-2002. The absolute gain in real per capita GRP was similar across regions as one can judge from Figure 3.3, leading to some reduction in regional inequalities. The Figure 3.3 also shows the presence of outliers that would influence some statistics on regional differences (see Chukotka autonomous region). Given this situation and the somewhat mixed evidence presented in Table 3.1, it is important to assess (using a robust set of measures) whether there is a tendency towards convergence or divergence between Russian regions.

Table 3.1: Inequality Among Russian Regions During 1997-2002

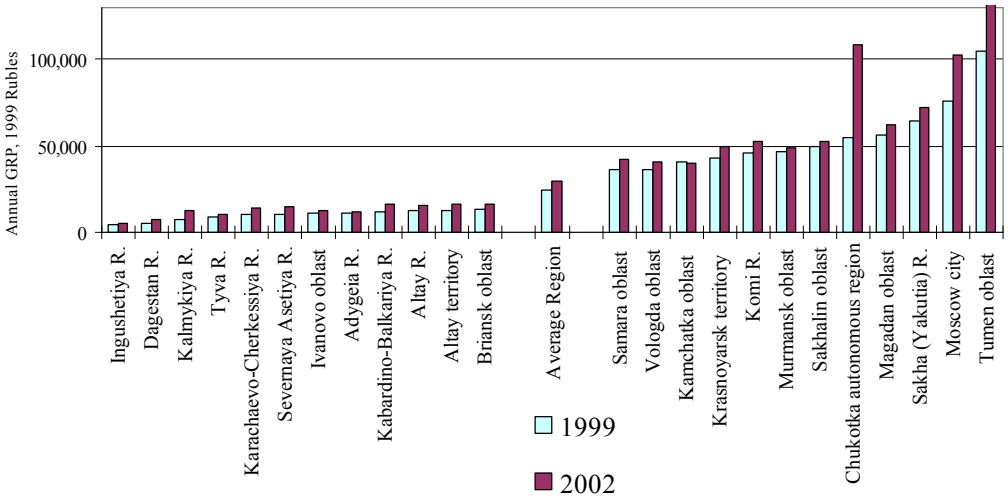
Year	Variable (per capita)	Max/Min, Times	Gini Index Unweighted	Gini Index Weighted by Population
97	GRP (in 2002 prices)	25.5	0.319	0.336
99	GRP (in 2002 prices)	33.2	0.307	0.335
02	GRP	35.7	0.316	0.350
97	Real GRP*	21.4	0.283	0.280
99	Real GRP*	13.9	0.231	0.237
02	Real GRP*	11.6	0.233	0.227
97	**Nominal Money Incomes**	**12.1**	**0.232**	**0.307**
99	**Nominal Money Incomes**	**12.6**	**0.247**	**0.324**
02	**Nominal Money Incomes**	**16.4**	**0.259**	**0.351**
97	**Real Money Incomes****	**8.1**	**0.147**	**0.208**
99	**Real Money Incomes****	**12.4**	**0.184**	**0.247**
02	**Real Money Incomes****	**11.6**	**0.203**	**0.259**
97	Nominal average wages	10.0	0.294	0.212
99	Nominal average wages	11.6	0.293	0.220
02	Nominal average wages	8.7	0.287	0.227
97	Real average wages**	4.7	0.147	0.122
99	Real average wages**	5.0	0.172	0.143
02	Real average wages**	4.9	0.153	0.135
97	Nominal Disp. Res.	9.2	0.197	0.272
99	Nominal Disp. Res.	5.2	0.181	0.210
02	Nominal Disp. Res.	6.5	0.179	0.200
97	Real Disp. Res.***	4.0	0.127	0.139
99	Real Disp. Res.***	3.6	0.117	0.118
02	Real Disp. Res.***	4.0	0.119	0.117
97	Nominal consumption	6.0	0.148	0.203
99	Nominal consumption	3.7	0.136	0.165
02	Nominal consumption	4.4	0.147	0.170
97	Real Consumption****	3.9	0.092	0.126
99	Real Consumption****	2.5	0.085	0.102
02	Real Consumption****	2.8	0.088	0.096

Note: For consistency over time this table reports summaries based on regional data for 77 regions (not 89!), with larger regions including the smaller constituent parts (formed after 2000).

* Regional GRP deflators used to correct for spatial price variation as express regional GRP in average Russian prices; ** Official regional poverty lines of the current year used as deflators; *** 2002 official regional poverty lines adjusted with regional CPI for 1999 and 1997 used as deflators; **** Regionally consistent poverty lines developed by N. Kakwani used as deflators, see Chapter 1.

Sources: Goskomstat, various publications, Ministry of Economy and Trade, and staff estimates based on HBS 1997-2002.

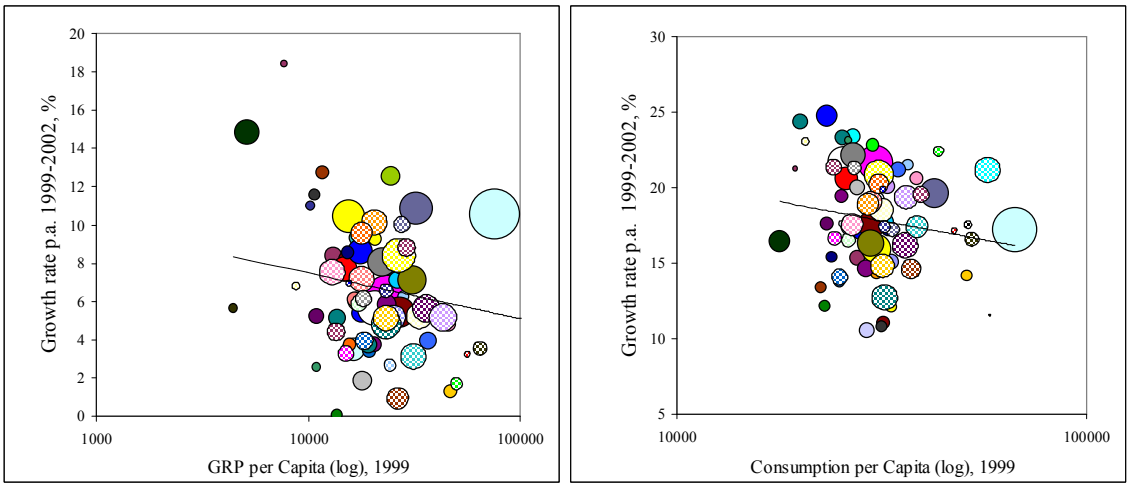
Figure 3.3: GRP per Capita in 12 of the Richest and 12 of the Poorest Regions, 99-02



Note: GRP deflators used; in constant (1999) prices, regional ranks are based on 1999 values.
Source: Goskomstat.

3.11 **After the 1998 crisis Russian regions did not diverge.** The intuitive presentation of convergence hypothesis is given in Figure 3.4. It shows GRP per capita from national accounts data in 1999 on horizontal axis (the left panel) and average annual growth rate over 1999-2002 on the y-axis. The right panel of the Figure 3.4 plots regional levels of household consumption from the survey levels on the x axis and corresponding growth rates on the y-axis. If the regions tend to cluster along a downward sloping trend line, it means that the lower is the initial GRP (consumption), the higher is the subsequent growth rate. This would imply convergence, so that over time differentiation in GRP is declining. An upward sloping trend line would indicate a divergence. Trend lines based on the regression of regional data are plotted on both panels, suggesting convergence, though it is not statistically significant. Thus, at a minimum one can conclude that Russian regions were at least not diverging between 1999 and 2002.

Figure 3.4: Convergence Across Russian Regions, 1999-2002, GRP per Capita (left panel); and Consumption per Capita (right panel).



Note: Size of bubbles reflect regions' population.
Source: Goskomstat data (Macro and HBS) reported in Table A3.1.

3.12 Convergence operates through a variety of channels. Most of these channels in Russia reflect market interactions, and are translated ultimately into large population movements in response to differences in labor market conditions and incomes. Mobility is happening to take advantage of new

opportunities which would serve to eliminate poverty, if not reduce inequality (see also Box 3.1).

Box 3.1: Intra-Regional Differences Through a Prism of the Census 2002.

The new Census (2002) results reflect a demographic aspect of regional differences. In addition to revealing important trends in the distribution of population across regions and in significant cross-regional mobility, the Census revealed an astonishing trend in the distribution of population within regions.

The most striking result of the Census was a finding of an increasing number of abandoned villages or "ghost towns." In the Census results showing the grouping of urban areas and villages, these "ghosts" are listed as settlements "without population." The expectation prior to the Census was that such settlements contained a population and were included in the official list of populated places for enumeration. However, when the Census takers arrived, they either found no one living in these places or no permanent residents. These 13,032 abandoned villages constituted 8.4 percent of all villages in Russia. Another 34,803 rural settlements had less than 10 residents each. Thus, nearly one-third of all Russian villages are either "dead" or will soon be extinct. The bulk are located in the central part of the country in the Central, Northwest, and Volga districts—areas containing some of the highest percentage shares of elderly populations in the country. These villages are losing population, as the last elderly persons living in them die and the youth migrate to nearby urban areas. Elsewhere in Russia, the ghost town phenomenon reflects other causes. Not surprisingly, the regions with the largest share of empty towns were found in the two peripheral regions with the largest percentage of population declines, Magadan and Chukotka (which experienced a reduction in overall population of about 50 percent between 1989 and 2002), where one-third of all settlements had been abandoned. Many of these empty towns and villages continue to be supplied with electricity, gas, and other services, a costly drain on the state budget.

Source: Helenyak, T. "The 2002 Census in Russia: Preliminary Results//" *Eurasian Geography and Economics*, 2003, 44, No. 6.

3.13 **Correcting for regional price differences shows an even stronger trend toward the reduction of inequality across the regions over 1999-2002.** Table 3.2 breaks down national inequality into two components: inequality between regions and the contribution to national inequality of inequality from inside (or within) each region. The procedure begins with a value of inequality for the whole population which is then broken down or 'decomposed' into contributions associated with regional contributions, in terms of the inequality observed *within* each of the regions, and the inequality due to variations in average incomes *between* regions. (using the Theil index of inequality, see Annex 3.1 for details). Both survey-based measures reported in the Table 3.2 - per capita real disposable resources and per capita real consumption – show that the inter-regional inequality was stable between 1999 and 2002, but was reduced between 1997 and 1999.[6]

3.14 **Within-region differences are more important than inter-regional differences as a driver of national level inequality.** Table 3.2 demonstrates that by 2002 only 9 percent of inequality as measured by consumption came from differences in average living standards across regions, while 91 percent came from inequality within regions. Annex Table A3.3 shows that most regions in Russia are characterized by substantial inequality of their own distributions of welfare.

3.15 **Regional differences represent nevertheless an important concern for policies.** The fact that the within-regional component of inequality dominates does not mean that differences between regions should be neglected. Shorrocks and Wan (2003) use data on incomes from 13 countries to decompose national inequality into between-regional and within-regional components, and arrive at a

[6] The conclusion regarding falling inter-regional inequality as a factor of overall inequality is confirmed by an independent survey source: RLMS data. The calculations of the Independent Institute of Social Policy (IISP) show a reduction of the between-regions component during 1998-2002 (results provided by Institute, see also "Imaginary and real consequences of Russia's accession to WTO, IISP [2004]). It should be noted, however, that decomposition of inequality for money incomes per capita as reported in Yemtsov (2003) and in Commander et al. (1999) brings an opposite result: increasing regional differences. Such a contradiction between conclusions obtained with different series points to the need to review the methodology for compiling the money incomes indicator, – a task which goes beyond the scope of this chapter.

conclusion that the former share in Russia is one of the largest in the world. Once a broader view of the living standards is taken into consideration (see Ravallion, 2004, or Kanbur, 2003) even a small share of regional differences in overall inequality may have far-reaching consequences for policies and for welfare (for example, through the provision of region-specific public goods). When there are constraints on mobility across regions, such differences can also be regarded as unjust. They can also persist (see Commander and Yemtsov, 1995) leading to increased polarization between the extremes despite some convergence on average (see Fedorov, 2002 and Dolynskaya, 2002). Finally, in Russia even controlling for other factors that are used to explain inequality, such as education, employment, type of settlement and demography, region remains the largest contributor (Independent Institute for Social Policy). Regional differences should therefore be closely monitored and acted upon. Annex 3.2 using the example of two representative regions demonstrates that inequality between regions in income or consumption is often related to the full spectrum of differences in some vital parameters of social and political life, feeding social exclusion and potentially weakening the tendency for convergence.

Table 3.2: Inequality Decomposition by Regions for Survey-Based Indices, 1997-2002

Panel A. Per capita real disposable resources

	1997	1998	1999	2000	2001	2002
Gini	**0.412**	**0.392**	**0.386**	**0.392**	**0.389**	**0.388**
Theil inequality	**0.291**	**0.264**	**0.256**	**0.263**	**0.258**	**0.256**
Of which						
Between regions	**0.032**	**0.028**	**0.023**	**0.027**	**0.026**	**0.023**
as a share of total	*11%*	*11%*	*9%*	*10%*	*10%*	*9%*
Within regions	**0.260**	**0.235**	**0.233**	**0.236**	**0.232**	**0.233**
as a share of total	*89%*	*89%*	*91%*	*90%*	*90%*	*91%*

Panel B. Per capita real consumption

	1997	1998	1999	2000	2001	2002
Gini	**0.346**	**0.361**	**0.340**	**0.330**	**0.331**	**0.330**
Theil inequality	**0.205**	**0.221**	**0.199**	**0.185**	**0.186**	**0.183**
Of which						
Between regions	**0.029**	**0.030**	**0.017**	**0.014**	**0.018**	**0.016**
as a share of total	*14%*	*14%*	*8%*	*8%*	*10%*	*9%*
Within regions	**0.176**	**0.191**	**0.182**	**0.171**	**0.168**	**0.167**
as a share of total	*86%*	*86%*	*92%*	*92%*	*90%*	*91%*

Note: Real values for disposable resources: Official poverty lines as deflators, for consumption –recommended poverty lines.
Source: staff estimates using HBS 1997-2002.

3.16 **The existence of sizable, but manageable, differences in living standards across regions means that regional policies in Russia could play an active role, as in other countries.** As the level of regional differences in living standards across Russian regions does not exceed what is observed in many large OECD economies, the experience of these latter countries in setting policy objectives based on regional outcomes would be very informative for Russian policymakers. Moreover, the reduction in regional inequality during the period of economic growth suggests proper instruments for such policies. During 1999-2002, economic reform efforts were focused more on the creation of a level playing field than on following paternalistic protectionist policies that favored the poorest regions. This experience is in line with that of other countries and suggests that the most efficient policies for addressing regional inequality are one, promoting a common economic union through the removal of barriers to factor mobility, and two, ensuring minimum standards of basic services across the nation. At the same time, the role and the importance of within-region inequalities

suggest that regional policies should become more targeted to looking beyond a region as a single unit and addressing the problem of poor areas within regions as well.

B. POVERTY ACROSS RUSSIAN REGIONS

*Though regional differences **in socioeconomic** conditions are reflected in sizable differences in poverty incidence across regions, most **poor** people live in regions whose poverty incidence mirrors the national average. Regions with a higher incidence of poverty are those that have low output levels, low real wages, and high unemployment rates.*

3.17 **There are large differences in the incidence of poverty among the regions.** Annex Table A3.2 shows that poverty varied in 2002 between 3.1 percent and 55.6 percent, an 18 fold difference(using the recommended methodology, see Chapter 1). The official poverty counts based on an aggregate money incomes varies between 7 and 87 percent, almost a 12 fold difference.

3.18 **Differences in poverty levels reflect closely variation in labor market conditions across regions. Poor regions have lower real wages and higher unemployment rates.** The main transmission channel between the economic structure of the regions and poverty outcomes is the labor market. Figures 3.5 and 3.6 show the patterns between the incidence of poverty from the HBS data and two key labor market variables: average regional real wages and regional unemployment rates.

3.19 **There are large differences across regions of Russia in the unemployment rate; these differences are closely and positively linked with poverty.** Figure 3.5 shows that regions with higher unemployment, measured according to ILO methodology based on LFS data, have higher poverty rates. Unemployment rates in 2002 ranged from a low of just 1 percent to a high of over 30 percent. This large variation in labor market outcomes is a significant factor driving the regional differences in poverty rates.

3.20 **Differences in real wages are also very significant and negatively associated with poverty incidence**. Figure 3.6 shows that the real wage rate measured by the number of minimum subsistence baskets a net average wage can buy (recommended poverty line used) varied between a high of 11 to a low of 2 in 2002. The wage rate was closely and negatively linked to regional poverty incidence. As there is a link between regional unemployment and regional real wages (see Commander and Yemtsov (1995), these effects on poverty reinforce each other.

Figure 3.5: Regional Poverty Rate and Unemployment Rate, 2002

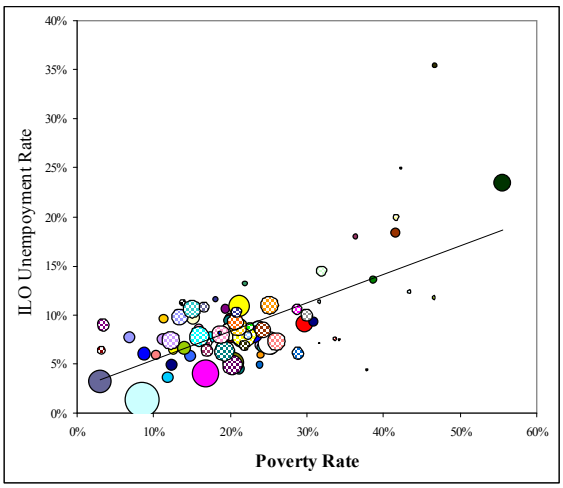
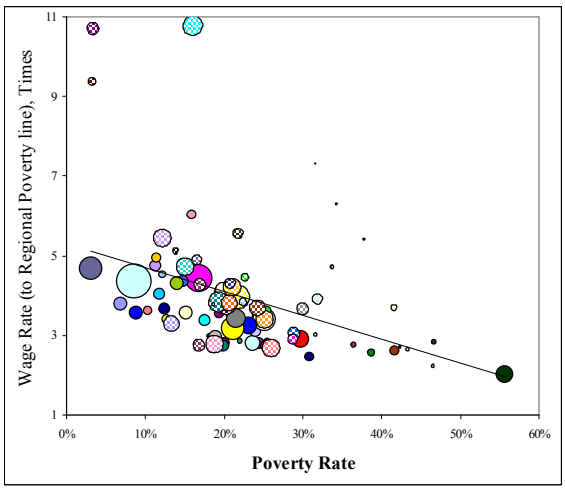


Figure 3.6: Regional Real Wage and Poverty Rate, 2002

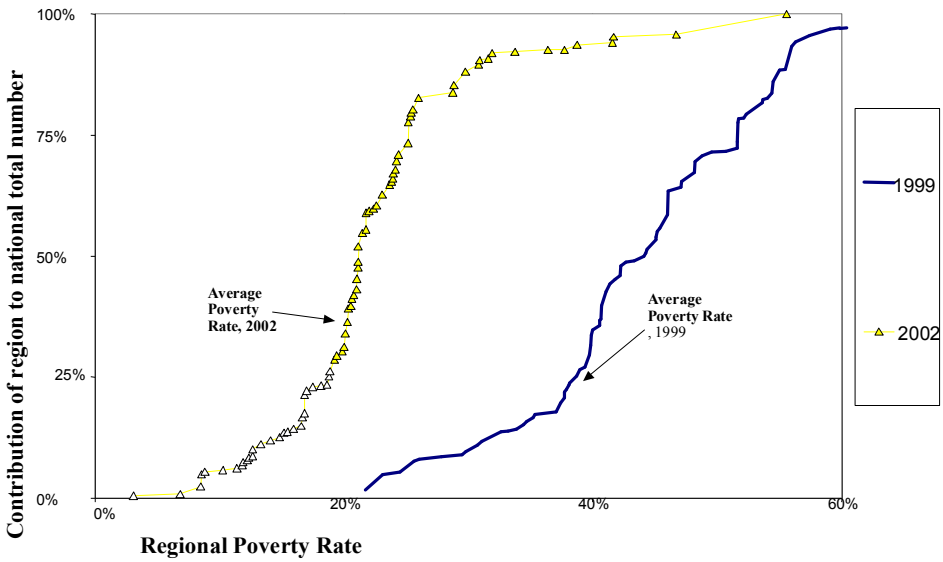


Source: Fig. 3.5. Goskomstat data (HBS and LFS data). Recommended poverty line methodology. Published LFS based unemployment rates are used. Size of bubbles reflect regions' population. Trend line is based on simple (unweighted) regression. Fig. 3.6. Goskomstat data (HBS and enterprise reports for wage data). Recommended poverty methodology. Size of bubbles reflect regions' population. Trend line is based on simple (unweighted) regression.

3.21 **Most of the Russian population resides in regions where unemployment rates, and real wages gravitate around the all-Russia's median.** Thus, despite the existence of extremes, the extent of regional inequality among a majority of Russian regions (or "inequality in the middle") in any socio-economic indicator is not large. This has important implications for poverty distribution in the country.

3.22 **Despite large regional differences, most of the poor live in "average" regions, in terms of socio-economic development**. While there are substantial variations in unemployment and real wages leading to disproportionately high or low levels of poverty incidence across regions, in most regions the unemployment rate and the regional real wage are close to the national average. Consequently, poverty rates in these regions are also close to the national average. This can be seen in Figure 3.7 which plots the cumulative density curves for poverty. On the vertical axis such curves show the cumulative percent based on regional contributions to the total national poverty (in percent). On the horizontal axis the regions are ranked according to their level of poverty from the richest on the left to the poorest (with higher poverty rate) on the right. Figure 3.7 shows the evolution of regional concentration of poverty between 1999 and 2002. The density function is very steep, forming almost a vertical line at the average poverty rate, particularly in the case of 2002. This indicates that many of the poor live in regions where the poverty incidence is close to the national average. There is a significant top tail, with the poorest regions having more than double the national poverty rate, but they account only for the minority of the poor, and there is no sign that this group is increasing. It is clear that in 1999 the poverty rate was twice the 2002 level for most regions. The recovery has shifted the entire distribution almost exactly parallel to its crisis level, and the shape has become steeper, reflecting increasing concentration of poverty in the "middle" group of regions.

Figure 3.7: Regional Concentration of Poverty: 1999 to 2002



Source: Goskomstat data (HBS) and population, reported in Annex Table A3.1.
Recommended methodology approach to poverty is used here.

3.23 **Despite a host of intervening factors, poverty incidence varies across Russia's regions closely mirroring the differences in their output levels.** Figure 3.8 below compares the level of poverty with the regional GRP per capita corrected for price differences. This suggests a consistent relationship between poverty and output, albeit with some important deviations: for a given level of

GRP, the poverty rate may vary significantly across regions.

3.24 **Compared to the real value of regional economies output, regional inequality plays a less prominent role as a correlate of poverty.** Figure 3.9 plotting poverty rates based on the recommended poverty methodology against consumption-based measures of inequality suggests a positive relationship between inequality and poverty: higher regional inequality leads to higher poverty. But as demonstrated by Annex Table A3.3, the dispersion of regional inequality indices (as measured by Gini) is significantly less than the regional variation of other socio-economic indicators: the regional Gini index for consumption varies between 0.4 and 0.24. The value observed in some Russian regions would put them close to least unequal societies in the world, while the upper limits of the Gini index are similar to significantly unequal developing countries. Nevertheless, there is no clear cut relationship between inequality and poverty at the regional level based on household consumption data. An analysis of the matter using income data [7] suggests quite the contrary: that differences in inequality are at least as important as the variation in regional income levels to explain poverty and that both are closely linked to a set geographic, economic and political factors.

3.25 Ultimately, poverty in each region is completely determined by region's levels of consumption and inequality of its distribution among region's citizens. Changes in poverty over time represent changes in real incomes and inequality and both are sides of a single growth process. Thus better understanding of linkages between growth inequality and poverty at the regional level is required to guide policies aimed at poverty reduction through a pro-poor growth.

Figure 3.8: Regional GRP and Poverty Incidence, 2002

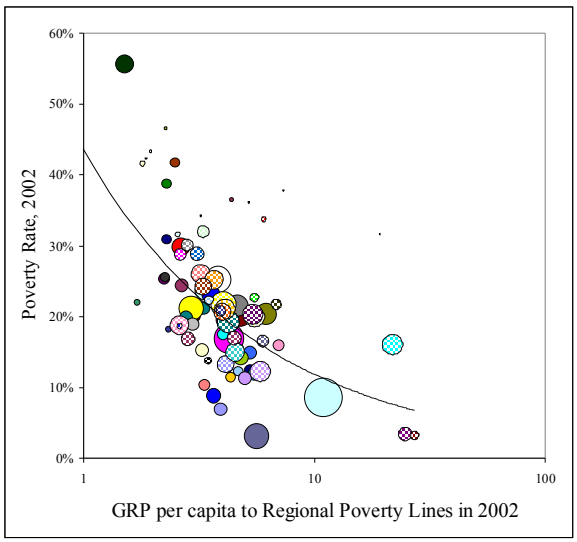
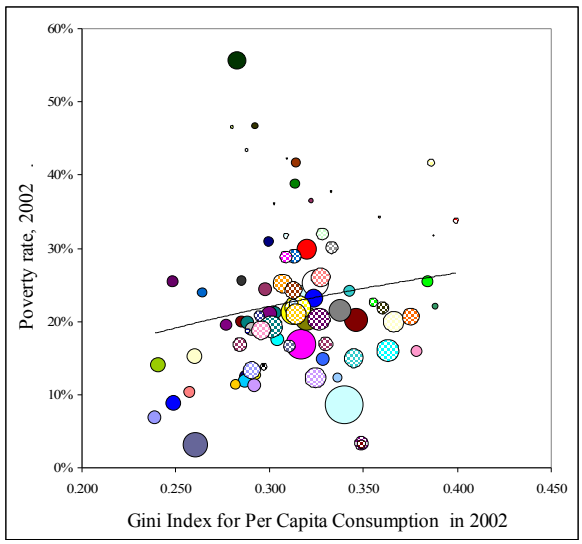


Figure 3.9: Inequality and Poverty Across Russian Regions, 2002



Source: Fig. 3.8. Goskomstat data (HBS data) reported in Tables A3.2 and A3.3. Recommended poverty methodology. Consumption per capita is used to measure inequality. Size of bubbles reflect regions' population. Trend line is based on simple linear (unweighted) regression. Fig. 3.9 Goskomstat data (Macro and HBS) reported in Tables A3.1 and A3.2.. Recommended poverty methodology. Size of bubbles reflect regions' population. Trend line is based on simple linear (unweighted) regression.

[7] Kolenikov and Shorrocks (2003 a and b)

C. REGIONAL POVERTY PROFILE

The household poverty profile across Russia's 88 regions is similar in some aspects, but different in others. The economic factors (degree of urbanization and labor market status show a significant variation across regions), while demographic correlates of poverty are common across regions.

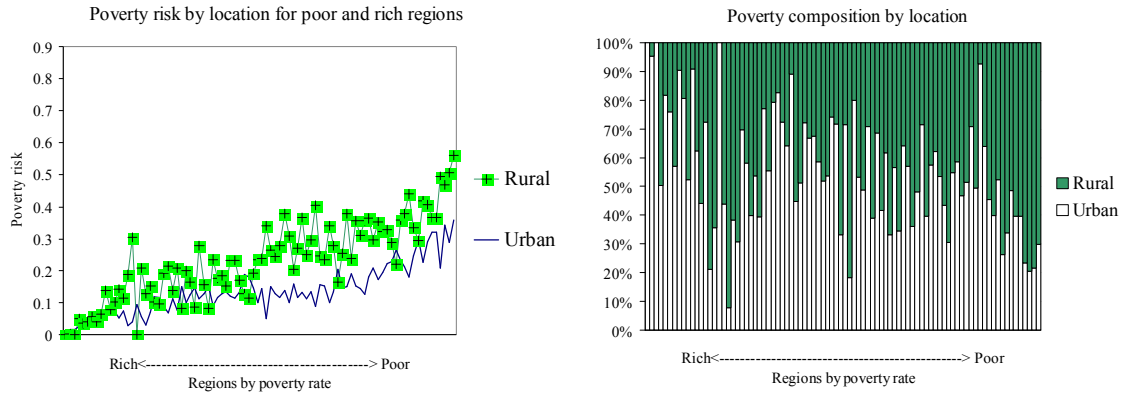
3.26 **To a large extent the differences in poverty rates by region are accounted for by the differences in regions in factors such as level of urbanization, education, employment and family size.** Taking two typical large rich regions (Moscow and Tumen) and two large poor regions (Dagestan and Tuva Republics), one finds that the poverty rate differed between them in 2002 by a factor of 4: poverty rates 10 percent in the richer regions versus 45 percent in the poorer regions. These regions have very different demographic structures, different employment rates, age profile and urbanization.

3.27 **However, individuals with similar characteristics have different risks of poverty, depending on the region they live in.** A person is 3 times more likely to be poor in Tuva and Dagestan compared to a similar resident in Moscow (or Tumen). The simplest way to control for differences is to take observationally identical persons in the survey from a poor and a rich region and compare their poverty risks. If poverty is only a function of education, employment, demographic composition etc., differences in poverty across regions for similar persons will be minimal. In fact, they are not. A similar person's risk of being poor would be 3 times lower in Moscow and Tumen as opposed to Tuva and Dagestan republics. This suggests a presence of significant regional effects (differences in economic returns) determining to large extent differences in poverty rates across regions.

3.28 **It would appear that there are strongly differentiated region specific rates of return to various assets.** Explaining such differences would help to unveil the causes of poverty. This section investigates these questions further focusing on a set of key factors: rural residence, education, labor market and number of dependants (children).

3.29 **The risk of poverty is systematically higher in rural areas in both wealthier and poor regions. However, wealthier regions have fewer rural residents, and as a result, poverty is predominantly urban in wealthier regions, and rural in poorer regions.** Figure 3.10 is composed of two panels. On each panel regions are ranked from left to right by poverty incidence, from low poverty to high poverty regions. On the left panel lines represent poverty risks by groups: the upper line (with crosses) shows the poverty incidence of the rural population in each region. In the region with the lowest poverty incidence (on the left of the x-axis), even the rural poor have a very low risk of poverty (around 0 percent), while in the to the poorest regions, the rural population has a very high poverty risk - about 55 percent. The solid line on the same panel shows the poverty risk for urban subgroup in each region. Thus, even though the rural residents in better off regions generally face a high risk of poverty that than urban residents, rural residents in these better off regions still face a much lower risk of poverty than rural residents in poor regions. The panel on the right side divides the poor into urban and rural subgroups. Regions are ranked in the same fashion from rich to poor, and the total number of the poor in each region is 100 percent. This panel shows that as the regional poverty rate increases, the share of the rural poor to total poor in each region increases. While rural residents of wealthier regions still face a higher risk of poverty than urban residents, wealthier regions tend to be much more urbanized. As a result, the poor in those regions are mostly urban residents. Poorer regions have a lower degree of urbanization, and therefore have a high percentage of the poor living in rural areas.

Figure 3.10: Regional Poverty Profile by Rural-Urban Location, 2002



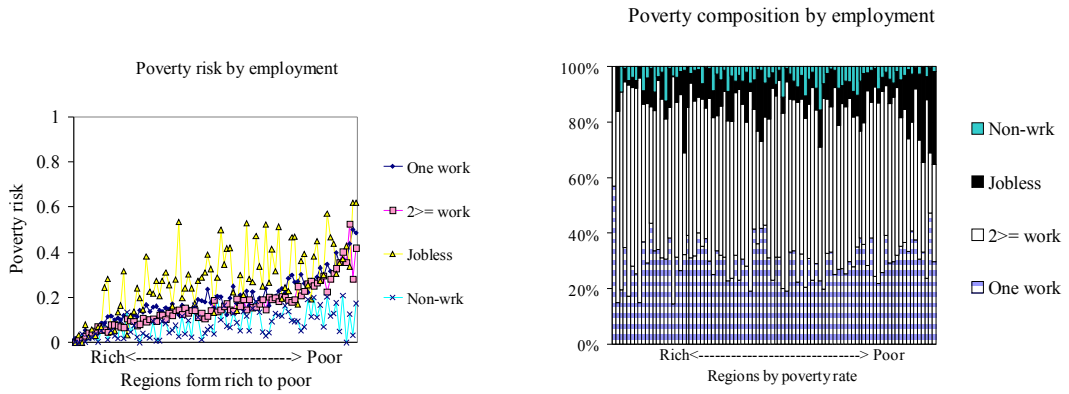
Source: Goskomstat data (HBS) and population , reported in Annex Table A3.1. Recommended poverty methodology used for the numbers here.

3.30 **The labor market profile of the poor is also distinctly different among regions with different levels of poverty. The majority of the poor (80 percent) everywhere are working families, but in regions with a higher poverty incidence fewer families have multiple earners. Poorer regions have also more unemployed among the poor.** To analyze the link between labor market and poverty, a household (not individual) level definition of labor attachment is used.[8] Figure 3.11 is similar in its construction to Figure 3.10. The left panel shows that unemployment (jobless) households have systematically higher poverty risk than other households across regions. However, they are a relatively small share of the population in each region, so that working families constitute a majority of the poor, as seen on Panel 3.10 b. On the other hand, the poverty risks of nonworking age families differ very little across regions, and they constitute the smallest group among the poor.

3.31 **Poverty profile across regions does not differ much by education levels, with risks of poverty moving in parallel with regional incidence of poverty for all education groups.** Russia's poor are relatively well educated; households with a head achieving only primary education are the minority among the poor and is only sizeable among the poor in the wealthiest regions. Poverty risk change across regions is parallel, a person with similar education will be more or less likely to be poor regardless of the region of residence. There is also a very stable ranking of poverty risks, primary and secondary education of the households head means higher risk of poverty for all regions compared to households with a head achieving higher education. At the same time, education does not guarantee against poverty in any region: even persons with higher education are present among the poor in both rich and poor regions.

[8] The European Commission definitions is used here. Jobless households are those in which one could expect (on age grounds) at least one member to work, but where no one works. Non-active age household is where not a single member would be working (outside the working age). A working household is an active age household which has at least one employed member (defined according to ILO criteria).

Figure 3.11: Regional Poverty Profile by Household Attachment to Labor Market



Source: Goskomstat data (HBS) and population , reported in Annex Table A3.1. Recommended poverty methodology is used here.

3.32 **The analysis of the regional poverty profile by the number of children reveals that families with children are the majority among the poor in all regions.** Children invariably have the highest risk of poverty and pensioners as a group the lowest risk across all regions. The poverty risk of a child varies between 0.5 percent in the richest region and 60 percent in the poorest region. Large families with many children (3+), comprise a very small share of the poor and their poverty risk has little link to the overall poverty incidence.

3.33 **The policy implications from this analysis are twofold.** On the one hand, similarities in the poverty profile means that common policies targeted to certain common characteristics – especially labor market attachment and demographic risk factors, such as child allowances- would reach the poor across the whole spectrum of regions. On the other hand, to address certain groups of poor, policies have to be region specific. For example, housing allowances that are targeted to the urban poor will have limited impact on reducing the overall number of poor in the poorest regions where the majority of the poor live in rural areas. A proper balance between universal and region-specific policies is required.

D. POLICY RECOMMENDATIONS:

a. Policy makers in Russia should not be discouraged by excessively large regional differences that seem to be beyond the scope of policies. The scale of differences in living standards across the regions is amenable to a set of well-designed policies that combine universal principles with region-specific instruments.

b. Since pockets of poverty are found in virtually all regions, the strategies need to focus less on singling out a small subset of poor regions and more on reducing the incidence of the pockets of poverty found in virtually all region across the country.

c. As most of the poor are in regions with poverty levels close to the national average, strategies emphasizing broad growth are likely to have large impact on poverty reduction. Such policies would reach the majority among Russia's poor.

d. For regions with the highest incidence of poverty, there is a need for targeted policies and interventions that take into account the profile of the poor in the poverty-struck regions. Of particular note is the concentration of poor in rural areas in these regions. Strategies to promote rural growth, development of backward areas, and increase incomes of the rural population in the poorest regions would be the most appropriate way to help to target the

poorest.

PART II. ECONOMIC RECOVERY HAS REDUCED POVERTY

During the first seven years of transition (1992-1998), Russia experienced a prolonged transition recession, with GDP collapsing by almost 40 percent. Double-digit inflation, labor shedding, and mounting wage arrears dramatically increased poverty levels during this period. Russia's economic rebound after the 1998 financial crisis has been more impressive. With an average annual GDP growth of 7.4 percent in 1999-2003, Russia not only quickly eliminated the negative effects of the crisis, but also overcame the losses that the population had incurred during the previous years of transition. Employment increased, real wages soared, and well-being measured by household consumption, had surpassed the pre-transition level by 2002.

This part of the Report takes a closer look at how the strong rebound in growth in the post crisis period translated into favorable poverty outcomes.

***Chapter 4** analyzes the mechanisms of the recovery and its main driving forces. It concludes that although achieved growth rates are impressive, the sustainability of growth remains in question. Growth to date has been due primarily due to a favorable combination of temporary post-crisis effects (a very low capacity utilization in the aftermath of the crisis and a dramatic reduction in the relative cost of production), which are not sustainable, and to positive external factors. The main concern is related to the continuing dependence of Russia's growth on favorable external factors, such as high (and rising) oil prices. This dependence continues to increase during the post-crisis period, with exports of a few commodities becoming ever more important in generating domestic demand and keeping macro-balances in surplus. This vulnerability to external shocks brings diversification of the economy to the top of the government agenda. Sustainable broad-based growth, and hence a stable reduction in poverty and improvement in standards of living, can be generated only by increased investment in non-commodity sectors and the share of non-petroleum start-ups, particularly SMEs.*

***Chapter 5** presents an analysis of how growth has affected developments in the labor market. A significant increase in job creation and the utilization of the employed labor force has been reported since the 1998 crisis. Employment and working hours have increased, wage arrears have been dramatically cut, and real wages have been growing faster than output beginning in 1999. The increase in household earnings has had a positive impact on poverty reduction.*

***Chapter 6** primarily investigates three questions: (i) Has growth reduced poverty? (ii) How has the inequality that has accompanied economic growth affected poverty reduction? and (iii) Has economic growth been pro-poor or anti-poor in Russia? Chapter 6 finds that all poverty measures show that poverty increased from 1997 to 1999 and then decreased from 1999 to 2002. The chapter also shows that growth has been broad-based and has benefited both ultra-poor and people living in poor regions more than the poor with incomes close to the poverty line and those in more prosperous regions. Since 1999, growth has also been pro-poor in the sense that it has increased the consumption share of the bottom quintile.*

The chapter concludes that during the four post-crisis years for which data are available (1999-2002) the poverty headcount ratio declined by 18.7 percentage points. Of this, growth was responsible for a reduction in the headcount ratio of 11.8 percent and lower inequality for 7 percentage points. However, future growth may be less pro-poor. Therefore, making economic growth and social policies even more pro-poor is recommended to achieve further progress in poverty alleviation. Three additional challenges make this task increasingly important. First, the government has set a goal of halving the poverty headcount by 2007. Second, the social protection system will have to cushion the impact of some envisaged structural reforms, such as those in housing and communal services. Third, the social protection system will have to play a similar role in moderating the impact of Russia's accession to the WTO. These issues are reviewed in Part III of the Report.

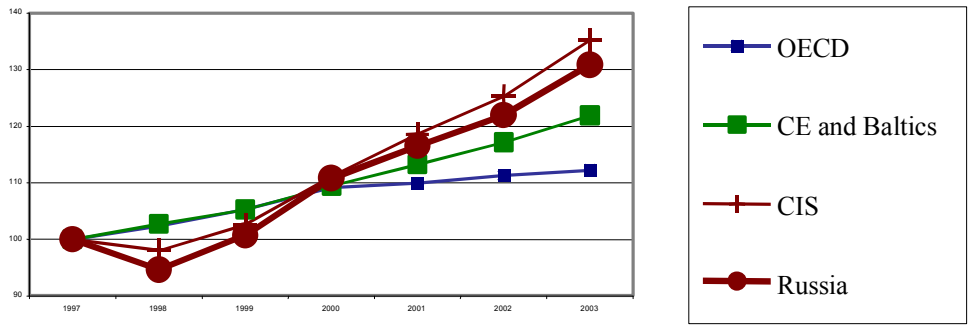
CHAPTER 4. POST-1998 ECONOMIC RECOVERY

The post-financial crisis recovery has been impressive, the sustainability of growth remains in question. Growth to date has been due primarily due to a very low capacity utilization in the aftermath of the crisis and a dramatic reduction in the relative cost of production, and to positive external factors. The main concern is related to the continuing dependence of Russia's growth on favorable external factors, such as high oil prices. This dependence continues to increase during the post-crisis period, with exports of a few commodities becoming ever more important in generating domestic demand and keeping macro-balances in surplus. This vulnerability to external shocks brings diversification of the economy to the top of the government agenda. Sustainable broad-based growth, and hence a stable reduction in poverty and improvement in standards of living, can be generated only by increased investment in non-commodity sectors and the share of non-petroleum start-ups, particularly SMEs.

A. IMPRESSIVE MACROECONOMIC PERFORMANCE IN 1999-2003

4.1 **Russia's macroeconomic performance over five years since the 1998 crisis was impressive on all counts**. The cumulative growth rate for the period 1999-2003 reached 37.5 percent, and is projected to continue at 4 to 5 percent in 2004. This has put Russia among the leaders of growth in that period (see Figure 4.1). Inflation gradually declined from 84 percent in 1998 to around 12 percent in 2003. For the past four years Russia has enjoyed a twin surplus in the budget and current accounts. The federal budget's surplus was 1.6 percent of GDP in 2003, and is projected at 0.5 percent in 2004. The current account—which, unlike the budget, was in surplus throughout the entire transition period—reached 8.3 percent of GDP in 2003. Mirroring these surpluses, and in an attempt to sterilize the inflow of foreign exchange and to contain the resulting appreciation of the national currency, the gold and foreign exchange reserves of the Central Bank had increased to a record level of US$77 billion by end-2003 (from merely US$12 billion in the aftermath of the 1998 crisis).

Figure 4.1: Real GDP Growth in Russia, CIS, CEE, and OECD in 1997-2003, %

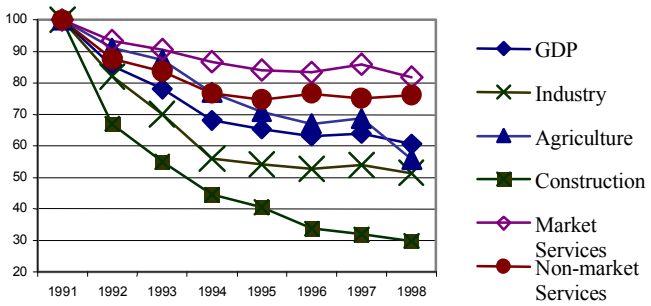


Source: CIS Statistical Committee, World Bank

4.2 **The post-crisis recovery looks particularly remarkable against the background of the**

preceding seven-year recession, which led to a massive 39.5 percent cumulative decline in GDP by 1998 (see Figure 4.2 for sectoral details of the pre-crisis recession). While all major sectors contracted during the recession, two sectors were particularly affected: industrial output collapsed by 49 percent, and construction activities collapsed by 70 percent.

Figure 4.2: Dynamics of Russia's GDP and its Main Components in 1990-98, 1991=100

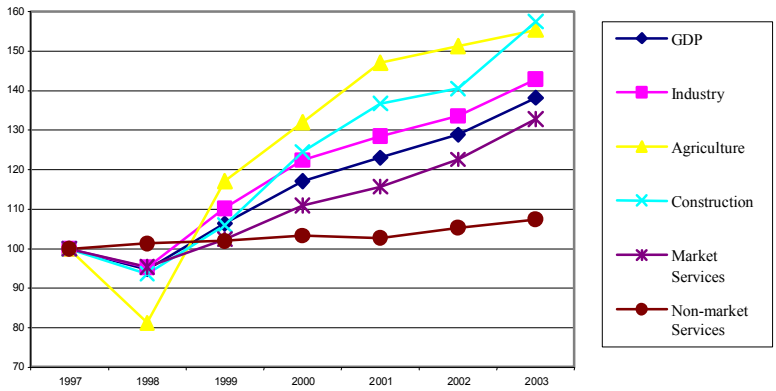


Source: Goskomstat

All Sectors Have Been Growing Since the Crisis, Albeit at a Different Pace

4.3 **The post-crisis rebound was of a universal character, yet with noticeably varying growth rates. The pre-crisis "losers"– agriculture, industry and construction, were the growth leaders this time** (see Figure 4.3 for sectoral details). Admittedly, agriculture benefited from record crops several years in a row. Yet import substitution, which was triggered by the devaluation of the ruble in 1998, has become an even more important factor of growth in the domestic production of agricultural products.

Figure 4.3: Dynamics of Russia's GDP and its Main Components in 1999-2003, 1997=100



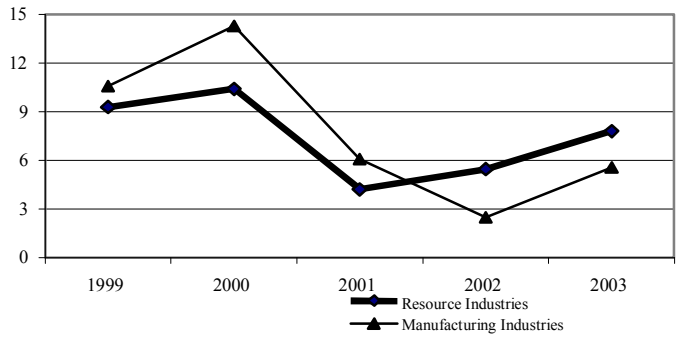
Source: Goskomstat.

4.4 **Construction has been primarily booming because of the demand from the non-residential sector.** In 2001 (the latest year for which data are available), housing construction was still below the level achieved in 1997. In addition demand from the industrial and agricultural sectors has not been strong enough to explain the high growth rates in construction. With the abundance of underutilized capacity in these sectors until very recently incumbent firms could not justify

investment in new construction, and there have been few start-ups ups to increase demand. Thus, the construction boom has been driven mainly by the demand for new retail and wholesale facilities and office space.

4.5 **Growth rates have also varied within industry. Industries that target the export market outperformed those targeting the domestic market in two recent years.** Figure 4.4 shows the growth rates of sectors representing extractive, export oriented industries on the one hand, and manufacturing industries, producing mostly for domestic demand, on the other.[9] The natural resource sectors started to outperform domestic manufacturing in 2002 for the first time since the beginning of transition. Although the manufacturing sectors have since started to catch up, the process has not yet reversed itself. Unless this trend is reversed, the natural resource and export-oriented industries will increase their share in the total industrial output and in hence the economy as a whole.

Figure 4.4: Growth Rates in Manufacturing and Resource



Source: Goskomstat.

4.6 **Official numbers underestimate the contribution of oil and gas production to Russia's economy.** One caveat regarding the role of the extractive sector in general, and the oil and gas industries in particular, should be mentioned. National Accounts data are unadjusted for the peculiar Russian phenomenon of using transfer pricing for tax avoidance (and often evasion). This practice leads to a transfer of value added of the industrial sectors—primarily commodity (oil and gas)—to the trade sector via grossly inflated trade margins. As a result, output in the trade sector—and hence in services as a whole—is overstated by around 12 percent of GDP.[10] Corrected figures increase the contribution of oil and gas to GDP to 20 percent, which is particularly important to bear in mind, given that this sector generates employment for only 1 percent of Russian labor.

Almost All Regions Have Grown Since the Crisis, Albeit Unevenly

4.7 **The 1998 crisis affected the regions unevenly.** A handful of regions were able to maintain positive growth even in 1998, while the rest registered declines ranging from 0.7 percent to 23 percent in one year (see Figure 4.5: individual regions on the vertical axis, growth rates on the horizontal axis).

[9] The sectors are, in the Goskomstat classification, ferrous and non-ferrous metals, fuel and energy, and wood processing representing the export oriented natural resource sectors; and electricity, chemical, machine building, construction materials, light industry and food representing domestic manufacturing.

[10] Official statistics show that the trade sector accounts for an amazing 25 percent of Russia's GDP, while the oil and gas sector accounts for only 9 percent.

Figure 4.5: Regional Yearly Growth Rates, 1998

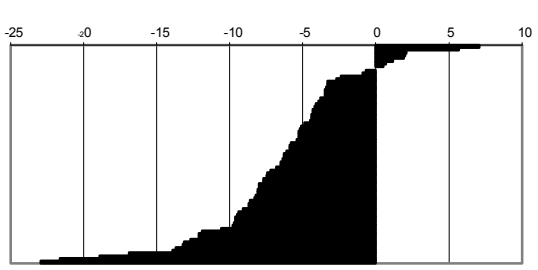
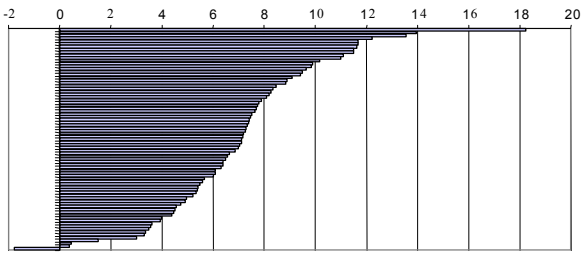


Figure 4.6: Regional Yearly Growth Rates, Average 19992001



Source: Goskomstat

4.8 **Recovery was equally impressive but also uneven across regions. All but one region experienced positive growth during the post-crisis period. Yet deviations from an average annual growth of 7.4 percent during 1999-2001 amounted to around 10 percentage points in both directions** (see Figure 4.6). There was not much overlap in those regions that were the best or worst performers in 1998 and 1999-2001.

Table 4.1: Best and Worst Performing Regions in 1998 and on Average in 1999-2001.

10 worst performing regions in 1998	10 worst performing regions in 1999-2001, annual average	10 best performing regions in 1998	10 best performing regions in 1999-2001, annual average
Chukotsky Auton. Unit, -23%	Kamchatskaya oblast, - -2%	Orlovskaya oblast, 7.1%	Kalmykiya, 18%
Ingushetia, -22%	Magadanskaya oblast, 0.4%	Novgorodskaya oblast, 5.7%	Kabardino-Balkariya, 14%
Magadanskaya oblast, -19%	Mariy-El, 0.5%	Osetia-Alania, 2.1%	Ingushetia, 14%
Cheliabinskaya oblast, -17%	Primorskiy krai, 1.5%	Tverskaya oblast, 2%	Rostovskaya oblast 12%
Ivanovskaya oblast, -14%	Irkutskaya oblast, 3%	Kurskaya oblast, 1.9%	Osetiya-Alania, 12%
Orenburgskaya oblast, -14%	Kurskaya oblast, 3.3%	Astrakhanskaya oblast, 1.2%	Dagestan, 12%
Chitinskaya oblast, -13%	Ulianovskaya oblast, 3.4%	Brianskaya oblast, 0.7%	Leningradskaya oblast, 12%
Jewish Auton. Unit, - 13%	Hakhasia, 3.5%	Kabardino-Balkaria, 0.5%	Astrakhanskaya oblast, 12%
Omskaya oblast, - 13%	Kirovskaya oblast, 3.6%	Karachaevo-Cherkessia, 0%	Smolenskaya oblast 12%
Volgogradskaya oblast, -12%	Kurganskaya oblast, 3.6%	Komi, -0.7%	Arkhangelskaya oblast 11%

Source: Goskomstat

4.9 As Table 4.1 shows, only one region (Magadan) was among the 10 worst performing in 1998 and also on average in 1999-2001. Another region, which was hit hardest in 1998 (Ingushetia), performed among the best in 1999-2001. One region, which survived the 1998 crisis much more successfully than most others (Kursk), turned out to be among the worst performers in 1999-2001. At first glance the list of best performers seems to be more stable: three regions were on this list, in both 1998 and 1999-2001. All three regions (Osetia, Kabarda, and Astrakhan) are southern regions with the advanced agricultural sector that benefited from import substitution in the consumption of foodstuffs.

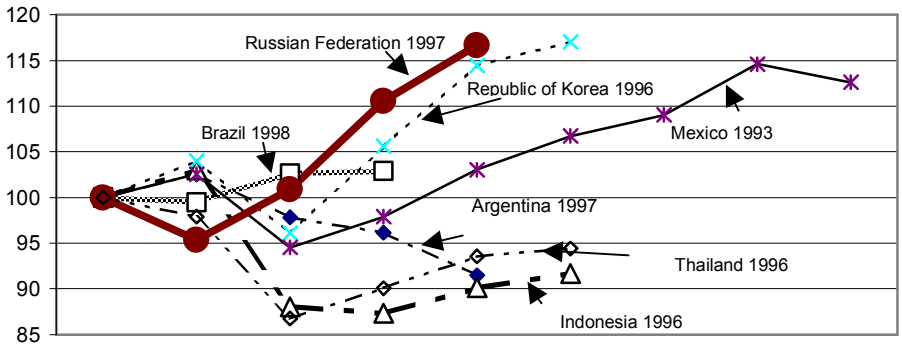
B. ENGINES OF POST-CRISIS RECOVERY

4.10 **In contrast to the international record—in which financial crises and national defaults traditionally led to a significant contraction in GDP growth rates in subsequent years—Russia rebounded quickly.** The impact of the crisis on the real side of the economy appeared to be less

adverse than many observers had expected. The recovery was also more rapid than in most other recent crisis countries (See Figure 4.7).

Figure 4.7: Output Recovery Post-Crisis
(GDP per capita in constant LCU indexes relative to pre-crisis year)

Figure 4.7: Output Recovery Post-Crisis (GDP per capita in constant LCU indexed relative to pre-crisis year)



Source: World Bank (2003), Russia: Development Policy Review, p. 7.

4.11 A broad range of **complementary factors allowed for the impressive post-crisis recovery**, which can be divided in four groups:

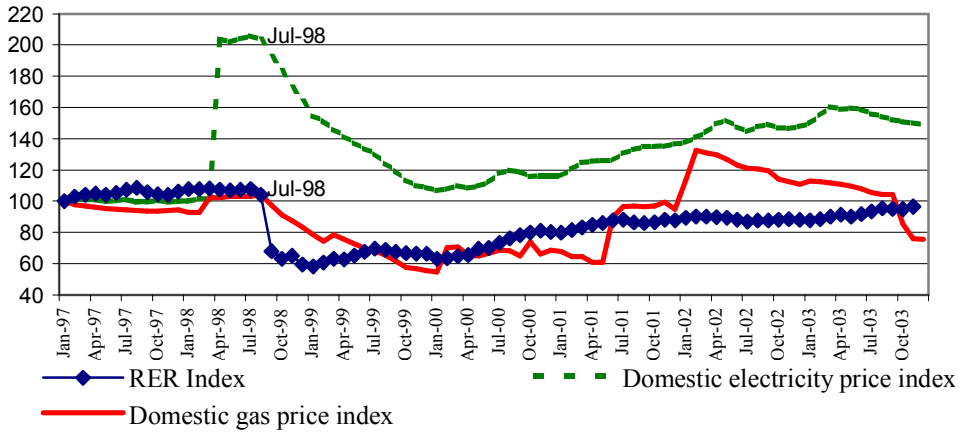
- ***A wide-scale import substitution was triggered*** by the four-fold devaluation of the ruble in the aftermath of the crisis, and a reduction in the cost of domestic production has taken place due to positive changes in relative prices on domestic inputs (particularly, real wages, electricity and natural gas tariffs).
- The ***bulk of capacity had gone unutilized in the main producing sectors*** by the time of the crisis, owing to a prolonged pre-crisis contraction in output. This had facilitated a rapid increase in output as soon as devaluation took place and high oil price-driven demand surged.
- ***Higher oil prices*** (from early 1999 on) ensured higher export values, a constant inflow of foreign exchange, and higher government revenues (the oil and gas sector contributes up to 40 percent to federal budget revenues).
- ***Hard budget constraints*** were imposed on the government by the inability to borrow either on the domestic government bond market (GKO) or internationally (Eurobonds). This meant that post-crisis governments had to balance their budgets or face the challenge of hyperinflation.

4.12 This necessitated both ***prudent macro-management*** (including introducing hard-budget constraints for the private sector) and ***structural reforms***. The latter, in their turn, targeted ***higher efficiency in public services delivery***, and a more ***favorable business climate***, which comprise the core of the government's pro-growth policy.

4.13 **Devaluation gave the first push to the post-crisis resumption of growth in Russia**. But the impact of a shift in other relative prices controlled by the government was also significant. Figure 4.8 presents the post-crisis dynamics of the ruble real exchange rate (RER), and natural gas and electricity tariffs deflated by the producer price index (PPI). The RER collapsed by almost 40 percent in real terms between July and October of 1998. Electricity and natural gas tariffs contracted in real terms by around 50 percent relative to their level by the time of the crisis (July 1998), during the second half of 1998 and the whole of 1999. Moreover, by the end of 2003 both tariffs were still set by the government at a level below the one in force on the eve of the crisis. In October 2003, the electricity

tariff was around 25 percent lower and the natural gas tariff was around 20 percent lower than in July 1998. Lower tariffs have had a beneficial impact on cost of production for Russian companies.

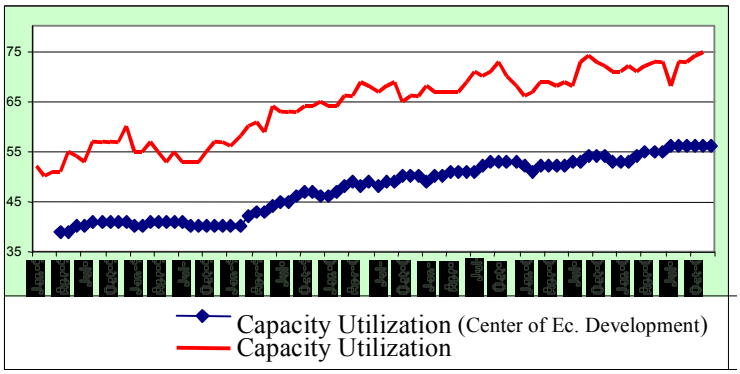
Figure 4.8: Dynamics of the Ruble Real Exchange Rate, and Electricity and Natural Gas Tariffs in 1997-2003, January 1997=100



Source: World Bank

4.14 **The ability to utilize industrial capacity, which had stood idle before the crisis, enabled production to increase quickly..** There is no single acknowledged source for data on capacity utilization in Russia. However, both of the existing sources – the Government Center for Economic Analysis (CEA) and an independent Russian Economic Barometer (REB) – present generally similar dynamics (see Figure 4.9). The CEA reports an increase in industrial capacity utilization of around 15 percentage points and the REB of around 20 percentage points between July 1998 and end-2003.

Figure 4.9: Dynamics of Industrial Capacity Utilization in 1997-2003, %



Source: CEA, REB

4.15 **The price of oil has had a major impact on Russia's recovery.** The largest increases in oil prices occurred in 1999 and 2000 – also the years in which Russia experienced the highest growth rates (see Table 4.2). The price of Russia's main Brent (Urals) went from US$10.3 per barrel on average in 1998 to US$24 on average in 2003. In general, one observation which can be drawn from Russia's post-crisis experience is that **growth rates of 5 percent or higher have been achieved in Russia only at times when the oil price has been increasing substantially.**

Table 4.2: Dynamics of Urals Price in 1998-2003

	1998	1999	2000	2001	2002	2003

Average annual price, US$ per barrel	10.3	15.2	24.0	20.9	21.0	24.0
Rate of Growth, %		50	60	-12	0	14

Source: World Bank.

4.16 **This comes as no surprise, given that commodity price dynamics strongly influence Russia's major economic indicators.** To illustrate the significance of commodity price dynamics- oil in particular - on Russia's economy it will suffice to cite several statistics. Commodity exports contributed 78 percent to Russia's total exports in 2002, including 57 percent from oil and natural gas. Over 60 percent of Russia's fixed capital investment either goes into the hydrocarbon industries or is financed from the public purse, which in turn is over-dependent on the petroleum sector. Thirty seven percent of the federal budget revenues originate in the petroleum and gas sector. According to calculations by Bank staff, an *increase in the price of Urals by one dollar per barrel raises federal budget revenues by 0.35 percent of GDP and raises the consolidated budget revenues by 0.45 percent*.

4.17 **Government policy is also an important driver of Russia's post-crisis recovery.** The government's success in balancing its books, moderating inflation, and increasing the monetization of the economy by virtually eliminating non-cash settlements and tax offsets, in particular, have had the most beneficial impact on the efficiency of the corporate sector. Hard budget constraints imposed by the government on all economic agents have streamlined business incentives and improved resource allocation. Growth has ensued. Structural reforms implemented by the government during the post-crisis period have also contributed to the improvement of the business environment, and hence growth. The tax reform and debureaucratization effort have, perhaps, been of the utmost importance in this respect (see Box 4.1 for details of the government program).

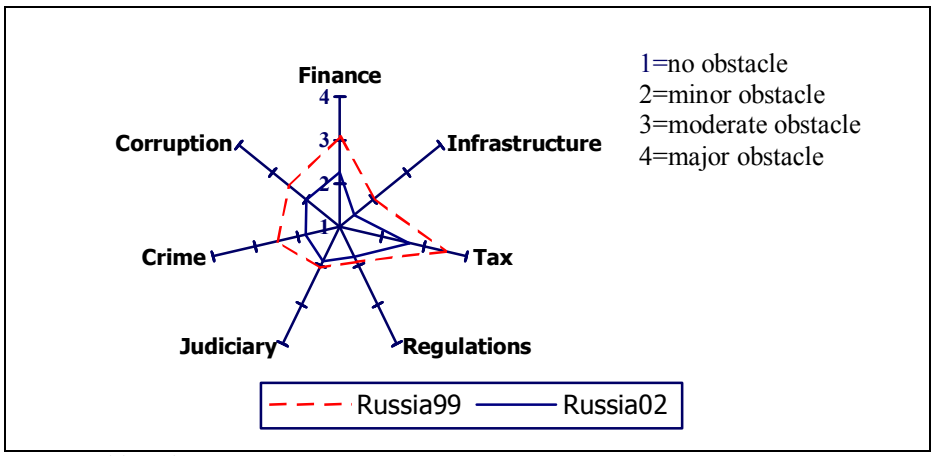
4.18 **The reform program has contributed to the perception of an improved business environment between 1999 and 2002**. This conclusion is derived from the Business Environment and Enterprise Performance Survey (BEEPS), conducted by the EBRD and the World Bank in 1999 and then again in 2002. The survey of the perceptions of establishments suggests that the business environment had generally improved between 1999 and 2002 (see Figure 4.10). Businesses perceive progress in all dimensions of the business environment surveyed—access to financing, the quality of infrastructure, taxation, problems with crime and corruption, as well as in the area of judiciary and regulations. Discriminatory practices that favored the old enterprises over the small start-ups have begun to diminish. For instance, corruption is now seen to be less of an obstacle. The rule of law is perceived to have strengthened. And perceptions of state capture—of parliaments, commercial courts, governments, and political parties—have fallen sharply.

Box 4.1: The Government's Reform Strategy

Several hundred important pieces of economic legislations were enacted over the 2000-03 period. These were, in particular, as follows:

- **Tax Code** (flat income tax of 13 percent, reduction in profit tax from 35 to 24 percent, substitution of a unified social tax of 35.6 percent for the previous dues to various extrabudgetary social funds, abolition of a 5 percent sales tax, etc.).
- **Budget Code**, streamlining the administration of public expenditures, and the division of responsibilities between the levels of government.
- **Customs Code**, limiting the discretion of Customs officers in the implementation of Customs regulations.
- **Land Code** (most important, including the right to sell agricultural land, which was enacted in the summer of 2003 – much later than the main body of this Code).
- **Labor Code**, easing the recruitment and lay-off process for employers.
- **Law on Public Social Assistance**, introducing the principles of targeting.
- **Pension Reform Package**, gradually changing the pension system from the pay as you go to a two-pillar system.
- **Deregulation Package**, which comprised four laws: on registration, licensing, inspections, and certification, and was targeting reductions in the burden of administrative regulations on businesses.
- **Law on the Principles of Technical Regulations**, aiming at a gradual abolition of obsolete standardization and certification requirements.
- **Strategy for reforming RAO UES**, the national electricity monopoly, aiming at the separation of potentially competitive electricity generation and distribution from a natural monopoly component of trunk transmission.
- Housing and Communal Services Reform Plan, targeting increase in cost recovery.

Figure 4.10: Obstacles to Business in 1999 and 2002



Source: World Bank.

4.19 **The government used its improved revenues from higher oil prices to significantly increase social spending on health, education, and social protection, and thus created broad-based benefits.** Spending on the social sectors appears to be sensitive to the overall fiscal position, and there seems to be a large discretionary element in such spending. Both the absolute level of social spending and its share in the budget or GDP appear subject to large cyclical changes over a short time

period, mirroring oil price dynamics. As a proportion of GDP, spending on the social sectors declined between 1997 and 2000 from 24.1 percent to 14.5 percent, before rising significantly to about 20 percent in 2002 (see Table 4.3). In 2002, spending on these three sectors was significant, at one-fifth of the GDP and about 57 percent of non-interest expenditures of the enlarged budget (federal and sub-national). However, Table 4.3 shows that social sector spending has been pro-cyclical. This has enabled the dissemination of broad-based benefits from higher oil prices and improved government revenues. However, it appears that social sector spending cannot provide the built-in stabilization function that is typically the case with such spending.

Table 4.3: Enlarged Budget Social Expenditure, 1997-2002 (% of GDP)

	1997	1998	1999	2000	2001	2002
Education	4.6%	3.6%	3.0%	2.8%	3.1%	3.9%
Health	3.5%	3.4%	2.9%	2.8%	2.9%	3.2%
Social Protection	16.0%	13.3%	9.7%	8.9%	10.9%	12.6%
Total Health/Education/ Social Protection	**24.10%**	**20.30%**	**15.60%**	**14.50%**	**16.90%**	**19.70%**

4.20 Implementation of key reforms set the stage for further growth and allowed the authorities to set more ambitious targets, among which the most challenging goals are doubling GDP per capita, and halving the poverty headcount by 2007. The key goals for the further reform effort were set in the Updated Medium-Term Program for 2004-07 which was approved by the government in the summer of 2003. The key targets set for this effort are as follows:

- To reduce poverty levels and income differentiation by providing incentives for wage and employment growth, and by strengthening the targeting of social assistance.
- To achieve economic modernization and improvements in enterprise efficiency, which will require eliminating the subsidization of the economy embedded in low tariffs (simultaneous with increasing the efficiency of the infrastructure monopolies and of housing and communal services).
- To improve the economy's innovative and technological potential.
- To create an institutional environment favorable to investment in the real sector, and to develop financial intermediation. To introduce the effective protection of property rights and to develop competitive markets for goods, services and capital (including land), and to increase the role of small and medium businesses.
- To introduce effective protection of property rights and develop competitive markets for goods, services and capital (including land), and to increase the role of small and medium businesses;
- To improve fiscal efficiency by focusing budget expenditures on the priority targets of social and economic policy, by improving control over the assets and liabilities of the state, by streamlining the budgeting process, and by ensuring an effective tax system.
- To reduce regional differentiation in social and economic development, and to strengthen the economic foundations of the Russian Federation by ensuring the conformity of sub-national legislation with federal-legislations, and by introducing clear functional divisions of authority and financial resources between the federal level and the sub-national levels.

4.21 To achieve these targets the government is working on several other reforms, the most crucial of which are: in the civil service, the financial sector, and the judicial system; all of which have been recently launched.

C. RUSSIA STILL FACES THE CHALLENGES OF SUSTAINABLE GROWTH

4.22 **One question remains: How much of the impressive post-crisis rebound is sustainable, owing to reforms, prudent macroeconomic management, and structural changes in the economy, and how much comes from the good fortune of high prices on Russia's key commodity exports?** The structural changes induced by the government reform effort have not yet become the main sources of growth. With the economy still heavily skewed toward the commodity sector, Russia's growth prospects are subject to the following main risks:

- **Exposure to Volatility**: Dependence on just a few exported goods means that growth is a hostage of prices determined on sector markets outside of Russia. Therefore, the sustainability of such growth is exposed to price shocks, which Russia's government has little ability to mitigate.
- **Low Chance to Catch up on Growth**: The dependence of growth on world commodity prices inter alia means that high growth rates can be reached by an economy only at times of significant hikes in these prices. Chances that oil prices will continue to grow from an already record level— and that such growth in prices will be prolonged —are slim. Thus, the likelihood of Russia's chances to catch up with the OECD nations, which would require growth rates in the range of 7 to 8 percent, is low.

4.23 **This means that the challenge of diversifying Russia's economy, and thus making growth more sustainable must move to the very top of the government's agenda. Russia's economy needs to diversify both by type of business and by sector.** These tasks are intertwined, as small and medium-size enterprises—whose contribution to output and job creation are much smaller in Russia than in most transition economies—are likely to emerge in non-commodity sectors. This requires lowering barriers to market entry dramatically and reducing the cost of doing business. Competition and a level playing field need to be ensured by the continuation of the government's deregulation effort (i.e., cutting redundant interference and ensuring the openness of the economy) while enforcing the anti-trust rules (i.e., preventing privately-erected barriers from replacing the out-going state barriers). Specifically this will include the following actions:

- Reducing the tax burden on businesses, in particular, lowering the single social tax and value added tax. This will require much higher efficiency in public service provision (and especially education, healthcare, housing and communal services and social protection) to make tax cuts bearable for the budget.
- Undertaking a sweeping change in the technical regulations and the system of their enforcement, particularly in standardization and certification.
- Ensuring the rule of law, in particular, by reducing the authorities' discretion for interventions in business activities, by ensuring an independent judiciary, and by setting transparent boundaries for administrative interference.
- Completing WTO accession (currently targeted by 2005) to facilitate the integration of Russian businesses with global value chains.

4.24 **A significant improvement in the system of social protection will also be required to cushion the impact of many of these reforms**. Part III of the Report assesses the likely impact of the most socially sensitive reforms—housing and communal service, education, healthcare—and puts forward recommendations on how to make these public services better oriented toward the provision of equal opportunity, and how to better target the social protection system to ensure social justice.

CHAPTER 5. ECONOMIC RECOVERY HAS IMPROVED LABOR EARNINGS

A significant increase in job creation in Russia is reported after 1998, especially in sectors that benefited from devaluation. This, combined with a decrease in job destruction, has led to growth in employment. Labor market institutions, while rigid in theory, appear to be flexible enough in practice to support job creation and destruction. Economic growth was also accompanied by an increase in capacity utilization, in terms of both working hours and the number of people employed. The increase in employment was greatest in the market service sector, and among smaller establishments. Better use of labor resources is also revealed by an increase in productivity. This increase in labor productivity was highest in the industry and construction sectors and in the agricultural sector. Most of the productivity increase resulted from within-sector improvements. As a result of higher productivity, the average real wage began to increase from 1999 onward. Moreover, the improved fiscal position helped increase public sector wages, although they continue to be very low by comparison with the private sector. Reduced unemployment, higher wages, and greater earnings contributed significantly to raising household incomes and reducing poverty in the economic recovery period. With the higher wages and the increased share of private-sector employment, there is evidence of increased returns to education and therefore of wage inequality.

5.1 This chapter reviews the utilization of labor resources and the changes in labor productivity and wages over the 1997-2002 period. It also addresses the role of public policy and labor market institutions in determining labor outcomes in this period.

A. ECONOMIC RECOVERY INCREASED THE UTILIZATION OF LABOR RESOURCES

5.2 **Labor utilization started to grow for the first time since the transition.** The fourfold devaluation in 1998 and the subsequent economic growth resulted in an increased aggregate demand for domestic goods, which gave firms the opportunity to restructure and increase capacity utilization, in terms of both physical assets and labor. The growing demand for labor was accommodated by an increasing labor effort that resulted from declining unemployment and from increased hours of work for the employed. By 1999, working hours and employment numbers began to increase for the first time in the transition period (after a decade of decline in employment). A methodological change which added the self-employed on subsistence land plots to the employment figures as of 1999 accounts for most of the 4.6 million increase jobs between 1998 and 1999. Under the same new methodology, the economic recovery has clearly created 2.7 million jobs, a 4.2 percent increase, between 1999 and 2002 (Table 5.1).

5.3 **Unemployment decreased steadily during the recovery period**. The unemployment rate (ILO definition) increased in the aftermath of the 1998 crisis to 13.2 percent, and subsequently fell to 8.6 percent in 2002 (Table 5.2).

Table 5.1: Employment and Unemployment in Russia,1992-2002

	1992	1997	1998	1999[1]	2000	2001	2002
Employment (million workers)	71.1	60.0	58.4	63.1	64.5	64.7	65.8
of which males	37.1	31.6	30.6	32.8	33.4	33.4	33.6
of which females	33.9	28.5	27.9	30.2	31.1	31.2	32.2
Unemployment (million workers)	3.9	8.1	8.9	9.1	7.0	6.3	6.2
of which males	2.0	4.4	4.8	4.8	3.8	3.4	3.3
of which females	1.9	3.7	4.1	4.3	3.2	2.9	2.8

Note : [1] Beginning in 1999, the numbers include those self-employed on subsistence land plots.
Source: Goskomstat, "Russia in Figures" (2003), p. 76. Note: The table refers to age group 15-72 years.

Table 5.2: Unemployment Rate by Gender, 1997-2002.

	1992	**1997**	**1998**	**1999 [1]**	**2000**	**2001**	**2002**
Unemployment Rate (%)	5.2	11.8	13.2	12.6	9.8	8.9	8.6
Males	5.2	12.2	13.5	12.8	10.2	9.3	9.0
Females	5.2	11.5	12.9	12.4	9.4	8.5	8.1

[1]Beginning 1999, the numbers include those self-employed at subsistence land plots.
Source: Goskomstat, Russia in Figures, 2003, p. 76. Note: The table refers to age group 15-72 years.

5.4 **The increased labor demand accelerated job creation and contributed to a positive net employment increase in establishments with 100+ workers, for the first time since the transition began in 1992.** Table 5.3 shows that for such establishments, reporting to the annual manufacturing census, net employment growth turned positive between 1999 and 2000 for the first time since the transition began. This resulted from an acceleration in job creation and a reduced rate of job destruction. At the same time, the reallocation of labor (both within and across sectors) to higher-productivity jobs continued, which contributed further to increasing labor productivity (see below).

Table 5.3: Rates of Annual Job Flows in Russian Manufacturing, 1985-2000

	Job Creation	Job Destruction	Job Reallocation	Net Growth in Employment
1985-92	0.87	3.94	4.81	-3.06
1992-96	2.09	11.23	13.32	-9.15
1997-98	2.28	9.37	11.65	-7.1
1998-99	4.07	7.28	11.35	-3.21
1999-00	6.07	4.66	10.73	1.41

Source: Brown and Earle (2002), Table 1, p.42 (based on annual manufacturing census data).

5.5 **Employment growth was even greater in smaller firms.** Employment in smaller firms increased more rapidly than that in establishments with 100+ workers. The highest net employment growth between 2001 and 2002 occurred in establishments with 31 to 100 workers. Alternatively, the share of large and medium enterprises in total employment diminished from 67.5 percent in 1998 to 62.9 percent in 2002, with the fall being especially pronounced in the market services sector (from 44.7 percent to 37.3 percent) and in industry and construction combined (from 74.2 percent to 66.8 percent). While large establishments continue to dominate the employment scene as a whole, these figures point to the fact that the new private sector firms start as small establishments and are more dynamic in job creation.

5.6 **Employment growth was also higher in the market service sector**. The total increase of 5.2 percent in non-agricultural employment can be broken down as follows: 3.4 percent employment growth in industry and construction, a 10.2 percent increase in employment in market services (trade, communications, transport and finance), and a 3.4 percent growth in the non-market services

comprising communal services, science, healthcare, culture and education (Poletaev, 2003).

5.7 **The shift from public to private sector employment continues.** Most of this shift occurred during the large-scale privatization at the beginning of the 1990s. Yet the shift in employment from the public to the private sector was also noticeable in recent years (Table 5.4). This movement has been accompanied by a shift from the larger to smaller firms, as mentioned above, including a shift from the formal sector to the informal one, and to self-employment. At the same time, it is widely believed that excessive employment in the public sector still exists (Poletaev, 2003, World Bank CEM 2004).

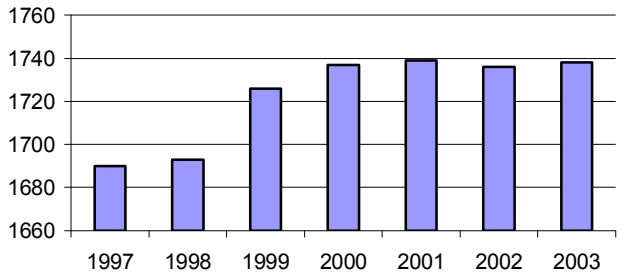
Table 5.4: Composition of Employment by Firm Ownership, 1992-2002%

Ownership of Sector	*1992*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
State and municipal	68.9	40.0	38.1	38.2	37.9	37.4	36.9
Private	19.5	39.9	43.2	44.3	46.1	47.6	49.1
Non-profit	0.8	0.6	0.7	0.8	0.8	0.8	0.8
Mixed Russian	10.5	18.3	16.4	14.9	12.5	11.6	10.7
Foreign, joint Russian and foreign	0.3	1.2	1.6	1.8	2.7	2.6	2.5

Source: Goskomstat "Russia in Figures" (2003), p.77.

5.8 **The average number of hours actually worked has also increased during this period** (Figure 5.1). After a reduction of almost 20 percent during 1988-96, the average annual working time per worker increased from 1,690 hours in 1997 to 1,736 hours in 2002. The increase was even more dramatic in the industrial sector, (from 1,548 hours in 1999 to 1,672 in 2002). The main reason for this increase has been a significant reduction in involuntary leaves and reduced hours of work (about 80 percent of the change), with the remaining reduction (20 percent) being attributed to an increase in the length of a regular working day (Poletaev, 2003, p.18).

Figure 5.1: Average Working Time, Hours per Year per Worker, Middle and Large Enterprises



Source: Labor Force in Russia, based on Survey, Goskomstat

5.9 **One indication of the increased labor demand is seen in the increasing number of CIS citizens recruited to work in Russia**. Between 1995 and 1999 the number of CIS citizens officially recruited to work in Russia declined from 134,000 to 95,000 workers. The economic recovery led to a reversal of this trend, and the number of such workers had more than doubled, to 193,000, by 2002. According to the Ministry of Interior, the number of illegal labor immigrants (mostly from the CIS) has also increased to 4 million workers in recent years.

B. A SIGNIFICANT INCREASE IN LABOR PRODUCTIVITY ACCOMPANIED THE ECONOMIC RECOVERY AFTER 1999

5.10 **The economic recovery was accompanied by a significant increase in labor productivity. During 1999-2002, the average annual growth rate of aggregate productivity was 4.1 percent in**

the non-agricultural sector as a whole. The non-agricultural sector includes industry, construction, and market services such as trade, communications, transport, finance, as well as non-market services such as education, healthcare, culture and science. Table 5.5 shows the decomposition of growth in output of the industrial sector and the broader non-agricultural sectors into: (i) growth in working time, which in turn is broken down into growth in total employment and average working hours; and (ii) growth in labor productivity. Over 1999-2002, the average annual growth rate of the non-agricultural sectors was 6.2 percent per annum, 2 percent of which is attributed to increased working time and about 4.1 percent of which is attributed to increased labor productivity. In other words, *two-thirds of the increase in non-agricultural output is due to increased productivity, while one-third has resulted from increased working time*. Cumulatively, this corresponds to a 17 percent increase in productivity during the period.

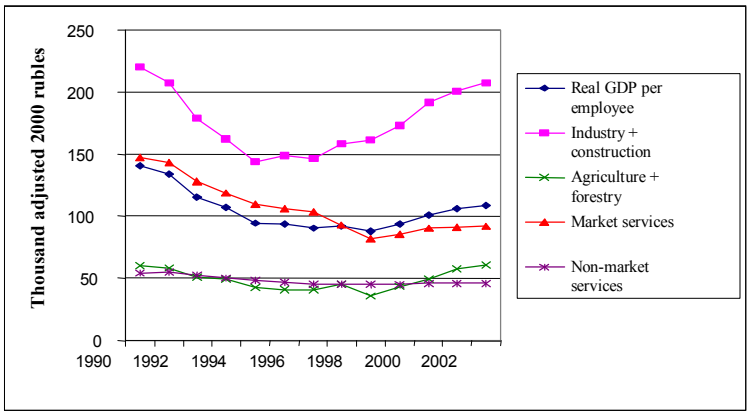
Table 5.5: Decomposing Growth Rates of Non-Agricultural Output into Working Time and Labor Productivity, 1990-2000 (Percent growth rate per annum)

Period	Employment	Annual hours	Working time	Output	Labor productivity
Non-agricultural sectors: 1999-2002	**1.3**	**0.7**	**2.0**	**6.2**	**4.1**
1999	0.7	2.2	2.9	5.8	2.8
2000	0.9	0.7	1.6	9.9	8.1
2001	1.4	0.2	1.6	4.7	3.0
2002	2.1	–0.2	2.0	4.5	2.5

Source: Poletaev (2003), p.22.

5.11 **Labor productivity increased significantly with the economic recovery. The fastest increase in labor productivity has been in industry and construction, followed by agriculture and market services.** Figure 5.2 shows the trends in aggregate labor productivity across the broad sectors of the economy. While overall productivity experienced a dramatic decline during the transitional recession, the increase in labor productivity has been significant since 1998. The cumulative growth during 1998-2002 in labor productivity was 24.7 percent in industry and construction, 67.2 percent in agriculture, 12.8 percent in market services, and 4.2 percent in non-market services. The figure also shows the productivity levels across sectors, which are highest in industry and construction. The lowest productivity level is in non-market, essentially public, services, where labor productivity is even lower than that in agriculture.

Figure 5.2: Sectoral Trends in Aggregate Labor Productivity, 1990-2002



Source: World Bank (2004), *Transition Meets Development*, Fig. III.3.2 (p. 79).

C. HIGHER LABOR EARNINGS

5.12 **Real wages increased significantly in recent years, exceeding the pre-crisis level.** The average real wage rate has been on the rise since 1999 (Table 5.6). Since the early 1990s, the real

wage rate has eroded, and it reached its lowest point in 1999. However, between 1999and 2002, and reflecting productivity improvement, the real wage increased by almost two-thirds and exceeded its pre-financial crisis level. While the RLMS data are collected for only one quarter per year, and the year 1999 was not covered, the RLMS provides a similar trend in wages. Between 1998 and 2001 the real hourly wage rate increased by about two-thirds of its value.

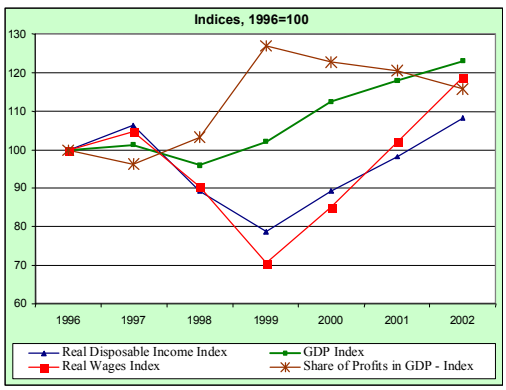
Table 5.6: Average Real Monthly Wages, 1997-2002

Year	Average Real Monthly Wage (1991 rubles)
1997	291
1998	253
1999	197
2000	238
2001	286
2002	320

Source: Goskomstat, "Russia in Figures" (2003), p. 106

5.13 As a result of growing employment and rising wages, the household disposable income had also been growing in real terms faster than GDP. This of course was possible only at the expense of corporate profits, which (as illustrated in Figure 5.3) had started to fall as a share of GDP beginning in 2000. The question arises of how this came about. To answer this question, it is helpful to look at the relative dynamics of the main labor-related indexes in Russia's industry (see Figure 5.4).

Figure 5.3: GDP, Wage, Profit, and Household Income Dynamics in 1997-2003.



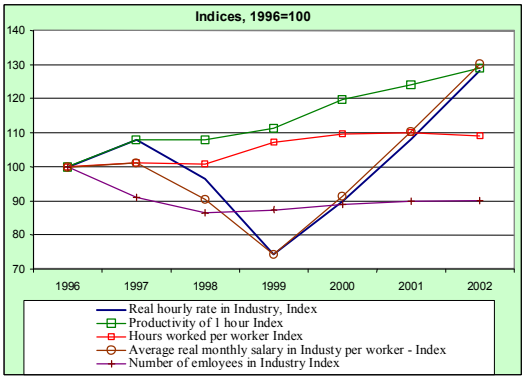
Sources: Goskomstat; Bank staff calculations.

5.14 **Russia experienced an impressive growth in labor productivity.** Although aggregate employment had been growing after the crisis in terms of both manpower and number of hours worked, industrial output had been growing even faster. Hence, labor productivity increased. It is worth noting that it was not employment that bore the brunt of the post-crisis adjustment costs, but wages (see Figure 5.4). In the aftermath of the 1998 crisis, the decline in real wage proved more important in helping enterprises to survive (and hence eventually to keep their workforce) than did a productivity boost that resulted from enterprises' adjusting employment to contracting output. Industrial salaries had fallen far more than either output or employment. This increased the profitability of an hour worked in industry. Given the record low utilization rates of both labor and fixed assets in the pre-crisis period (capacity utilization was a mere 39 percent in 1998) it became possible to dramatically increase industrial output without any major investment or restructuring.

5.15 **Wage adjustment served as a substitute for restructuring.** Only by the end of 2002 had the cumulative growth in industrial wages leveled with the cumulative growth in industrial labor productivity. In addition to demonstrating the amazing tolerance of Russia's labor, this answers the question of how real wages in Russia could grow faster than either labor productivity or GDP over the last few years. The answer then, is that they had fallen so far after the crisis that there was a long

way to go in order to “catch up”. It follows that the times when wages and real income growth could easily exceed GDP and productivity growth are over. In other words, from now on, any given rate of GDP growth will result in less tangible benefits for wage-earning households than was the case in 2000-02.

Figure 5.4: Industrial Employment, Wages, and Productivity in 1997-2002

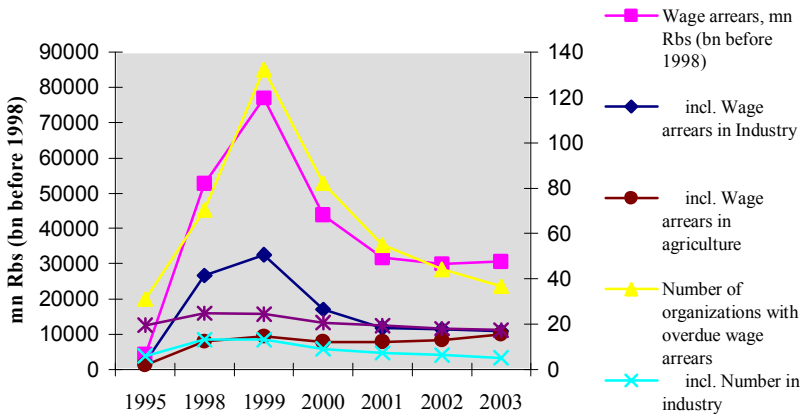


Sources: Goskomstat; Bank staff calculations.

5.16 **There is a significant variation in wage dynamics across sectors and industries.** Real wage dynamics varied by sector in 1997-2002 (see Annex Table A5.1). It is clear that although the trend is similar for all sectors, some sectors (credit and finance, geology and geodesy, communications) have been leading in terms of real wage increase (credit and finance, geology and geodesy, communication), while others have been lagging behind (agriculture). Annex Figure A5.1 plots the nominal hourly wage by sectors and industries. It shows that such sectors as fuel, non-ferrous metallurgy, and credit and finance, are not only the highest payers but also those with the most rapid increase in wages.

5.17 **The negative role of wage arrears on household welfare diminished dramatically with the economic recovery.** Since 1999 there has been a significant decline in wage arrears both in volume and in number of organizations that have wage arrears (Figure 5.5). Wage arrears are observed now only in some regions, or with respect to some professional groups (rural areas, military people, agriculture).

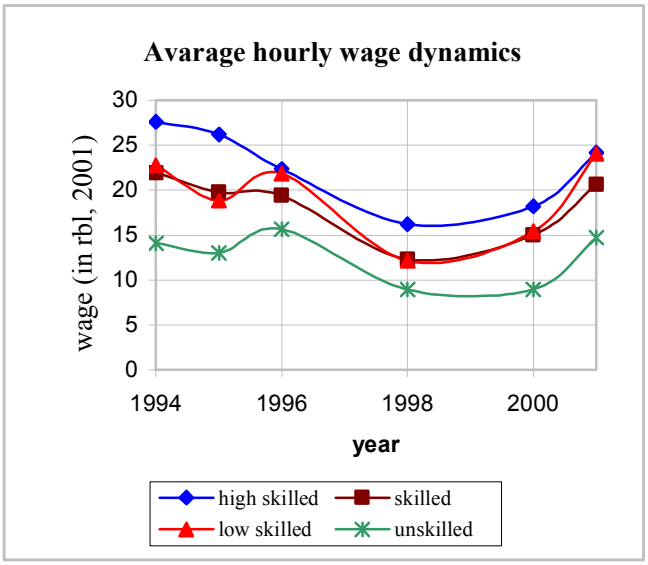
Figure 5.5: Wage Arrears, Nominal Volume and Number of Organizations, 1995-2003



Source: Gostomstat, "Labor and Employment in Russia", (2003), p.445.

5.18 **The gap between skilled and unskilled labor, which had been decreasing prior to 1998, started to increase again in 2000-01.** Figure 5.6 illustrates this growing gap on the basis of RLMS. Yet the wage differential (or premium) between a non-manual worker and a manual worker seems to have stabilized at 65 percent for the period since 1999 (Sabirianova, 2003). The gender gap remains significant too (see Box 5.1)

Figure 5.6: Wage Dynamics of Skilled and Unskilled Labor, 1994-2000



Source: Grishina (2003), Graph 2.

5.19 **Wages became decompressed in the 1990s, with returns to one year of schooling increasing from 8 percent in 1996 to 11 percent in 2000. Consequently, inequality in labor earnings increased recently.** Estimates of the return to one year of higher education was 12.5 percent in 2000, up from 6 percent in 1994 (Sabirianova, 2003). The Gini coefficient for various definitions of wages (based on RLMS) increased by 0.2-0.3 percentage points from 1998 to 2000, and stabilized in 2001 (Lukyanova, 2003). The rise is believed to reflect the increased returns to skills in the era of the knowledge-based economy. However, inequality in household incomes in the same RLMS surveys has not increased. This is potentially due to the fact that wage income, as reported by the RLMS, contributed only about half of the total household income for the years 1998, 2000, and 2001. Indeed, the growth in real income between 2000 and 2001 for various percentiles of the households did not increase income inequality.[11] (See also discussion of inequality in Chapter 2.) Wages are also subject to a gender gap (Box 5.1).

[11] See Russian Longitudinal Monitoring Survey 1992-2001, "Monitoring Economic Conditions in the Russian Federation," University of North Carolina, April 2002, p. 4 and p. 9.

Box 5.1: Gender Gap in Wages

The gender wage differential increased from 29 percent in 1995 to 37 percent in 2000. Fakhrutdinova (2002) has shown that differences in endowments, and in occupational, industrial, and sectoral affiliation, including segregation to low paid industries, account for almost 47-61 percent of the gross differential (see Box table). It is striking to note that the higher educational endowment of women counterbalances the increase in the gender gap. Women's advantages in human capital, however, are overwhelmed by the disadvantages caused by gender-specific occupational and industrial employment segregation into low-paid sectors. Different rewards for the same endowments appear to be responsible for 53-39 percent of the wage gap in 1995-2000, which signals the continuation of gender discrimination in wages.

Table 5.7: Gender Wage Gap Decomposition

	1995		1996		1998		2000	
	Value	percent	Value	percent	Value	Percent	Value	percent
Total differential in log	**0.2558**	**100**	**0.2713**	**100**	**0.2435**	**100**	**0.3167**	**100**
Ln gap percent	29		31		27		37	
Difference in characteristics:	**0.1434**	**56.05**	**0.1544**	**56.91**	**0.1367**	**56.15**	**0.1924**	**60.76**
Education	-0.0191	-7.47	-0.0307	-11.32	-0.0236	-9.69	-0.0507	-16.01
Occupation	0.0803	31.39	0.0784	28.90	0.0718	29.49	0.1183	37.36
Feminization of industry	0.0815	31.86	0.1021	37.63	0.0801	32.90	0.1033	32.62
Megapolitan areas	-0.0102	-3.99	-0.0008	-0.29	-0.0004	-0.16	-0.0016	-0.51
State enterprises	0.0109	4.26	0.0054	1.99	0.0088	3.61	0.0231	7.29
Difference in returns	**0.1124**	**43.95**	**0.1169**	**43.09**	**0.1068**	**43.85**	**0.1243**	**39.24**

Source: Fakhrutdinova (2002), Table 2, p.19, based on RLMS.

D. FISCAL STABILIZATION HAS HELPED TO IMPROVE PUBLIC SECTOR WAGES

5.20 **The state budget is an important employer, and this determines its role in the labor market.** The influence is twofold. Public sector employment attracts a significant share of labor and provides an important benchmark for wage setting. Moreover, the very mechanism of wage setting in the public sector is still used as a model by many private employers (Kapeljushnikov 2002). Total employment in public services (broadly defined) amounts to 37 percent of the Russian workforce.

5.21 **The public sector is known for a fairly compressed formal wage structure and a number of low-paid jobs.** As is seen in Table 5.8, the incidence of low pay was about 44 percent among public service workers in 2000, with 11.5 percent being very low paid. In comparison about 25 percent of private sector employees were low paid, with 8 percent being very low paid. However, there were several noticeable increases in public sector salaries in the past three years. The wage of a particular public sector employee in a given grade is linked through a "grade coefficient" to the "minimum wage tariff", which is the base wage rate for the lowest grade. Figure 5.7 shows the trend in the real minimum wage rate for public sector employees. The figure indicates several increases in the 2000-2002 period. By 2002, the public sector wages exceeded their value in 1997 in real terms. This has had a positive impact on the incomes of low paid public servants.

Table 5.8: Low Pay in Russia, 2000

	Percent of all employees	Percent who are low paid	Percent who are very low paid	Percent with no pay
Wholly government owned	48.5	39.9	14.5	18.4
Public service workers	(13.3)	43.9	11.4	15.8
Private/joint ventures	36.2	24.6	8.2	14.3
Foreign owned	(4.1)	15.0	3.5	7.3
Missing	15.3	29.4	10.5	18.8
All employees	100	32.6	11.6	17.0

Note*:* Low paid – with earnings of less than 2/3 median earnings; very low paid - with earnings of less than 1/3 median earnings. *Source:* Klugman et al. (2002), p.30 (based on RLMS).

5.22 **In Russia social assistance in the form of monthly benefits barely exists, and there is practically no unemployment assistance (UA) provision.** This is a major difference from Eastern Europe, where social assistance is rather common and where each unemployed person can receive unemployment assistance of infinite duration and of non-negligible magnitude. While the Russian system provides almost no distortions to the incentives to work, it does not prevent the unemployed from falling into poverty. The unemployment benefit system in Russia also fails to provide unemployment *insurance* for either skilled or unskilled workers. Even though the formal replacement ratios are comparable to those in developed countries, high inflation at the beginning of the 1990s, payment arrears afterward, and the upper cap of the regional average wage level are now responsible for the low *effective* replacement ratios of unemployment benefits. Moreover, there is a very loose connection between the labor market history of the unemployed and the benefit. The disincentives to search for a job are probably negligible in this case, but are at the expense of the complete failure of the insurance function.

E. LABOR MARKET INSTITUTIONS PLAY A LIMITED ROLE IN MAGNIFYING THE IMPACT OF ECONOMIC GROWTH ON EMPLOYMENT

5.23 **The Russian Labor Code will remain restrictive as compared to those in OECD countries, even after the new Code is introduced.** Formally, the Code puts rather strong restrictions on an employers' adjustment to technological changes and economic shocks through labor shedding or wage reduction. Hence, the Code significantly increases the cost of doing business. If formal rules had been respected, then the response to high separation and hiring costs would have been a decrease in the demand for labor and a decline in turnover.

5.24 **The Russian labor market, which is formally rather restrictive, is effectively fairly flexible.** Indeed, many rather restrictive norms of the Labor Code, including the new Code, are not enforced, which allows labor market participants to overcome the restrictions. Informal employment without contract specification, and forced "voluntary" quits, are among the most frequently cited ways of overcoming the high turnover costs stipulated in the Labor Code. Moreover, formal contracts are often violated with no penalty.

5.25 **There is still evidence of the influence of institutional restrictions on participants in the formal labor market.** Gimpelson et al. (2003) argues that the observed decrease in employment in large and medium enterprises in recent years is due to the high turnover costs for enterprises working in the formal sector. Hence, it is the informal sector which increases employment.

5.26 **The new Labor Code has introduced some changes aimed at lowering turnover costs.** In particular, trade unions have lost the veto right in separation decisions. The financial costs of separation remain high, however. Fixed-term contracts that are expected to replace life-long contracts and to reduce labor turnover costs are specified in the new Code. However, the Code specifies a

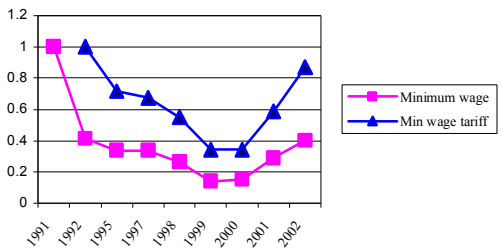
limited list of reasons for entering into such a contract. The Code preserves significant obligations for the employer with respect to tenured employees (i.e., those with an infinite contract).

5.27 **Consequently, only a few managers believe that the new Code introduces more flexible labor relations**. Gimpelson et.al. (2003) studied the reaction of enterprises to the new Labor Code by interviewing managers of about 300 enterprises. They found that only 26 percent of managers believed that the new Code introduces more flexible labor relations, while 36 percent believed that it introduces additional problems for managers, and the rest do not see any changes. The new Labor Code is regarded as more flexible mainly by new small private enterprises in a good financial position located in small towns. As far as enforcement is concerned, only 24 percent of managers expect the Code to stimulate better compliance, while about 70 percent do not expect any changes, and 5 percent expect even worse compliance. There are some positive shifts mentioned: almost one-third of managers indicate that it is easier to use fixed-term contracts now, and more than 18 percent find it easier to fire employees. Over half of the respondents do not acknowledge any improvements, however.

5.28 **Collective bargaining institutions are still weak.** Trade unions do not reflect the interests of employees, and employers' organizations lack support from employers. At the same time, a better representation of workers in the bargaining process would not only increase labor share in value added, but would also help to increase the amount of on-the-job training and to improve working conditions.

5.29 **Minimum wage setting does not reduce poverty.** Wage regulation in Russia is undertaken mainly by setting a minimum wage level and a minimum wage tariff, which is the base rate for the lowest grade in the for public sector. The minimum wage is not binding. The ratio of the minimum wage to the average wage fell from 23 percent in 1990 to 5 percent in 1999. Since then, both the minimum wage and the minimum tariff have increased in real terms during the recent period of economic growth, exceeding the pre-crisis level by 2002 (Figure 5.7).

Figure 5.7: The Dynamics of the Minimum Wage and Minimum Wage Tariff



Source: Goskomstat, "Russia in Figures", (2003), p.99.

5.30 **Wage regulation instruments play a role in economy-wide wage-setting**. Kapeljushnikov (2003) reports that over half of the enterprises in his sample use the minimum wage, or the minimum tariff or regional subsistence level when setting the lowest wages for an enterprise. A large share of enterprises use either the old Soviet or the current Russian tariff system as a basis for establishing own compensation schemes for both blue collar staff (45 percent of respondents) and white collar staff (34 percent of respondents).

5.31 In conclusion, this chapter has shown that economic recovery has increased labor demand. This has led to higher employment, increased productivity and higher wages, and improved earnings have raised the living standards and reduced poverty. The sustainability of wage increases will be conditioned by the extent of future increases in productivity. The poverty reduction trends are addressed in the next chapter.

CHAPTER 6. POVERTY, GROWTH AND INEQUALITY IN RUSSIA

Poverty reduction depends on two factors: (i) economic growth, and (ii) the extent to which the benefits of growth accrue to the poor. The previous two chapters documented robust economic growth and significant improvements in labor earnings following the Russian crisis. The rapid and solid recovery in economic output and labor earnings contributed significantly to improved living standards and a broad-based reduction in poverty since 1999. In particular, higher wages in the private and public sectors; increased aggregate and private sector employment;, reduced arrears in the payment of wages and social benefits; higher pensions; and increased public spending on the social sector contributed to broad-based improvements in living standards.

The present chapter first documents the trends in living standards during 1997-2002 as measured by per capita consumption and then analyzes the increase in poverty resulting from the Russian crisis. The chapter then discusses the subsequent steep reduction in poverty accompanying economic recovery. The extent to which poverty reduction can be attributed to growth, and the fact that this impact of growth on poverty could be undermined by increasing inequality, are also addressed. The chapter also discusses the scope for further reductions in poverty given various scenarios for growth in consumption.

A. POVERTY AND INEQUALITY, 1997-2002

Living Standards Made a Significant Recovery after 1999

6.1 **Mirroring changes in output and labor earnings, per capita consumption fell sharply between 1997 and 1999, followed by a sharp increase between 1999 and 2002.**[12] Table 6.1 shows the trends in consumption over the 1997-2002 period, broken down into food and non-food components. Real per capita consumption lost more than a quarter of its value in two years (1997-99) as a result of the financial crisis. This depression was followed by an impressive rebound. Consumption per capita was 5 percent greater in 2002 than in 1997.

6.2 **The pattern of food and non-food consumption confirms the aggregate trends in living standards**. Given that food is more of a necessity, people tend to adjust to adversity by cutting down on non-food items more than on food items. Similarly, they adjust to positive improvements in living standards by increasing their spending on non-food items. The trends shown in Table 6.1 confirm this adjustment pattern. Food consumption did not fall as sharply as non-food consumption between 1997 and 1999. In the post-crisis period, non-food consumption increased more sharply than per capita food expenditure.

[12] The analysis in this chapter relies on the recommended methodology outlined in Chapter 1, with a derived poverty line and a measure of welfare as consumption with regional adjustment for the cost of living. The consumption measure includes both cash and in-kind consumption expenditures. The cash consumption expenditures include expenditures on food, alcohol, non-food and services. The in-kind consumption includes value of inflow in kind and value of discounts, subsidies, etc., received in kind. Given the substantial spatial price variations, the consumption measure is adjusted for the cost of living differences among regions.

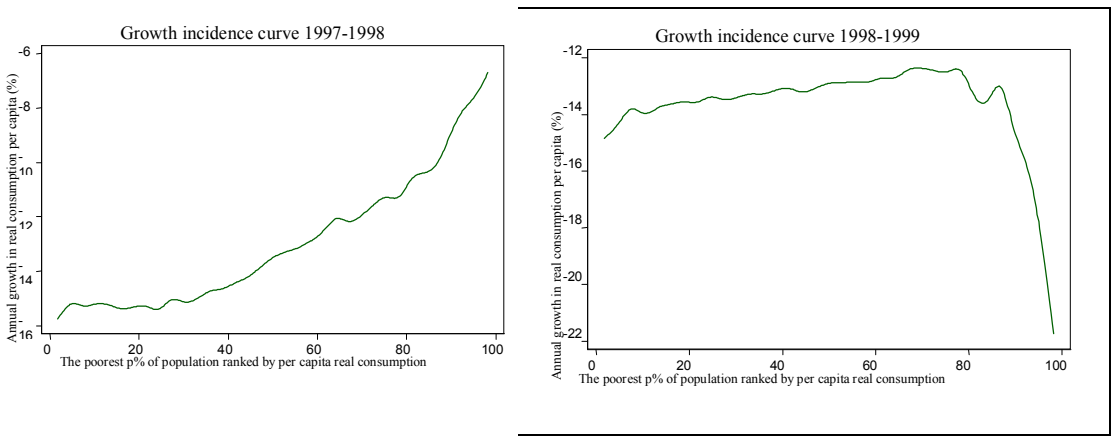
Table 6.1: Per Capita Real Consumption and Growth Rates: 2002 Prices, 1997-2002

Year	Food	Non-food	Total consump.	Share of Food
	Rubles per person per month			
1997	1107	909	2,016	54.9
1998	1111	716	1,827	60.8
1999	893	578	1,471	60.7
2000	916	673	1,588	57.6
2001	1,031	847	1,877	54.9
2002	1,084	1,036	2,120	51.1
	Indices of per capita real consumption			
1997	100	100	100	100.0
1998	100	79	91	110.7
1999	81	64	73	110.6
2000	83	74	79	105.0
2001	93	93	93	100.0
2002	98	114	105	93.1
	Growth rates of per capita real consumption			
1998	0.3	-21.2	-9.4	
1999	-19.6	-19.3	-19.5	
2000	2.5	16.5	8.0	
2001	12.6	25.8	18.2	
2002	5.1	22.4	12.9	

Source: HBS 1997-2002

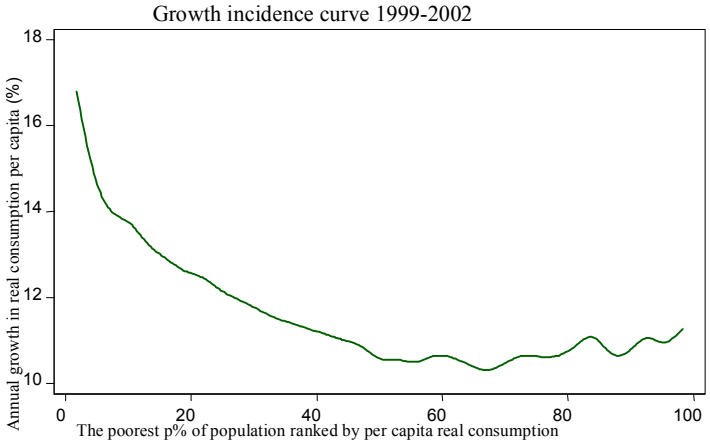
6.3 **The crisis had a heavy impact on the poor.** During the 1997-98 period, the consumption of the poorest segment of the population experienced a far more significant drop than that of the population as whole. Figure 6.1 shows the "growth incidence curves," which illustrate the consumption growth for various cumulative percentiles of the population. Consumption declined for every percentile between 1997 and 1998. The poor, like the rest of the population, became poorer. However, while the entire population suffered a decline between 1998 and 1999, the decline was much worse for the richest segment of the population.

Figure 6.1: The Severe Impact of the Crisis on the Poor, 1997-1999



6.4 **The economic growth between 1999 and 2002 was pro-poor**. During the economic growth period of 1999-2002, the poor became better-off, which indicates that makes growth is pro-poor. Moreover, the consumption of the poor showed a relatively large increase than that of the better-off (Figure 6.2). The quantitative impact of the changes in poverty and inequality is addressed in the next two sections.

Figure 6.2: Economic Growth and Its Pro-poor Effect



Growth Sparked Positive Trends in Poverty

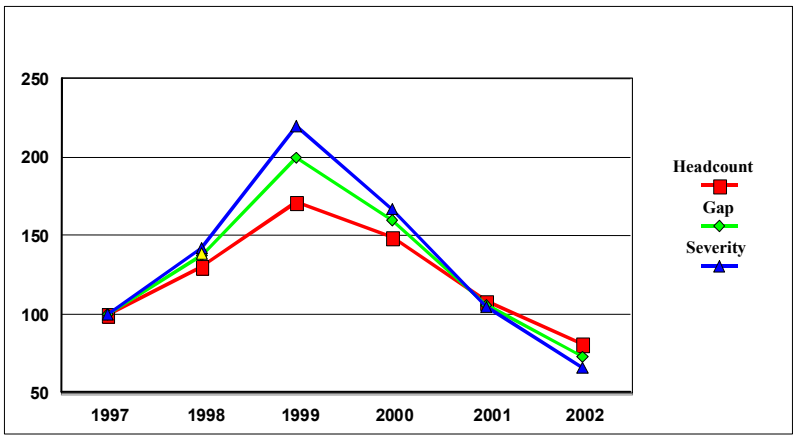
6.5 **All poverty measures show that poverty had increased substantially from 1997 to 1999** (see Table 6.2). As consumption collapsed by more than a quarter during the period 1997-1999, various measures of poverty showed a significant increase. During this period the fraction of the total population in poverty increased from 24.1 percent to 41.5 percent. About 25 million people were thrown into poverty in two years! Other measures showed a dramatic worsening of poverty as well. The severity index – which is more sensitive to the ultra poor--more than doubled, indicating that the ultra poor were hurt even more severely than the average poor during this period.

Table 6.2: Poverty Trends in Russia, 1997-2002

Year	Headcount	Gap	Severity
		Actual poverty estimates	
1997	24.1	7.0	3.0
1998	31.4	9.7	4.3
1999	41.5	14.1	6.6
2000	35.9	11.3	5.1
2001	26.2	7.5	3.2
2002	19.6	5.1	2.0

6.6 **Poverty was cut in half during 1999-2002**. The substantial increase in poverty during 1997-99 was more than fully offset by the significant reduction in poverty during 1999-2002 (Table 6.2). As household consumption recovered strongly, all poverty measures show a significant decline. The fraction of persons with consumption below the recommended poverty line fell from 41.5 percent in 1999 to 19.6 percent in 2002. This is the equivalent of 32 million people escaping poverty during the period. Moreover, the poverty gap index was reduced at an even greater rate than the headcount index, and the severity of poverty index was reduced at a still greater rate (Figure 6.3). This indicates that the ultra poor benefited even more than the average poor during the recovery period. By the end of 2002 all measures of poverty were lower than in 1997.

Figure 6.3: Indices of Poverty, 1997-2002



Source:

6.7 **The low point for GDP was in 1998**. In 1999 there was growth in GDP but consumption continued to decline, reaching its lowest point. At this time, poverty reached its highest level. The financial crisis hit the economy in the latter part of 1998, but households felt the force of its impact mostly in 1999. For example, Table 5.6 in Chapter 5 shows that the low point for the average wage rate was 1999 and not 1998. It is quite plausible to have a short lag between the low point for GDP (1998) and the low point for household consumption (1999), as households were probably able to postpone the effects of the crisis for a short time.

6.8 **Although the levels are differ, the trends in poverty over the 1997-2002 period shown above are similar to those in the official poverty estimates, as well as those in poverty estimates using international poverty lines.** Table 6.3 shows the official estimates of poverty as well as those derived from the recommended methodology developed in Chapter 1. The table also shows the poverty estimates using the consumption measure along with the international per capita poverty lines of the equivalent of one dollar a day, two dollars a day, and four dollars a day. It is important to recognize that the official estimates for the years 2000-2002 rely on the revised poverty line of 2000, while the earlier official estimates rely on the poverty line adopted in 1992. As the official 2000 poverty line is more generous than the older 1992 poverty line, the official series is not comparable internally between the two periods. Overall, all series show a significant increase in poverty between 1997 and 1999 and a significant reduction in poverty in the subsequent period. For example, according to the two dollars a day international poverty line, 12.3 million people were thrown into poverty between 1997 and 1999, but 15 million people escaped poverty in the 1999-2002 period. The increase in poverty and the subsequent decline are sharper according to the recommended methodology than they are according to the official poverty estimates. The table also clearly shows that the one dollar a day poverty line is not appropriate for Russia, as is also the case with other countries in the Europe and Central Asia region. Indeed, the poverty line derived from the recommended methodology in Chapter 1 was 1,056 rubles per capita per month, which amounts to 3.54 dollars a day in purchasing power parity terms.

Table 6.3: Incidence of Poverty According to Various Poverty Lines and Methodologies, 1997-2002

	1997	1998	1999	2000	2001	2002
Headcount Index (% of Population)						
Official Poverty Estimates	20.7	23.3	28.3	***28.9***	***27.3***	***24.2***
Recommended Methodology	24.1	31.4	41.5	35.9	26.2	19.6
$1.075 a day Poverty Line	1.0	1.6	2.7	1.8	1.0	0.5
$2.150 a day Poverty Line	8.0	11.6	16.4	12.8	8.6	6.3
$4.300 a day Poverty Line	34.4	42.9	51.9	46.5	38.4	33.0
Number of Poor People (Millions)						
Official Poverty Estimates	30.3	34.0	41.2	***41.9***	***39.4***	***35.8***
Recommended Methodology	35.3	45.8	60.5	52.1	37.8	28.1
$1.075 a day Poverty Line	1.5	2.4	4.0	2.6	1.5	0.7
$2.150 a day Poverty Line	11.6	16.9	23.9	18.5	12.4	9.0
$4.300 a day Poverty Line	50.4	62.6	75.6	67.4	55.5	47.3

Note 1: The 2000 Purchasing Power Parity conversion factors were used for the international poverty lines.
Note 2: The official poverty line was changed as of 2000, hence the series is not comparable before and after that date

Trends in Inequality

6.9 **The aggregate changes in poverty are driven by changes in average consumption as well as changes in the inequality in consumption**. Thus, it is important to fully analyze the trends in inequality.

6.10 **Although the Gini index showed little change, growth was pro-poor in the period 1999-2002 because of the increasing share of welfare of the bottom quintile.** Inequality increased in the aftermath of the 1998 crisis. Since then, it has begun to decline more or less monotonically. During the economic crisis, real wage and employment declined (with the former falling particularly sharply). This adversely affected the poor much more than the non-poor, because the income of the poor in Russia depends heavily on wage employment. Inequality initially declined in 1999. In 2000, there was a sharp decline in the unemployment rate and a very sharp increase in the real wage, which led to a further decline in inequality. In the period 2000-02, the decline in unemployment slowed down but the real wage continued to increase rapidly. The Gini index remained more or less constant during this period but the welfare share of the bottom quintile continued to increase (see Figures 6.4 and 6.5). The share of the bottom quintile in total consumption increased from 6.4 percent in 1998 to 7.2 percent in 2002 (see Table 6.4). These trends suggest that changes in the unemployment rate and in real wages are important determinants of changes in inequality.

Table 6.4: Trends in Inequality: Gini Index and Quintile Shares

Year	Gini index	Quintile1	Quintile2	Quintile3	Quintile4	Quintile5
		Per capita consumption				
1997	37.0	6.5	11.3	16.0	1997	37.0
1998	39.2	6.1	10.7	15.4	1998	39.2
1999	37.3	6.3	11.1	15.9	1999	37.3
2000	36.3	6.6	11.4	16.1	2000	36.3
2001	36.8	6.6	11.3	15.9	2001	36.8
2002	36.8	6.7	11.3	15.7	2002	36.8
		Per capita real consumption				
1997	36.1	6.7	11.6	16.2	22.6	43.0
1998	37.5	6.4	11.1	15.8	22.4	44.2
1999	35.5	6.6	11.5	16.4	23.2	42.2
2000	34.2	7.0	11.9	16.6	23.2	41.3
2001	34.5	7.0	11.8	16.4	23.0	41.7
2002	34.4	7.2	11.8	16.3	23.0	41.8
		Per capita welfare				
1997	34.6	7.0	11.9	16.6	22.7	41.8
1998	36.1	6.7	11.5	16.1	22.6	43.0
1999	34.0	6.9	11.9	16.8	23.4	41.0
2000	33.0	7.2	12.2	16.9	23.4	40.3
2001	33.1	7.3	12.2	16.8	23.2	40.5
2002	33.0	7.5	12.2	16.6	23.1	40.6

Note: Real consumption is consumption adjusted for regional price differences. The "welfare" variable is real consumption divided by the poverty line.

Figure 6.4: Trends in Gini Index of Consumption, 1997-2002

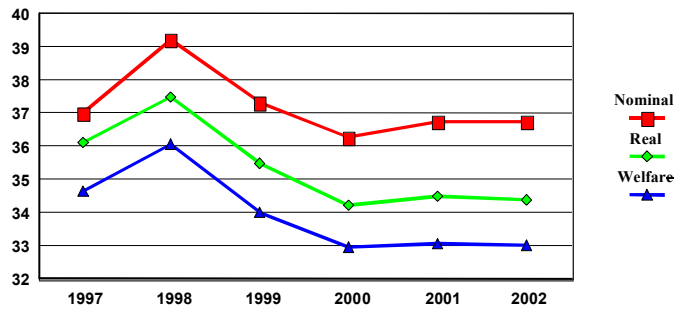
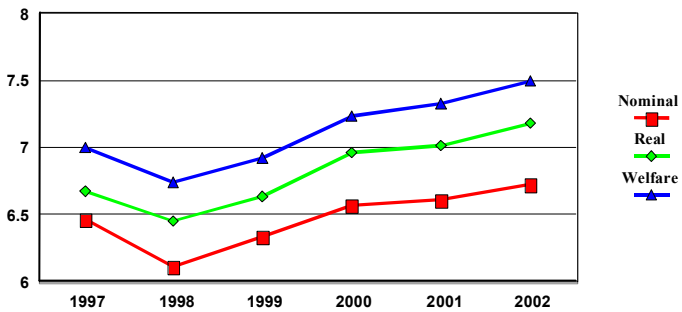


Figure 6.5: Trends in Consumption Share of First Quintile, 1997-2002



Decomposing Changes in Poverty into Growth and Redistribution Components

6.11 **The poverty level depends upon two factors: the average level of consumption or welfare and the extent of inequality in the consumption distribution.** While an increase in average consumption reduces poverty, an increase in inequality increases poverty. The total change in poverty can be decomposed as the sum of growth and inequality components. The growth component measures the change in poverty assuming no change in the inequality. The inequality or redistribution component of the decomposition measures the change in poverty that is strictly due to a change in inequality assuming that the average consumption of the whole distribution has not changed. The total change in poverty between any two years can be written as the sum of these two components.

6.12 **The crisis in Russia hurt the poor proportionately more than the non-poor**. The percentage of poor increased by 30.1 percent in 1998, of which 21.5 percent was the contribution of a decrease in average expenditure and 8.7 percent was the contribution of a change in inequality (see Table 6.5). If inequality had not changed, the incidence of poverty would have increased by only 21.5 percent, A similar conclusion emerges when we measure poverty by the other poverty measures (gap, severity).

6.13 **Although the real wage declined in 1999, the improvement in employment offset the adverse effect of the falling real wage.** The incidence of poverty increased by 32.2 percent in 1999. If inequality had not changed, the incidence of poverty would have increased by 38.9 percent. This means that the consumption of the poor grew disproportionately more than that of the non poor, contributing to a further reduction in poverty of 6.7 percent. The poor particularly benefited from growth during this period because of a large decline in the unemployment rate.

Table 6.5: Decomposing Change in Poverty into Growth and Redistribution Components, 1998-2002

	Growth Component	Redistribution Component	Total Percent Poverty Change
		Headcount ratio	
1998	21.5	8.7	30.1
1999	38.9	-6.7	32.2
2000	-11.3	-2.2	-13.4
2001	-27.3	0.1	-27.1
2002	-24.4	-0.7	-25.1
1997-2002	-11.8	-7.0	-18.7
		Poverty gap ratio	
1998	27.2	10.6	37.8
1999	53.2	-8.2	45.1
2000	-14.0	-5.7	-19.7
2001	-32.4	-1.4	-33.8
2002	-27.3	-4.4	-31.6
1997-02	-13.1	-14.3	-27.4
		Severity of poverty	
1998	30.6	11.7	42.4
1999	62.8	-8.5	54.3
2000	-15.6	-8.2	-23.8
2001	-35.2	-2.4	-37.6
2002	-28.7	-7.7	-36.5
1997-02	-13.7	-19.9	-33.6

6.14 **During the five-year period from 1997 to 2002, the poverty headcount ratio declined by 18.7 percent, of which growth contributed to a reduction of 11.8 percent and lower inequality contributed to a reduction in poverty by 7 percent.** This means that growth favored the poor during this period of recovery from the financial crisis.

B. THE CHANGING POVERTY PROFILE

The Impact of Growth on Rural-Urban Differences

6.15 **The rural-urban gap had been narrowing until 1999, when it began to widen.** Per capita welfare in 1997 in the urban areas was about 28 percent higher than that in the rural areas (see Table 6.6). The gap between the rural-urban areas increased between 1997 and 2002. By 2002, per capita welfare in the urban areas was about 38 percent higher than that in the rural areas. Overall inequality between people in two separate groups can be decomposed into an inequality term "within the groups" and another term of inequality "between the groups," using a standard inequality index called the Theil index. The use of the Theil decomposition also shows that the share of "between" inequality in total inequality decreased from 2.8 percent in 1997 to 2.2 percent in 1999 and then increased to 5.5 percent (see Table 6.7). This is an expected phenomenon. When an economy is on the downturn, the people living in urban areas suffer more severely than those in the rural areas, but during the upturn the people living in urban areas benefit more rapidly than those in the rural areas.

Table 6.6: Per Capita Welfare by Urban and Rural Areas, 1997-2002

	Urban		Rural	
	Value	Growth rate	Value	Growth rate
1997	199	-	156	-
1998	180	-9.4	141	-9.4
1999	145	-19.6	117	-17.0
2000	158	8.7	123	5.3
2001	189	19.5	141	14.4
2002	215	13.9	155	9.8

Table 6.7: Inequality Within and Between Urban and Rural Areas, 1997-2002

	Within Inequality		Total	Between	Share of Between
	Urban	Rural	Inequality	Inequality	Inequality
1997	19.3	21.9	20.5	0.6	2.8
1998	21.5	21.6	22.1	0.6	2.6
1999	20.0	17.8	19.9	0.4	2.2
2000	18.3	16.9	18.5	0.6	3.2
2001	18.3	16.3	18.6	0.8	4.3
2002	17.8	15.9	18.3	1.0	5.5

The Changing Demographic Profile of Poverty

6.16 **Poverty among children was consistently high in every year. It is noteworthy that poverty among the elderly was consistently low.** The standard procedure is to assume that if a household is identified as poor, all persons living in that household are poor (which is not necessarily the case in practice, but is justified by the lack of data on the distribution of resources within a household). Using this assumption, we can measure the incidence of poverty among different types of individuals (see Table 6.8). It is worth noting that the incidence of poverty among older children had

not only become the highest of any demographic group by 2002 but had also declined by less than was the case for any other group during 1997-2002. Women and younger children were the two groups that benefited most from the recovery. The decline in poverty incidence for these groups was 4.3 and 4.8, respectively – higher than an average decline of 4.1 percent for the population as a whole.

Table 6.8: Percentage of the Poor by Individual Types, 1997-2002

	Active Males	Active Females	Elderly	Children 0-6 years	Children 7-15 years	All persons
			Percentage of poor			
1997	23.9	22.8	17.9	33.6	29.9	24.2
1998	31.5	29.6	25.4	41.0	38.4	31.4
1999	40.6	39.8	37.7	49.8	48.8	41.6
2000	35.0	33.9	32.5	42.6	43.9	35.9
2001	25.6	24.8	21.5	32.5	33.7	26.2
2002	19.4	18.3	15.1	26.2	26.8	19.6
			Percentage change in poverty			
1998	31.9	29.7	42.0	22.1	28.3	29.9
1999	29.0	34.3	48.5	21.6	27.2	32.3
2000	-13.8	-14.7	-13.7	-14.4	-10.0	-13.6
2001	-26.8	-26.9	-33.8	-23.8	-23.2	-27.1
2002	-24.5	-26.3	-29.8	-19.4	-20.4	-25.1
1997-2002	-4.1	-4.3	-3.3	-4.8	-2.1	-4.1

C. HALVING POVERTY IS AN ATTAINABLE BUT DIFFICULT GOAL

6.17 **Cutting poverty in half between 2002-2007 is potentially attainable, but is a very difficult and challenging goal.** It requires a diversified economic base and deep structural reforms. WTO accession will generate medium-term gains for welfare and poverty reduction, but the implementation of a broad array of reforms is needed in other areas as well (see Chapter 4).

6.18 **Sustained and broad-based growth is the key element of a strategy to fight poverty**. Growth has been the driving force behind the significant poverty reduction that took place between 1999 and 2002. However, as poverty declines a higher growth rate of consumption is required to achieve the same percentage point reduction in poverty. For example, for every 5 percentage points of uniform growth in consumption, poverty would go down by about 3 percentage points if 30 percent of the population lived in poverty, but it would go down by only 2 percentage points if the incidence of poverty was 15 percent of the population. Figure 6.6 shows simulations of the impact of different scenarios of consumption growth on the incidence of poverty, while assuming no change in inequality at its level in 2002. The simulations start from the poverty level of 19.6 percent in 2002. If uniform growth in consumption is constant at 3 percent per annum, then the incidence of poverty would be cut by about a third, to reach 13.4 percent in 2007. If consumption were to grow uniformly by 4 percent per annum, poverty would be cut by about 40 percent to reach 11.7 percent by 2007. ***It would take a high level of uniform consumption growth of at least 5 percent per annum to reduce the incidence of poverty almost in half between 2002 and 2007.*** At 5 percent annual growth in consumption, the incidence of poverty is expected to reach 10.2 percent by 2007. In this case the poverty gap index and poverty severity index, which capture the depth and severity of poverty would also be reduced by about half of their value in 2002 (Figure 6.7).

Figure 6.6: Simulation of Poverty Trends for Different Growth Scenarios
2002-08 (P0 in 1997=100)

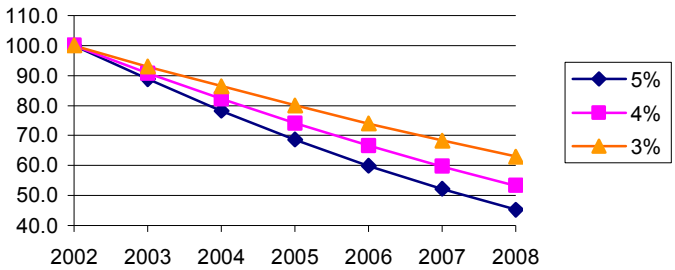
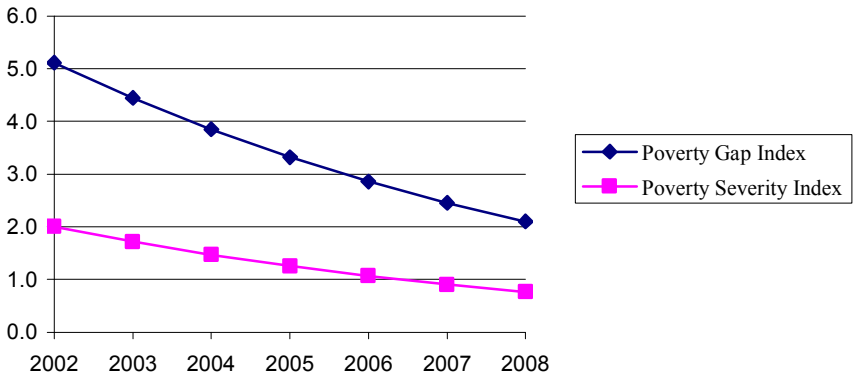


Figure 6.7: Simulation of Poverty Trends for a 5 percent Growth Scenario, 2002-08



6.19 **Increasing inequality would substantially reduce the poverty reduction impact of growth**. If future growth were accompanied by increasing inequality, for example, through higher returns to education and increasing decompression of wages, inequality would be likely to rise. Increased inequality would reduce the poverty reduction impact of growth, and while average growth rates might be achieved, the poverty reduction targets could be far from being achieved. It is important, therefore, to monitor inequality appropriately and develop a better understanding of its determinants and the policy levers that could influence it.

6.20 **To achieve a sustained growth rate of 5 percent in consumption, GDP would have to increase at a higher rate than 5 percent**. As the economy grew from its depressed state in 1998, households responded by strongly increasing their consumption--more so for non-food items. This may not continue into the future. The growth was facilitated by a substantial under-utilized capacity, requiring little extra investment. With several years of expanding output, the capacity utilization is at a high level and further output increases will need to be achieved by expanding the capital stock and devoting a larger share of output to investment rather than consumption. Also, consumption is likely to rise less than incomes, as households start increasing their savings rate. While this would be good for achieving and sustaining growth in the long run, it implies that GDP will have to grow at a faster rate than the required 5 percent consumption growth to cut poverty in half by 2007.

6.21 **In conclusion, the chapter has demonstrated that growth is a pillar for any poverty**

reduction strategy. For growth to have the desired poverty reduction impact, it needs to be broad-based and sustainable. Chapter 7 addresses the way in which accession to the WTO would contribute to improved welfare and poverty reduction over the medium run. It is also important to recognize the need to fight poverty along two other pillars: (i) targeted interventions for deep pockets of poverty that may not receive much benefit from growth, and (ii) a redistributive social policy. Part III addresses the scope for improving the redistributive social policy in order to fight poverty.

CHAPTER 7. IMPACT OF WTO ACCESSION ON LIVING STANDARDS AND POVERTY

Accession to the WTO is likely to generate substantial benefits for Russia—about 7 percent of the value of consumption in the medium term and considerably more in the long term. These benefits would come from increased foreign direct investment (FDI) by multinational service providers, owing to commitments to liberalize the services sectors to foreign investors; from increased productivity owing to an inflow of imported technology as the result of a reduction in Russian tariff barriers; and from the improved treatment of Russian exporters in antidumping cases. The export intensive sectors are likely to experience the greatest expansion. Sectors that export little and that have relatively high import protection are likely to contract in the medium term. In the long term, an improvement in the return to investment should expand the capital stock and incomes considerably more.

The vast majority of households will gain from WTO accession, and the poor will gain as least as much as the average household. Rural households are expected to gain slightly less than the average urban household, and workers are likely to gain more than capital owners.

Government safety nets are crucial in helping with the short-run adverse impact from the accession, especially for the poorest members of society. Despite gains in the medium to long term, during a transition period it is possible that many households will lose. There will be unskilled workers who have been displaced and will need to find new employment. These workers will suffer losses from transitional unemployment and are likely to incur expenses related to retraining or relocation. Thus, despite the likely substantial improvement in the standard of living for almost all Russian after accession to the WTO and after adjustment to the new equilibrium, the transition will require a strong role for public policy, especially as regards the poorest members of the society (Appropriate safety net policies are discussed in chapter 8.).

7.1 **Global integration remains a challenge for Russia.** By some measures, Russia is already well integrated with the global economy. The trade to GDP ratio in 2002 was almost 50 percent. But much of the exports are energy commodities, which now comprise 54 percent of total exports. Foreign direct investment (FDI) inflows remain low compared with those of most transition economies (see Table 7.1). Net FDI in Russia ranged between 0.8 and 1.7 percent of GDP between 1997 and 2001 (less in earlier years). Attracting more FDI is important to promote growth, to boost competitiveness through the transfer of technology and management expertise, and to diversify the economy. This requires an environment in which multinationals view Russia as a country where investment can give them a global competitive advantage.

7.2 While an open trade regime is a prerequisite for WTO accession, so too are low policy and administrative barriers to investment as well as trade facilitation (as discussed in Chapter 4).

Table 7.1: Foreign Direct Investment Inflows into Emerging Markets, 1995-2001

Country	Net FDI Inflow ($ billion)							Net FDI as % of GDP						
	1995	1996	1997	1998	1999	2000	2001	1995	1996	1997	1998	1999	2000	2001
Russian Federation	**2**	**2.5**	**6.6**	**2.8**	**3.3**	**2.7**	**2.5**	**0.6**	**0.6**	**1.5**	**1**	**1.7**	**1.1**	**0.8**
Czech Republic	2.6	1.4	1.3	3.7	6.3	4.6	4.9	4.9	2.5	2.4	6.5	11.6	9	8.7
Hungary	4.5	2.3	2.2	2	2	1.7	2.4	10.1	5	4.7	4.3	4.1	3.7	4.6
Poland	3.7	4.5	4.9	6.4	7.3	9.3	8.8	2.9	3.1	3.4	4	4.7	5.9	5.1
Argentina	5.6	6.9	9.2	7.3	24	11.7	3.2	2.2	2.6	3.1	2.4	8.5	4.1	1.2
Brasil	4.9	11.2	19.7	3.2	28.6	32.8	22.5	0.7	1.4	2.4	4.1	5.4	5.5	4.5
China	35.9	40.2	44.2	4.4	38.8	38.4	46.8	5.1	4.9	4.9	4.6	3.9	3.6	4
México	9.5	9.2	12.8	11.3	11.9	13.3	24.7	3.3	2.8	3.2	2.7	2.5	2.3	4

Sources: World Bank, World Development Indicators, 2002; UNCTAD, *World Investment Report*, 2001.

7.3 **WTO accession must be a central pillar of Russia's strategy for global integration.** Accession would provide improved access for Russian exporters. The rights of membership will enable Russia to help shape the future of the global trading environment and, crucially, WTO accession will contribute to progress in the domestic reform agenda in many dimensions. To that end, Russia would benefit if it took the following few steps. First it would reduce tariff peaks for certain products and move toward tariff uniformity or lower tariffs (Russia's average tariff rate of 11 percent for Most Favored Nation (MFN) is lower than the average tariff in many non-OECD countries; however, there are some significant products for which tariffs are quite high. These tariff peaks distort the tariff system; their reduction and movement toward uniformity would improve efficiency). Second, Russia should continue the recent initiatives to improve the investment climate. Third, it could improve the services offer the WTO in ways that would encourage FDI by foreign service providers[13]; and fourth, it should make further progress on customs, trade facilitation and standards.[14]

A. WTO ACCESSION WILL HAVE SIGNIFICANT AGGREGATE BENEFITS

7.4 **Although WTO accession will benefit Russia significantly, accession is likely to have different impacts on various layers of Russian society and on the economy.** Trade and FDI liberalization, which is a part of WTO accession, is likely to have a significant positive impact on growth, and hence on the sustained reduction of poverty. However, policymakers are concerned that effects that have been positive in many countries may not be so in Russia. They are concerned not only with the aggregate effects and impacts on the productive and service sectors, but also with the effects on labor markets and the poor. To address these concerns, this chapter systematically evaluates the likely impact of WTO accession on the poor and on the different layers of the society and the economy.

7.5 **The analysis of the WTO aggregate and distributional impacts relies on an innovative**

[13] Relative to Russia's tariff barriers on goods, the barriers to FDI by multinational companies in areas such as banking, insurance, securities, accounting, telecommunications, maritime transportation and aviation appear to be quite high. This difference is reflected in the remaining contentious issues in the accession discussions at the WTO, where services remain as some of the more contentious issues.

[14] Trade facilitation refers to procedures that allow goods to enter and exit the country without undue delays and with transparent non-discriminatory rules. Progress on standards means reducing technical barriers to trade, and the sanitary and phyto-sanitary barriers that are discriminatory or that limit the flow of goods. This would include, in the case of Russia, greater reliance on international certification agencies for the certification of the safety of goods.

model combining all households from the HBS with a Computable General Equilibrium (CGE) model. Using the CGE model and the HBS-RLMS data (see Box 7.1 for a description of the model and the dataset), the chapter assesses the distributional and poverty implications of WTO accession and provides intuitive explanations for the principal policy results, including the macroeconomic, sector, labor market, poverty and distributional results. Table 7.2 presents key aggregate results. We estimate that, overall, the Russian economy will gain about 7.3 percent of the value of consumption (about 3.4 percent of GDP) from WTO accession in the medium term. The potential gains in the long run are much larger: approximately 24 percent of Russian consumption.

Table 7.2: Impact of WTO Accession: Decomposition of Effects

		Components		
	Aggregate impact of WTO accession	Improved market access only	Tariff reform only	Reform of FDI barriers only
	(1)	(3)	(4)	(5)
Aggregate welfare				
Consumption	7.3	0.7	1.3	5.3
GDP	3.4	0.3	0.6	2.5
Government budget				
Tariff revenue (% of GDP)	0.9	1.4	0.8	1.4
Tariff revenue (% change)	-32.9	8.8	-38.1	11.4
Aggregate trade				
Real exchange rate (% change)	2.7	-0.5	2.1	1.2
Aggregate exports (% change)	14.5	2.3	8.1	3.7
Returns to mobile factors				
Unskilled Labor (% change)	3.8	0.1	0.5	3.2
Skilled Labor (% change)	5.5	0.6	1.7	3.0
Capital (% change)	1.7	-0.5	1.1	1.1
Share of mobile factors that will have to adjust				
Unskilled labor	1.3	0.3	1.3	0.3
Skilled labor	1.2	0.4	0.5	0.6
Capital	0.9	0.5	0.2	0.5

Note: Government revenue surplus is assumed to be distributed proportional to income
Source: Bank staff estimates.

7.6 **Improved market access is valuable but is the least important of the three key changes that would result from WTO accession.** Improved market access accounts for only 0.7 percentage points of the overall gain of 7.3 percentage points (see Table 7.2). Russia has already attained either bilateral (Most Favored Nation) MFN status or preferential status (in the CIS) from almost all of its trading partners. Hence, the MFN status accorded to WTO members will not significantly help Russian exporters to obtain better market access. Russian exporters subject to antidumping cases, however, will obtain improved legal status to challenge the application of antidumping duties. Yet this is not likely to lead to significantly lower duties on average; therefore only a small improvement in market access for Russian exporters is likely to result from WTO accession.

Box 7.1: Overview of the Model and Dataset

The Model and Data

A computable general equilibrium (CGE) model of the Russian economy was employed for the analysis. The primary factors of production are capital, skilled labor and unskilled labor. There are five types of capital in the model. There are 35 sectors and there are three types of sectors: competitive goods and services sectors, imperfectly competitive goods sectors and imperfectly competitive business services sectors (a detailed description of the model is presented in Jensen, Jesper; Rutherford, Thomas F., and Tarr, David G, "Economy-wide and Sector Effects of Russia's Accession to the WTO," 2004, www.worldbank.org/trade/russia-wto. The authors provide confidence intervals of the estimates in that paper

Modeling Assumptions

Goods produced subject to increasing returns to scale are differentiated at the firm level; firms in these industries set prices so that marginal cost equals marginal revenue; and there is free entry, which drives profits to zero. The standard Chamberlinian large group monopolistic competition assumption is used, which results in constant markups over marginal cost.

Aggregate productivity is affected by the number of varieties using the standard Dixit-Stiglitz formulation. The effective cost function for users of goods produced subject to increasing returns to scale declines in the total number of firms in the industry. For simplicity we assume that the compositions of fixed and marginal cost are assumed to be identical in all increasing returns to scale sectors. This implies that the ratio of fixed to marginal cost is a constant. This assumption in a standard Chamberlinian large-group model assures that output per firm for all firm types remains constant - i.e., the model does not produce rationalization gains or losses.

Manufactured goods are assumed to be either produced domestically or imported, and the cost structure of domestic firms is defined by observed primary factor and intermediate inputs to that sector in the base year data. The cif import price of foreign goods is simply defined by the import price, and, by the zero profits assumption, in equilibrium the import price must cover the fixed and marginal costs of foreign firms. In the services sector characterized by increasing returns to scale, there are two types of firms providing services to the Russian economy: (i) Russian firms, which employ primary factors and intermediate inputs, and (ii) multinational firms, which provide services using imported inputs (FDI and foreign expertise) together with primary factors and intermediate inputs.

We assume that the structure of both the marginal costs and the fixed costs of services firms are identical, so that (as was the case in goods production), output per firm is fixed and there are no rationalization gains. For multinational service providers, both the fixed and variable costs of service supply are assumed to be a convex combination of the domestic supply price in the same sector and the cost of imported inputs.

Household Data

The households are modeled endogenously, primarily based on the 49,000 households in the HBS. The major shortcoming of the HBS for the purposes of the analysis is that it does not contain information on the sources of income of the households. For sources of household income we must turn to the RLMS, which contains extensive information on individual and household sources of income: wages and profits from first, second, and third jobs; pensions and unemployment benefits; profits and dividends from accumulated assets.

Recent advances in the literature have proposed techniques for combining data from different survey sources. Econometric techniques known as small area estimation (SAE) and matching have been proposed to produce synthetic datasets that combine survey data with comprehensive census information. We have employed both small area estimation and matching techniques to generate sources of income data for all 49,000 households in the HBS. The key point is that we chose characteristics of the two datasets that are common to both datasets and which we expect influence the factor shares of income.

7.7 **Tariff reduction will lead to significant gains but is not the most important source of gains from WTO accession.** Tariff reduction would yield 1.3 percentage points of improvement in consumption. Tariff reduction should lead to improved allocation of resources in Russia, as resources will be induced to shift to sectors where they are more highly valued at world prices. More important, tariff reduction would more readily permit Russian businesses to import products that contain new and diverse technologies. This would lead to productivity gains. But the Russian tariff is at present not very high (1.6 percent of GDP, or about 7 percent of the value of imports).[15] Therefore, this would not yield the largest macroeconomic effect, although it would be important for a few sectors.

7.8 **Liberalization of the barriers to FDI in the services sectors is the most important source of gains from WTO accession.** About 5.3 percentage points of the estimated increase in consumption would follow from liberalization of the barriers to multinational providers of services. Examples of the barriers that are under negotiation as part of the WTO accession are as follows: the monopoly on long distance telephone services; the restraints on multinational banks opening affiliates in Russia; and the quotas on multinational providers of insurance services. Russian commitments to multinational service providers would encourage more FDI in Russia. This would give Russian businesses improved access to the services of multinational service providers in such sectors as telecommunications, banking, insurance, and transportation. This should lower the cost of doing business and should also lead to productivity gains for firms using these services.

7.9 **The potential long term growth effects resulting from improvements in the investment climate could result in much larger gains, but all estimates are subject to a margin of error.** The long term improvement of the investment climate should expand the capital stock. Hence, we estimate that the long term gains in consumption could be three or four times larger than the medium term gains. All the estimates are subject to a margin of error, due to parameter specification and modeling assumptions. "Confidence intervals" of the estimates indicate that the medium term gains should be substantial under a wide range of parameter and modeling assumptions. The long run estimates, however, are subject to a much larger margin of error

B. IMPACT ON THE SECTORS AND THE LABOR MARKET

7.10 **Employment and output in some sectors will contract, but overall unemployment will not change.** Despite overall gains to the economy, some productive and services sectors will contract in the medium run. However, despite fears that widespread unemployment will follow from increased imports due to the liberalization of tariff barriers, not all sectors will contract. Russia will have to pay for increased imports, and foreigners will demand hard currency for their goods and services. Exports will have to expand in order to pay for the imports. Otherwise, there will not be an increase in imports.[16] The exchange rate will depreciate to encourage both an increase in exports and a decline in imports so that the additional exports can pay for the additional imports. International experience indicates that there is no aggregate change in employment in the medium term from trade liberalization, and this is what we assume will occur in the Russian economy as a result of WTO accession.

7.11 **Protected manufacturing sectors that export little are likely to contract**. In manufacturing, we estimate that the greatest fall in employment will be in the food industry, in light industry, in construction materials and in machinery and equipment. Exports as a share of output are quite low in these sectors, and the first three sectors are the only ones with tariff rates at about 10

[15] Seven percent is an effective tariff rate (i.e, value of collected import duties divided by imports) which is different from an average statuary rate of 11 percent, reported earlier in the chapter, owing to application of various preferential customs regimes

[16] There is a trade surplus in Russia, but the trade surplus reflects capital investment decisions. As long as Russians continue to desire to send capital abroad, the trade surplus cannot be used to pay for imports.

percent.

7.12 **More sectors will expand than contract, and export-intensive manufacturing sectors are likely to experience the largest expansion.** Outside of services, the sectors that will experience the greatest expansion in employment are non-ferrous metals, ferrous metals and chemicals. These sectors are among those that export the highest percentage of their output, and thus they will benefit most from the real exchange rate depreciation that should accompany the tariff reduction. In addition, these sectors are among the seven sectors that will benefit from improved treatment in antidumping cases.

7.13 **Most services sectors that receive FDI will expand employment.** We estimate that many of the key business services sectors, where Russian service providers will be subject to increased competition from multinational service providers, will expand their employment. These sectors include telecommunications, financial services, truck transportation and trade. Multinationals that invest in Russia in these sectors employ between 90 and 98 percent Russian labor. Consequently, FDI in these sectors will increase the demand for Russian skilled workers in these sectors, even if there is a decline in demand for labor from Russian- owned companies.

7.14 **In services sectors where there will be little or no FDI, we expect a small decline in employment**. These sectors would lose from the depreciation of the real exchange rate; thus, the price of traded goods would increase relative to the price of the output of their sectors.

C. RETURNS TO THE FACTORS OF PRODUCTION

7.15 **We estimate that the wage rate of skilled labor will rise by 5.5 percent, the wage rate of unskilled labor will rise by 3.8 percent and the rate of return on capital will increase by 1.7 percent.** Although the returns to all factors of production should increase, the return on capital increases less than that on wages. This is because owners of "specific" capital in sectors that are subject to increased competition from imports or from FDI will see a reduction in the value of their returns (negative impact). Owners of capital that is mobile across sectors will experience an increase in their returns of over 6 percent. The average increase in return to owners of specific and mobile capital is 1.7 percent.

7.16 **The impact on Russian "specific" capital owners in sectors that compete with FDI will depend on their ability to participate in joint ventures.** Despite an overall decrease in the returns to "specific" capital owners, we do not expect all Russian specific capital owners to lose. Notably, we estimate that there would be a significant increase in FDI and an increase in multinational firms operating in the business services sectors in Russia, which would result in a more competitive environment for Russian capital owners in these sectors. Multinationals, however, will often look for a Russian joint venture partner when they want to invest in Russia. The Russian firms that become part of a joint venture with foreign investors are likely to increase the value of their investments. Russian capital owners in business services who remain wholly independent of multinational firms, either because they avoid joint ventures or because they are not desired as joint venture partners, are likely to see the value of their investments decline.

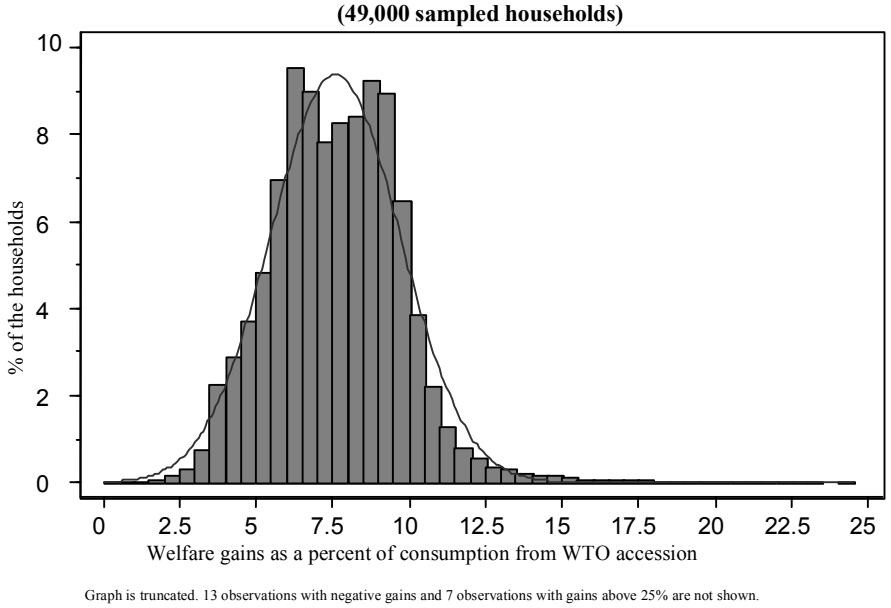
7.17 **Skilled labor in the services sectors should gain from FDI, but capital owners will experience diverse impacts.** Our estimates suggest that labor should find it in its interest to support FDI liberalization even if capital owners in the sector oppose it. But capital owners themselves may have diverse interests depending on their prospects for acquisition by multinationals.

D. DISTRIBUTION OF GAINS AT THE HOUSEHOLD LEVEL

7.18 **The vast majority of households are expected to gain from WTO accession.** The gains are between 2 percent of household consumption in the medium term (see Figure 7.1 for the estimated

distribution of gains among the 49,000[17] households in the HBS). In the long run, when the positive impact on the investment climate and productivity materializes, the gains will be larger.

Figure 7.1: Distribution of Estimated Welfare Gains from Russian WTO Accession.



7.19 The poorest 10 percent of the households gain 7.8 percent of consumption, which is slightly higher than the average gain of 7.3 percent of consumption. (See Table 7.3 for the distribution of gains among household deciles, from poorest to richest.) Table 7.3 shows that the gains, as a percent of consumption, are distributed rather evenly across households at different income levels. The richest 10 percent of the households, gain 6.7 percent of consumption, which is slightly less than the average for all households. The reason for the differences is that the return to capital increases less than the return to unskilled labor, and poor households have proportionately more unskilled labor and less capital. Skilled labor in Russia is remarkably evenly distributed across the income levels of the population. This reflects the fact that skilled workers, such as teachers and researchers, who may work for the government, often earn rather low wages.

7.20 **Although rural households benefit from WTO accession, they gain slightly less than urban households**. The poorest rural households are expected to gain 7.2 percent of consumption, compared with 8.5 percent for the poorest urban households. Rural households are generally less endowed with skilled labor than urban households, and skilled labor will gain more than unskilled labor.

E. IMPACT ON POTENTIAL GOVERNMENT TRANSFERS AND THE SAFETY NET

7.21 **Government revenue will increase as a result of WTO accession**. Despite the loss of tariff

[17] The HBS dataset contains 55,531 households, but only 49,239 actual households are in the sample. The difference is due to the fact that 6,292 households were split into two households by Goskomstat, with the weight of the original household split between the two households. If the household was on the border between decile i and i+1 it was duplicated and the weight assigned to the household was divided between the original and the duplicated household so that the weight adjusted number of households per decile is the same. We worked with the 55,000 household version of the dataset.

revenue (of about 0.7 percent of GDP), the economy is estimated to expand, and other indirect taxes, such as the VAT, will more than compensate the government for the loss of tariff revenue. If the government were to distribute the additional revenue from WTO accession back to households in equal ruble amounts for each household, the average gain for the poor would increase from 7.8 percent to 9.0 percent of consumption (see Table 7.3).

7.22 **Government safety nets are very important in helping with the transition, and especially for the poorest members of society who can ill afford a harsh transition.** Despite gains in the medium to long term, during a transition period it is possible that many households will lose. There will be unskilled workers who will be displaced and who will have to find new employment. They will suffer losses from transitional unemployment and are likely to incur expenses related to retraining or relocation. Thus, despite a likely substantial improvement in the standard of living for almost all households after accession to the WTO (and after adjustment to a new equilibrium), there is a strong role for public policy especially in helping the poorest members of society to adjust to the transition. The specific policies to be applied regarding the social safety net in Russia are discussed in detail in Chapter 8 of this report.

7.23 **These results are consistent with international experience of the past 20-30 years that shows that rapid and sustained economic growth has occurred only in countries that progressively liberalized import protection, and who provided incentives to exporters that offset the tax that import protection imposes on exports**. That is, all the "development miracle" countries of the past 20-30 years progressively opened their markets. This is true for Chile, Hong Kong and Singapore who pursued classical free market principles; it is true for Mauritius, which used export processing zones to encourage exports and provide exporters with equivalent incentives as importers; and it is even true for South Korea and Taiwan, who started with significant import protection, but progressively lowered protection. Moreover, since import protection implicitly imposes a tax on exports, South Korean and Taiwan implemented complicated programs (like indirect duty drawback) to provide exporters with incentives equivalent to sectors that received import protection. Diverse and rapid export growth characterized the experience of all these countries, and appears crucial for sustained rapid economic growth. Since import protection penalizes exporters, it appears that lowering protection is a crucial necessary (but not sufficient) condition for sustained rapid economic development.

Table 7.3: The Impact of WTO Accession on Russian Households, From the Poorest to the Richest (welfare change as a percent of consumption)

Household types a/		WTO accession (equal Ruble transfers) b/ (2)	Aggregate WTO accession (1)	Improved market access only (3)	Tariff reform only (4)	Reform of FDI barriers only (5)
Decile 1 (0-10%) - overall		9.0	7.8	0.9	1.0	5.8
	- rural	8.5	7.2	0.8	0.8	5.6
	- urban	9.5	8.5	1.0	1.3	6.1
Decile 2 (11-20%) - overall		8.4	7.7	7.7	1.1	5.7
	- rural	7.6	6.9	0.8	0.8	5.3
	- urban	9.0	8.3	1.0	1.3	6.0
Decile 3 (21-30%) - overall		8.3	7.9	7.9	1.2	5.7
	- rural	7.3	6.8	0.8	0.8	5.2
	- urban	8.8	8.4	1.0	1.4	5.9
Decile 4 (31-40%) - overall		8.1	7.9	7.9	1.2	5.7
	- rural	7.1	6.8	0.8	0.8	5.2
	- urban	8.6	8.3	1.0	1.4	5.8

Decile 5 (41-50%) - overall		8.0	7.8	7.8	1.2	5.6
	- rural	6.8	6.6	0.7	0.8	5.0
	- urban	8.4	8.2	0.9	1.4	5.8
Decile 6 (51-60%) - overall		7.7	7.6	7.6	1.3	5.5
	- rural	6.4	6.3	0.6	0.8	4.9
	- urban	8.2	8.1	0.9	1.4	5.7
Decile 7 (61-70%) - overall		7.6	7.6	7.6	1.3	5.5
	- rural	6.4	6.4	0.6	0.8	4.9
	- urban	7.9	7.9	0.8	1.4	5.6
Decile 8 (71-80%) - overall		7.5	7.6	7.6	1.4	5.4
	- rural	6.1	6.2	0.6	0.8	4.7
	- urban	7.9	7.9	0.8	1.5	5.5
Decile 9 (81-90%) - overall		7.1	7.2	7.2	1.3	5.3
	- rural	6.0	6.2	0.5	0.8	4.9
	- urban	7.2	7.4	0.6	1.4	5.3
Decile 10 (91-100%) - overall		6.4	6.7	6.7	1.3	5.0
	- rural	5.3	5.6	0.3	0.9	4.4
	- urban	6.4	6.8	0.4	1.3	5.0

a/ Ten percent of the households in the HBS are in each decile. Decile 1 contains the poorest households on a per capita basis.
b/ Government revenue surplus is distributed in equal ruble amounts in the results in column 1. In all other columns, government revenue surplus is distributed proportional to income.

Source: Bank staff estimates.

PART III. REFORMING SECTORAL POLICIES FOR POVERTY ALLEVIATION

Even though the recent poverty trends have been encouraging, further progress is not likely to come with the same ease as during the years of rapid catch-up growth in real wages. Moreover, Russia will have to implement some reforms that might have negative--at least in the short run--welfare impact on some households. Most prominent among them will be the reform of the housing and communal sector, and structural reforms triggered by WTO accession. Hence the government's ambitious plans on poverty alleviation, as emphasized in the President's address to the nation in May 2004, will have to depend not only on promotion of growth, but also on a more efficient system of wealth redistribution. This puts reforms of the social protection policies to the top of the government agenda. This part of the Report starts with a discussion of the existing system of social benefits, and required reforms to increase its relevance to the poverty alleviation goals.

Chapter 8 *assesses the targeting performance of non-contributory social assistance programs. The amount of resources channeled through non-contributory social assistance programs is substantial, however the impact of these programs on poverty alleviation is small. Three factors have contributed to this outcome: (i) by design, only a small fraction of these resources is targeted to the poor; (ii) the ability of the social assistance administration to identify the poor is mediocre, which results in a substantial leakage even from those funds that are targeted; and (iii) the benefits transferred by these programs are small compared to the income deficit of the poor beneficiaries.*

From the perspective of both equity and efficiency, it is suggested (i) that the system of privileges be reformed to ensure equitable access to subsidized goods and services, and (ii) that the scope of occupation-related privileges be reduced. The resources freed up by these reforms could be reallocated to poverty alleviation programs. However, if these resources were to simply augment the budget of the existing targeted programs, without reforming the targeting practices, the poverty reduction outcome would be modest. The effectiveness of targeted social assistance programs can, and should, be substantially improved by the use of a proxy means test instead of the currently used formal income test, which, in Russia, is a particularly weak predictor of the true poverty status of a household.

Finally it is highly desirable that the government spending on social policy would become counter-cyclical rather than pro-cyclical as has been the case in Russia so far.

Chapter 9 *is devoted to the analysis of the existing system of housing subsidies, and required policy measures to mitigate the negative poverty impact of moving to full cost recovery, including expanding the take-up of the housing allowance program among the poorest.*

This part of the Report continuous with the review of social policies affecting non-cash aspects of poverty. Increasing inequity in access to healthcare and education not only deprives the poor of quality services, but also lower their chances to increase welfare. Hence reform of the education and

healthcare sectors is both an important part of fighting the current poverty, and preventing it from reemerging in the future by developing human capital of socially vulnerable groups.

Chapter 10 *presents evidence that the mutually reinforcing relationship between poverty and inadequate educational opportunities is a considerable problem in Russia. The educational challenges faced by the poor in Russia are twofold: (1) access to education is increasingly being determined by income and wealth, with poverty having a negative impact on access to non-compulsory education and high quality modern educational programs, and (2) funding for education in Russia is inequitably allocated. It is recommended that (i) targeting of education expenditures is improved; (ii) students rather than schools are financed; (iii) the relevance of secondary vocational programs is increased; and (iv) the education administration's capacity to monitor poverty and its relationship with education is developed.*

Chapter 11 *studies the health situation of the Russian poor, and the adequacy of the healthcare system to address the poverty challenge. It finds that nearly half of the lowest consumption group quintile reports bad or very bad health status. Moreover, the poor are also more likely to engage in risky behaviors that contribute to the poor health status. It is argued in the chapter that although defining causality is difficult, the decline in health status roughly parallels the decreases in public sector health care expenditures, in real terms. Lack of affordable medicines becomes a serious impediment to marinating good health for the poor.*

The Chapter suggests to formalize informal payments through a standardized co-payment system, and to develop explicit protections from these co-payments for the poor and medically vulnerable groups. Major changes will also be required to improve both efficiency and equity, as well as access to medical services. In particular, allocation of government expenditures based on population and on criteria such as need and levels of poverty could enable a redistribution of funds and a cross-subsidization from richer regions to poorer ones, and from healthy to sick.

CHAPTER 8. IMPROVING THE TARGETING OF SOCIAL TRANSFERS

This chapter assesses the targeting performance of non-contributory social assistance programs. Section A provides an overview of the whole social protection system, including pensions and other social insurance programs. Sections B and C concentrate on non-contributory programs.

The amount of resources channeled through non-contributory social assistance programs is substantial; however the impact of these programs on poverty alleviation is small. Three factors have contributed to this outcome: (i) by design, only a small fraction of these resources is targeted to the poor; (ii) the ability of the social assistance administration to identify the poor is mediocre, which results in a substantial leakage even from those funds that are targeted; and (iii) the benefits transferred by the targeted programs are small compared to the income deficit of the poor beneficiaries.

From the perspective of both equity and efficiency, it is suggested (i) that the system of privileges be reformed to ensure equitable access to subsidized goods and services, and (ii) that the scope of occupation-related privileges be reduced. The resources freed up by these reforms could be reallocated to poverty alleviation programs. However, if these resources were to simply augment the budget of the existing targeted programs, without reforming the targeting practices, the poverty reduction outcome would be modest. The effectiveness of targeted social assistance programs can, and should, be substantially improved by the use of a proxy means test instead of the currently used formal income test, which, in Russia, is a particularly weak predictor of the true poverty status of a household.

A. THE ROLE OF SOCIAL PROTECTION IN POVERTY ALLEVIATION

8.1 **Social protection programs, including pensions, are an important component of the government's poverty reduction strategy.** This is demonstrated by the large volume of resources that the government redistributes, the share of the population covered by such programs, and the importance of the transfers for the consumption of the beneficiaries, particularly for the poor. These programs have reached about 79 percent of the population directly or indirectly[18]. In this section, survey-based estimates of a program coverage show the fraction of the population reached by the program directly (as beneficiary, such as the child who received a child allowance) or indirectly (the other members of the households, who benefited from the transfer through resource sharing within the household). On average, social protection transfers have represented about one-fifth of household consumption. For the poorest quintile, the value of the social protection transfers received was equivalent to 41 percent of their current consumption. The most important transfer income are pensions. The importance of other, non-contributory social assistance transfers in household consumption is small. These transfers represent 4.4 percent of the consumption of the average

[18] In this section, survey-based estimates of a program coverage show the fraction of the population reached by the program directly (as beneficiary, such as the child who received a child allowance) or indirectly (the other members of the households, who benefited from the transfer through resource sharing within the household).

household, up to 7.6 percent for the poorest quintile.

8.2 **The social protection system is a combination of old and new programs.** Russia has a modern pension system, complemented by other social insurance and unemployment benefit programs, as well as an extensive system of cash and in-kind benefits for privileged citizens and, to a lesser extent, for poor and vulnerable groups. A large segment of the system consists of old programs inherited from the socialist past that needs to be reformed, such as the extensive and costly system of privileges and the inefficient system of institutionalized care. Annex 8.1 presents an overview of the main programs, in terms of their target group and eligibility criteria, benefit determination, financing and administration.

Overall Spending and Composition

8.3 **In 2002, consolidated government spending for social protection programs accounted for 12.6 percent of GDP** (Table 8.1 and Box 8.1). Moreover, the scope of the social protection system extends beyond public spending. Many citizens are eligible for subsidies whose costs are partly covered by the budget and partly by the providers (parastatals in housing and utility services, transport, health and some other sectors). The quasi-fiscal cost of these subsidies adds another 2 percent to the overall social protection bill. This brings the overall spending for social protection to 14.6 percent of GDP-- twice as much as the combined spending for health and education (7.1 percent).

8.4 **The largest share (about two-thirds) of social protection spending finances social insurance programs.** The social insurance system consists of pensions for former employees or farmers (for old age and disability) and their dependents (survivorship), and of other programs providing benefits for contributors in case of sickness, maternity, or unemployment. Overall spending on these programs accounted for 8.7 percent of GDP in 2002 (Table 8.1). While these programs do not have an explicit poverty alleviation mandate, some components are explicitly designed to reduce the risk of poverty among contributors or beneficiaries (minimum pension provisions) or cover vulnerable groups (for example, social pensions for the disabled elderly without other sources of income).

Table 8.1: Composition of Social Protection Spending in 2002

	2002
Social Insurance	
Pensions	6.3%
Other social insurance	2.4%
Unemployment benefits	0.0%
Non-contributory Programs	
Lgoty for housing and utility services	2.3%
Housing allowances	0.1%
Child benefits	0.2%
Other social protection programs	1.3%
Total public spending	12.6%
Other lgoty not covered above and quasi-fiscal subsidies	2.0%
Total social protection spending	14.6%

Source: Bank staff estimates

Box 8.1: How Much Does the Russian Federation Spend for Social Protection?

For this poverty assessment, a review of social protection spending was conducted to determine its magnitude, trends and functional composition (Morozov, 2004). This proved to be a daunting task, given the federal structure of the budget, the large number of programs operated by various levels of government, the widespread financing of social programs from multiple sources, and the use of both fiscal and quasi-fiscal mechanisms to finance the benefits. The review, although it captures the most important programs, fails to be exhaustive. In particular, spending on social protection programs administered by line ministries other than the ministries for social protection, health or education has not being included. For example, the compensation for the providers of subsidized transport is omitted. Similarly, social protection programs financed from subnational budgets but not identified as such in the standard reporting documents are also omitted. Finally, the quasi-fiscal component of the subsidies provided to privileged citizens in areas other than housing and utility services are not included.

Quasi-fiscal sources. For a large number of consumer subsidies for privileged citizens, a part of the subsidy is covered by the providers themselves. The state uses parastatals in the heating and utility sector, transport, health, etc., to finance social protection activities by quasi-fiscal means. The size of these subsidies, for which there are no administrative data, is estimated at 1-2 percent of GDP in 2002, according to survey data.

Public spending on social protection. The magnitude of social protection spending from public sources is simpler to estimate. This spending is financed transparently from *government budgets* of all levels: federal, subnational, and state social extrabudgetary funds (EBFs). It is known as the enlarged budget of the government and it covers cash benefits for the population (e.g. pensions or child allowances), financing for the provision of social services (e.g., orphanages), social security institutions (e.g., the administration of EBFs), and producer subsidies to the housing and communal services sector that are provided from the budget for compensation for the below-the-cost tariffs. Among the various levels of government and the EBFs there are numerous financial flows that need to be eliminated to arrive at a true, consolidated public spending. To the extent possible, double counting of social expenditures in the enlarged budget was eliminated. This included the netting of transfers from the federal budget to the pension fund for labor and military pensions, or for transfers from the federal budget to subnational budgets. Although the review captures the largest part of the spending, it is not exhaustive. It covers the largest component, amounting to 12.6 percent of GDP in 2002. What remains unaccounted for is the spending by other line ministries, as well as by subnational governments.

Functional composition of public spending. It is even more difficult to identify the composition of social protection spending by main programs, as many programs are co-financed from republican or local subnational budgets but are not reported as individual line items (programs) in the execution of the subnational budgets. Official reports on the execution of the federal and sub-national budgets and the budgets of state social EBFs do not provide sufficient information on specific social protection *programs*. In addition, the presentation of some budget expenditures does not follow the GFS principles of functional classification. For example, food benefits to parentless children are shown in the budget under the category "Expenditures on Education"; and cash compensation to the elderly for Sberbank deposits eroded by hyperinflation in the early 1990s is presented under the category "Internal Sources of Budget Deficit Financing".

Combining administrative and survey data to estimate the magnitude of social protection spending. To obtain a complete picture of the magnitude and composition of social protection spending, this section combines these administrative data with information from two household surveys the HBS (1997-2002) and the NOBUS (2003).

8.5 **Non-contributory social assistance programs and subsidies channel an additional 5.9 percent of GDP, of which 3.9 percent is through the enlarged budget of the government, and another 2 percent is in quasi-fiscal subsidies.** There are three broad categories of non-contributory social assistance programs, as listed below.

- **Subsidies for privileged citizens**. Some privileges have been granted to protect vulnerable groups (such as the disabled, war invalids, dependents of war victims, those affected by radiation), to grant reparations to those unjustly oppressed under the communist dictatorship (rehabilitated people and their dependents), or to reward citizens for exceptional services (war veterans, labor war veterans, citizens awarded the title of hero of the Russian Federation, or the Soviet Union, holders of the full Order of Glory, Heroes of Socialist Labor). We label all these privileges as **merit-based**. Apart from these awards , there are numerous privileges for labor veterans or those working in agencies with occupational benefits. In this report, these privileges are called **occupational privileges**. Privileged citizens enjoy subsidized or free access to a wide range of services and goods (Table 8.2), such as exemptions from or discounts for rents or utility payments; telephone services; medicines, medical appliances or medical services; urban, commuter or long-distance transport; vouchers for sanatoriums, spas, child care facilities, or summer camps. Some categories of citizens are exempted or discounted from real-estate taxes, or may receive substantial financial support to repair their house, or the provision of a plot of land. Overall, slightly more than half of the privilege holders belong to the merit-based category, with the remaining 47 percent enjoying occupational privileges. The fiscal and quasi-fiscal cost of these subsidies in 2002 is estimated at 4.3 percent of GDP. The largest part of these subsidies accrues for housing and communal services (2.9 percent of GDP).[19] Although only 27 percent of the population are privilege holders, the number of people who benefit is actually higher since everyone living in their household benefits from the subsidy, not just the actual privilege holder. Taking into account the indirect beneficiaries extends the coverage of the system to 45 percent of the population.

Table 8.2: Coverage of the System of Privileges, by Type of Privileged Citizen

	Coverage		%, Type of Privilege		Total
	% of Population	Million People	Merit	Labor	
Housing and Utility Services	20%	29.7	57%	43%	100%
Telephone	11%	15.8	52%	48%	100%
Medical	9%	12.6	29%	71%	100%
Transport	20%	29.0	61%	39%	100%
Spa and holidays	1%	1.5	34%	66%	100%
Others	2%	2.9	53%	47%	100%
Total Population	27%	145.3	53%	47%	100%

Number of privileged citizens (direct beneficiaries only) who used that type of benefit at least once during the last 3 months.
** Each type of benefit include multiple categories.
Source: NOBUS 2003.

- **Social assistance programs targeted to the poor.** The system of targeted social assistance (TSA) includes three main programs: (i) child allowances; (ii) allowances for housing and utility services (HUS); and (iii) targeted social assistance programs provided by sub-national governments[20] (regional or local). In 2002, these groups of programs channeled only 0.4 percent of GDP, of which 0.2 percent was for child allowances, 0.1 percent for HUS

[19] The cost of housing and communal services for the enlarged government budget was 2.3 percent of GDP. In addition, providers lost an estimated 0.6percent of GDP equivalent to the revenue gap of the utilities that provide such services below cost, and the net increase in household arrears (quasi-fiscal cost).

[20] This last category includes a set of income-tested one-time or monthly benefits, in cash or in kind, provided by regional and local governments in accordance to the provisions of the *Federal Law on Government Social Assistance* and financed from their respective budgets. According to NOBUS 2003, the largest types of programs in terms of coverage are (i) cash assistance programs (8.8% of the population); (ii) food assistance programs (3.2% of the population) and (iii) subsidized access to health services (7% of the population).

allowances, and an estimated 0.1 percent for decentralized social assistance programs.[21].

- **Other programs.** Other social protection programs channel 1.3 percent of GDP. Included here are institutionalized care (estimated to 0.5 percent of GDP[22]) and the administrative costs of the system (another 0.5 percent of GDP).

8.6 Unlike social insurance, where benefits accrue to those who contribute or have contributed to the system, it is legitimate to ask whether these tax-financed non-contributory social assistance programs are equitably distributed, or – given the emphasis placed by the government on reducing poverty –are well targeted towards the poor.

Coverage of the Social Protection Programs

8.7 **The majority of the citizens benefit from social protection transfers or subsidies**. This extensive coverage is found also in the European Union and in many of the countries of Central and Eastern Europe, which share common features with the Russian Federation such as an extensive pension system and a broad policy of child or family allowances. About 55 percent of the population benefits from social insurance, mostly pensions (51 percent) (see Table 8.3). Non-contributory programs, such as privileges (lgoty) and targeted social assistance, cover 45 percent[23] and 42 percent, respectively of the population, directly or indirectly. Among the social assistance programs targeted to the poor, the child allowance system has the largest coverage (32 percent of the population, and about two- thirds of the households with children), followed by the social assistance programs financed and implemented at the subnational level (11 percent of the population) and the targeted HUS allowance program (6 percent).

Table 8.3: Coverage of Selected Social Protection Programs, 2003
(Share of persons in recipient households benefiting, directly or indirectly, from the program in the total population, %)

	Total
Social Protection, o.w:	**79%**
A. Social Insurance, o.w.:	**55%**
Pensions	51%
Allowances	5%
Unemployment Benefit	2%
B. Targeted Social Assistance, o.w.:	**42%**
Child Allowances	32%
HUS Allowance	6%
Decentralized SA	11%
C. Subsidies (Lgoty), o.w.:	**45%**
Transport	25%
HUS	32%

Source: NOBUS 2003.

[21] The spending for decentralized social assistance was estimated based on the NOBUS survey (Goskomstat, 2003), by comparing the total benefit received by households from this source with the amount of child allowances or HUS allowances.

[22] See "Russian Federation: Child Welfare Outcomes during the 1990s: The Case of Russia", World Bank Report No. 24450-RU, 2002

[23] This chapter reports the coverage of federal privilege holders. Adding the lgoti awarded by sub-national entities increases the coverage of the subsidies for HUS from 32%of the population (as reported in Table 8.3) to 41% (as reported in Hamilton, Banerjee and Lomaia, 2004, "Exploring Housing Subsidies for Households in Russia", World Bank, mimeo).

Importance in Consumption

8.8 **The importance of social protection programs to household consumption is substantial.** By type of programs pensions make the greatest contribution; the total value of pensions represents 12.9 percent of total household consumption, and respectively 27.1 percent of the consumption of the bottom 20 percent of the population, according to NOBUS 2003 (Table 8.4). The second most important group of programs is subsidies for privileged citizens. Two of the most important such subsidies --heating and utility services and transport-- amounted to 2.8 percent of household consumption on average, and 3.4 percent of the consumption of the bottom quintile.

Table 8.4: Social Protection Transfers and Their Importance in Household Consumption

	Total	Poorest Quintile
Social Protection, o.w:	19.6%	41.0%
Social Insurance, o.w.:	15.2%	33.4%
Pensions	12.9%	27.1%
Allowances	2.1%	5.4%
Unemployment Benefit	0.2%	0.8%
Targeted Social Assistance, o.w.:	1.6%	4.2%
Child Allowances	0.5%	2.0%
HUS Allowance	0.5%	0.8%
Decentralized SA	0.3%	1.0%
Scholarship	0.2%	0.3%
Lgoty, o.w.:	2.8%	3.4%
Transport	1.0%	1.0%
HUS	1.8%	2.4%
HH Consumption	100%	100%

Source: NOBUS 2003.

8.9 **However, programs explicitly targeted to the poor play only a marginal role in the consumption of the average household, as well as for the poorest 20 percent of the population.** The system of targeted social assistance, which includes child allowances, housing allowances, and targeted social assistance programs provided by sub-national governments (decentralized SA), in spite of its extensive coverage, has a relatively low benefit adequacy. On average, these programs taken together contribute only 1.6 percent of the consumption of the average household, and up to 4.2 percent of the consumption of the poorest 20 percent. It is important to note that, although they are under-funded compared to privileges, targeted programs are more important to the consumption of the bottom 20 percent of the population.

Impact of Social Protection Transfers on Poverty Reduction

8.10 **How much do the government benefits contribute to poverty reduction?** To answer this question, we need to estimate the poverty rate that would exist in the absence of government benefits. The magnitude of the increase in poverty will give us an idea of the impact of various government benefits on aggregate poverty. This is a simplified approach that completely ignores the people's behavior in the absence of the social protection system.

8.11 **If the Russian Federation had not had any government programs, there would have been 47 million poor people in Russia.** Table 8.5 gives the empirical estimates of the impact of government benefits on the number of poor for 2002 based on the HBS . The actual number of poor is 28 million, which means that the government programs are contributing to a reduction in the number of poor by about 19 million. Pensions have the largest impact on poverty (90 percent of the total), because of the higher level of funds that they channel to pensioners, and because of the redistributive function that has gained prominence in the last few years. For non-contributory social assistance programs the impact is substantially smaller. The child allowance programs for example succeed in

lifting only 0.9 million people out of poverty, or less than 2 percent of the overall impact. It is important to note that other benefits, notably subsidies granted to privileged persons, are substantially less effective.

8.12 **Yet the actual cost of pulling a person out of poverty is 9.4 times the cost that would occur with perfect targeting.** The total cost of running all the programs is 46.79 billion per month, which gives an average cost of pulling one person out of poverty that is equal to 2,464 rubles per month. Under perfect targeting, a person can be pulled out of poverty by receiving an amount equal to the difference of the person's actual consumption from the poverty line. The HBS 2002 shows that the average per capita consumption of the poor was 747 rubles per month, while the average poverty line was 1,009 rubles per month. This means that the average cost of pulling a person from the poverty line would be only 262 rubles per month instead of the current 2,464 rubles. While perfect targeting is indeed impossible to achieve, this comparison illustrates that the Russian welfare programs are excessively costly and could their efficiency could be improved by better targeting.

Table 8.5: Impact of Social Protection on Poverty Reduction
(Simulation: Increase in the number of poor people if social protection benefits are discontinued)

	Nr. of poor (millions)		Impact	Cost per poor
	Actual	Without the program	million persons	Rbl / month
Old-age pension	28.1	43.2	15.1	2568
Disability pension	28.1	29.6	1.5	2434
Loss of breadwinner pension	28.1	28.8	0.7	1813
Social pension	28.1	28.3	0.1	1960
Care for children under 18 m	28.1	28.3	0.2	2200
Children allowance	28.1	29.1	0.9	1564
Unemployment benefits	28.1	28.3	0.1	2164
Other benefits	28.1	28.2	0.1	2032
Scholarship	28.1	28.4	0.2	2274
All benefits	28.1	47.1	19.0	2464

Note: Privileges not included.
Source: Household Budget Surveys 2002

B. FACTORS THAT DIMINISH THE EFFECTIVENESS OF NON-CONTRIBUTORY SOCIAL TRANSFERS IN REDUCING POVERTY

8.13 **Despite the large volume of resources that social protection channels, the impact of social protection on poverty reduction is relatively low.** The most important factors contributing to this outcome are (i) the pro-cyclical nature of overall spending; (ii) the fact that by design, only a small fraction of these resources are targeted to the poor; (iii) the mediocre ability of the social assistance administration to identify the poor, which results in a substantial leakage of funds; (iv) the fact that the benefits transferred by these programs are small compared to the income deficit of a poor beneficiary; and (v) the widespread duplication of programs.

Pro-cyclical Social Spending

8.14 **In the aftermath of the 1998 crisis, the needed fiscal consolidation in Russia was primarily achieved at the expense of social spending.** Social spending, including social protection, education and health, failed to act as an automatic stabilizer during the financial crisis in 1998. Instead, social spending was pro-cyclical, failing to protect the poor during the crisis when they were most in need. In retrospect, social expenditures followed the U-curve: initially they declined from their pre-crisis level (in percent of GDP) until 2000-2001; they quickly recovered afterward (see Table 8.6). Both the downward and upward sloping parts of the curve are very steep, pointing to significant

fluctuations in social expenditures. All major categories of social expenditures (e.g., health, education, social protection) had the same U-curve dynamics. In this respect, they differ from the non-social non-interest expenditures of the budget. The latter demonstrated surprising stability, with a very moderate decline after the 1998 crisis. Although between 1997 and 2000 total non-interest expenditures were cut by more than 10 percentage points of GDP, this cut was almost entirely achieved through a reduction in spending on social protection, education, and health.

Table 8.6: Enlarged Budget Expenditures as Percent of GDP, 1997-2002

	1997	1998	1999	2000	2001	2002
	Percent of GDP					
Non-interest expenditures	40.4%	36.2%	31.1%	30.0%	31.5%	34.6%
1.Education	4.6%	3.6%	3.0%	2.8%	3.1%	3.9%
2.Health	3.5%	3.4%	2.9%	2.8%	2.9%	3.2%
3.Social Protection	16.0%	13.3%	9.7%	8.9%	10.9%	12.6%
4.Other	16.3%	15.9%	15.5%	15.5%	14.6%	14.9%

Source: Bank staff estimates

Inefficient Budget Allocation within Non-contributory Social Assistance Programs

8.15 **The budget allocation among various non-contributory social assistance programs marginalizes the programs targeted to the poor at the expense of an inefficient system of privileges.** While the amount of public resources redistributed by the system is very large compared to other countries at a similar level of economic development, the share of resources explicitly targeted toward the poor or vulnerable strata of the population is very small. Only 7 percent of the total social assistance spending is explicitly targeted to the poor.[24]

- From a static perspective, the existing programs do not channel sufficient resources toward the most needy because of (i) an over-emphasis on regressive subsidies; (ii) a too generous Minimum Subsistence Level for the minority of targeted programs, diluting the allocation of scarce resources by addressing an overly large group, thereby eroding the adequacy of the allocation; and (iii) the use of targeting methods that have a mediocre performance.
- From a dynamic perspective, the current program mix focuses too much on coping with poverty or vulnerability, and pays too little attention to prevention. For example, (i) social work and community care programs are underdeveloped, (ii) social workers spend too much time on verifying program eligibility (income) and too little on managing the cases of their clients, and (iii) the policy towards orphans relied until recently on costly institutionalization, ignoring preventive services or family-based care.

[24] The allocation for all targeted social assistance programs represented 0.4 percent of GDP, equivalent to 10 percent of total public spending on non-contributory social programs (3.9 percent of GDP) or 7 percent of the overall (fiscal and quasi-fiscal) spending on non-contributory social programs (5.9 percent of GDP).

Box 8.2: Reforming the System of Subsidies for Privileged Citizens: Why and How

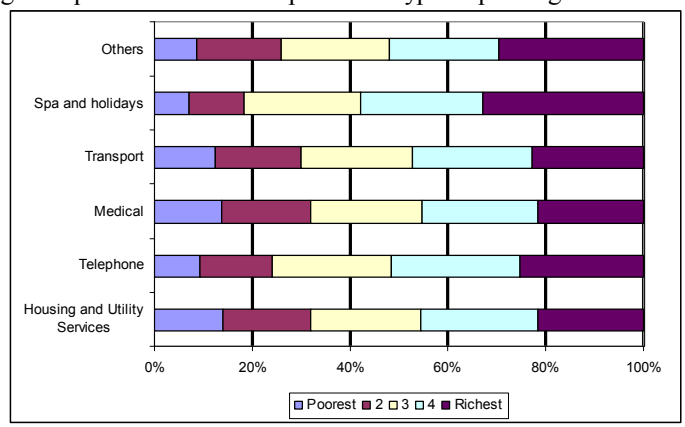
Privileges – categorically-targeted subsidies for a wide range of services and goods – are the most important non-contributory transfer in terms of spending. In 2003, only two types of privileges, for housing and utility services and transport, channeled more than six times the resources allocated for transfers targeted to the poor. These privileges are governed by a complex system of federal, regional and local laws and regulations. It was estimated that there were 156 types of privileges granted to 236 types of beneficiaries only at the federal level (Ovcharova, 2001). A review of the social protection system in three regions (Komi, Nijni-Novgorod and Moscow oblast) revealed that regional and local governments complement the system, either by granting privileges to new categories or by granting more generous discounts to those legislated federally.

Such a *program archipelago* is overly complex, hindering basic functions such as adequate budgeting or monitoring. According to the World Bank (2002), the system of privileges covers, *de jure*, 70 percent of the population, but the government can honor only part of its obligations. In 2000, only 36 percent of the households received their benefits. Thus, privileges continue to operate as an unfunded mandate, with adverse consequences for budgetary planning (without knowing with precision the number of beneficiaries and the level of the benefit, it is hard to estimate the volume of the subsidy required to cover this mandate), as well as for the financial position of the service providers.

Overall, about 45 percent of the population benefits directly or indirectly from at least one type of privilege. Irrespective of their type, the largest share of occupational privileges accrues to the richest strata of the population (Figure 8.1). The share of the households from the poorest quintile (poorest 20 percent) in the overall utilization of such subsidized services (in the *number* of services, not the *total amount* of the subsidy) varies between 7 percent and 14 percent. In contrast, the richest 20 percent of the population captures between 22 percent and 33 percent of the number of services. The capture of the subsidy by the richest quintile is particularly acute for a few categories with smaller coverage, such as telephone services, spas and holidays, and tax exemption for house repair. For merit-related privileges, the distributional pattern is similar, but the criterion of pro-poorness is not relevant in their case.

Figure 8.1: Utilization of Occupational Privileges, by Type of Privilege and Quintile

(% of households from a given quintile that used a particular type of privilege over the last 3 months)



Source: NOBUS 2003.

Occupational privileges are an expensive way to complement the wages and pensions of the benefit holders. They are highly regressive and should be reformed. These types of benefits are contrary to the social protection principles in a market economy; the system represents an inequitable use of scarce resources, as it does not explicitly benefit the poor and vulnerable. The fact that most benefits are captured by well-off beneficiaries is only one of the factors that determine the highly regressive outcome of the occupational privileges. The other factor, which is equally important, is the regressivity of the benefit (i.e., the fact that the amount of subsidy captured by the richer households is many times larger than for the poor households. The regressivity of the benefit is embodied in the design of the system. As privileges are subsidies for the consumption of services with a high income elasticity of demand, the better off households will tend to consume both a larger quantity of services and better quality (hence more expensive) services, if available.

Continued Box 8.2

A first step to reform the current system of privileges is to ensure an equitable access within the each type of privileged category, be it occupational or merit-based. According to this principle, all privileged persons would be entitled to an equal amount of subsidy. For example, all war veterans should receive the same per capita compensation for transport, based on average utilization rates and tariffs. One way to enforce such equitable access is to migrate from the current system of open-ended subsidies to quota-based subsidies (where each privileged citizen will receive a voucher redeemable up to its face value at the service provider) or by replacing them with flat cash benefits. Information on the utilization of these services and the respective tariffs can be obtained from a sample of providers (supply-side information), from a household survey which collected such information (demand-side information), or from both (allowing to cross-check the two sources).

We illustrate such reform scenario in the case of transport-related privileges, using data on the intake of the subsidy from the NOBUS survey in 2003. From the survey, we found that 55.3 million persons benefited, directly or indirectly from urban, commuter or long-distance transport services, free or charge or with discount (assumed at 50 percent). The total amount of subsidy is 3,155 million Rubles per quarter. The distribution of the beneficiaries is not very regressive: about 17 percent of the users belong to the poorest 20 percent of the population. Yet the distribution of the subsidy is very regressive: the beneficiaries from the poorest quintile received about 8% of the total subsidy, while the richest 20% captured 30 percent.

Table 8.7: Reduction in the Fiscal and Quasi-Fiscal Cost of Transport Benefits
(if monetized at the level of the subsidy earned by the second quintile)

	Quintiles					Total
	1	2	3	4	5	
Actual Distribution of the Transport Subsidies						
Beneficiaries						
Million persons	9.2	11.8	12.1	12.2	10.0	55.3
Shares	17%	21%	22%	22%	18%	100%
Current Subsidy						
Mil Rubles	246	475	732	755	947	3155
Shares	8%	15%	23%	24%	30%	100%
Mean Subsidy, Rubles per capita	123	**146**	200	200	303	199
Simulation: Replacing the current subsidy with a flat per capita benefit of 146 Rubles						
Mil Rubles	291	475	535	551	455	2308
% relative to current subsidy	119%	100%	73%	73%	48%	**73%**

Source: Simulation, based on the NOBUS 2003.

In Table 8.7, we estimate the average benefit per capita for a recipient household from each quintile. For fiscal considerations, we take the average consumption of the second quintile (where the official poverty line is located) as the value to monetize the benefit, or 146 Rubles/month. This value goes from 123 Rubles in the poorest quintile to 303 Rubles for the richest quintile. In the last two lines, we simulate the distribution of this subsidy across quintiles. This scenario is income neutral for the second quintile, raises the subsidy received by the poorest quintile by 19 percnet, and reduces the value of the subsidies in the richer quintiles. Overall, it can reduce the cost of this program by over one quarter, freeing up substantial resources to increase the budget of other, poverty-targeted, benefits. Given that HUS cost is almost twice that of transport benefit, potential budget savings from their rationalization would be even bigger.

Mediocre Targeting Performance

8.16 **The two programs that have the largest share of poor among their beneficiaries are the child allowance program and the decentralized social assistance program** (Table 8.8). These programs include about 30 percent and 28 percent, respectively, of their beneficiaries from the poorest quintile. As expected, programs not targeted to the poor have lower targeting performance. The programs that include the smaller share of poor recipients among their beneficiaries are transport privileges (only 13 percent), followed by HUS privileges (17 percent), and the targeted HUS allowance (20 percent). There is substantial leakage for all programs, irrespective of the chosen poverty line – official or alternative. About half of the beneficiaries of the targeted social assistance

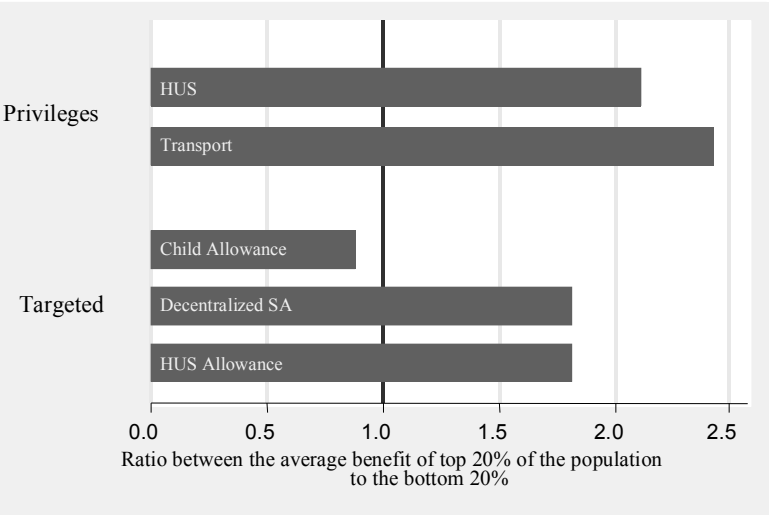
programs come from the richest 60 percent. This share is even higher for privileges, where 62 percent of the beneficiaries are from the richest 60 percent of the population.

Table 8.8: Beneficiary Incidence, by Type of SP Program
(Share of direct and indirect beneficiaries from a given quintile)

	Quintiles					Total
	1	2	3	4	5	
Targeted Social Assistance, o.w.:	26%	23%	21%	18%	13%	100%
Child Allowances	30%	24%	20%	16%	11%	100%
HUS Allowance	20%	25%	25%	18%	11%	100%
Decentralized SA	28%	22%	20%	17%	12%	100%
Lgoty, o.w.:	17%	21%	22%	22%	18%	100%
Transport	13%	20%	23%	24%	20%	100%
HUS	17%	22%	22%	23%	17%	100%

Source: NOBUS 2003

Figure 8.2: Comparison of Benefits to Rich and Poor Households



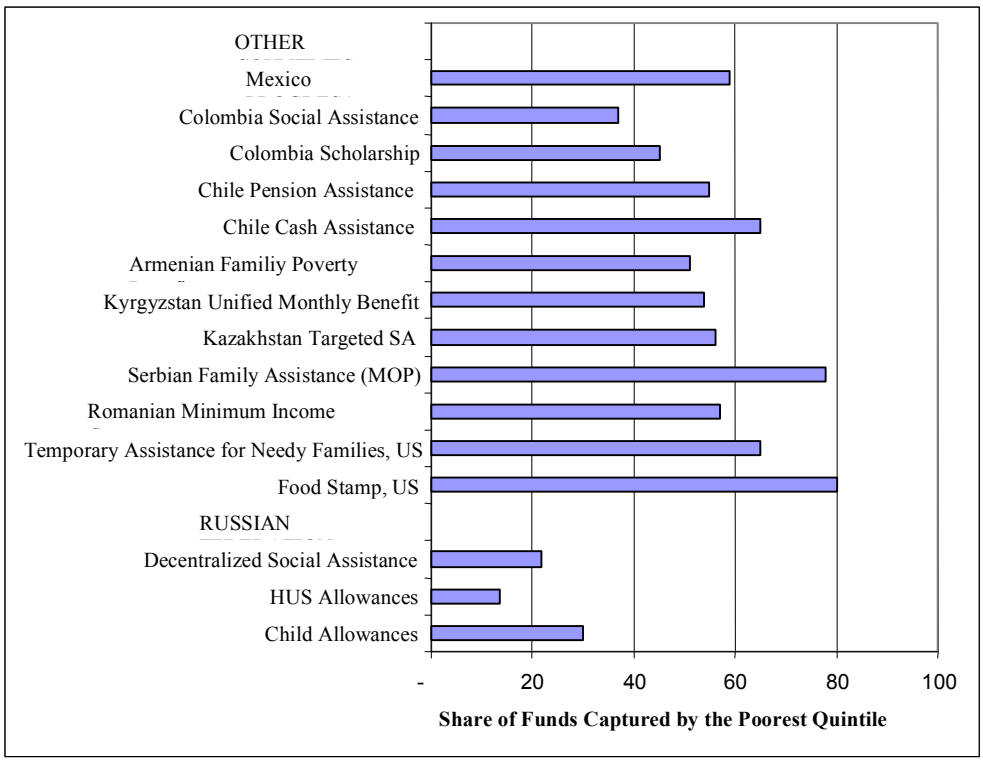
Source: NOBUS 2003.

8.17 **Almost all programs transfer higher benefits to richer households: the incidence of the benefit is regressive.** The only exception is the child allowance program. This is immediately visible in Figure 8.2, where the average benefit of a rich household (from the richest quintile) is compared with the average benefit of a household from the poorest quintile. Among the pro-poor programs, only the child allowance program transfers relatively higher amounts to households from the poorest quintile (compared to the richest). This outcome is due to the benefit formula, which provides higher amounts for very vulnerable beneficiaries (the benefit is doubled for a one-parent household). In the case of the other two targeted programs (the HUS allowance and decentralized social assistance) the average amount obtained by a household from the richest quintile is 80 percent and is 100 percent higher compared to a household from the poorest quintile. The subsidies for privileged citizens for housing and utility services for transport are the most regressive.

8.18 **The targeting performance of the "targeted social assistance" programs in the Russian Federation is substantially lower compared to other "good practice" programs in countries that use either a means test, or a proxy means test.** Figure 8.3 compares one dimension of the targeting performance of means-tested programs – the share of funds captured by the poorest quintile of the population – across programs from the United States, Latin America, Central Europe, the former Soviet Union and the Russian Federation. According to this indicator, all targeted programs implemented in the Russian Federation rank well below their comparators. The program with the best targeting performance in the Russian Federation, the child allowance program, channels only 30

percent of funding to the beneficiaries from the poorest quintile, while most comparator programs succeed in transferring between 40 percent and 60 percent of funds to this population group.

Figure 8.3: Comparative Targeting Performance
(Share of Funds Captured by the Poorest Quintile in Selected Countries)



8.19 **The targeting techniques used by the comparator programs are similar, but not identical, to the one used in the Russian Federation.** The targeting method used in Russia is, according to the law, an income test that verifies both formal income (wages and transfers) and informal (informal, entrepreneurial) income. The administration can verify de facto only the formal income, which is known to be plagued by underreporting. Computerized checks are performed only in a few regions, and only for other social protection incomes (against the records of other social services on pensions, unemployment benefits, and other targeted social assistance programs). Typically, income from a second job, in-kind income from agricultural self-employment, or entrepreneurial income is infrequently declared, is hard to check, and is seldom verified. This income test is thus an incomplete test of household's true welfare level, as shown below.

8.20 **Given the lack of reliability of income information and the mediocre targeting performance of the targeted social assistance programs, a proxy means test formula can provide better targeting outcomes**. The main challenge for the social assistance administration in Russia is improving the means test formula. Under a proxy means test (PMT), program eligibility is based on a synthetic score which is based on observable household characteristics-- variables that are simple to report and hard for the applicant to manipulate (see Box 8.3).

Box 8.3: Targeting Methods in Selected Countries

From the programs presented as comparators, **only the ones used in the United States** –Food Stamps and Temporary Assistance to Needy Families – **rely on a verified income test**, supplemented with a limited asset test (benefits are denied if bank savings exceed a certain threshold, if the household owns an expensive car, etc.). However, the infrastructure used to verify the accuracy of the information supplied by applicants is much more sophisticated than that existing in the Russian Federation.

Facing the same problems as the Russian Federation – the impossibility of verifying all sources of income of the applicants in an economy where the informal sector and the underground economy is large – **other countries have successfully applied two alternative targeting mechanisms:**

- In Central and Eastern Europe and the former Soviet Union, successful programs use a *combination of an income and assets test*, attempting to identify the "economic potential" of the households. Such a technique is similar to the experiments performed in the Russian Federation in 1998 in Komi and Voronezh. To ensure that able-bodied individuals will not fall into state support, Bulgaria and Romania supplemented the means test with a workfare requirement.
- In many Latin American countries, and also in Armenia and Turkey, targeting is based on a proxymeans test. Program eligibility is determined using a synthetic score based on easily observed characteristics (household structure, location, housing, ownership of durable goods, etc.). Such a technique was implemented in the Russian Federation in parts of the Volgograd oblast in 1998.

8.21 **The results of a simulated proxy means test (PMT) based on the NOBUS 2003 suggest that this method can substantially improve the targeting results of the targeted social assistance programs.** [25] The simulation presented in Table 8.9 shows that such a scoring formula would correctly identify 67 percent of the beneficiaries. Moreover, the distribution of program beneficiaries by quintiles would improve substantially (Table 8.10). About 61 percent of the PMT beneficiaries are from the poorest quintile, followed by another 25 percent from the second quintile. Hence the application of the PMT would generate a substantial reduction in poverty, under the same program envelope, **by almost doubling the resources that can be channeled to the poorest quintile of the population.**

Table 8.9: Simulated Targeting Performance Using PMT

		PMT Score		Total
		Non-Poor	Poor	
NOBUS	Non-Poor	86	33	77
	Poor	14	67	23
	Total	100	100	100

Table 8. 10: Distribution of PMT Beneficiaries by NOBUS Quintiles

		PMT Score		Total
		Non-Poor	Poor	
NOBUS Quintiles	Poorest	11	61	20
	2	19	25	20
	3	22	10	20
	4	23	4	20
	Richest	24	1	20
	Total	100	100	100

[25] A log-linear regression of household consumption on selected household characteristics was used to predict household consumption. The dependent variables in the regression are variables that are easily observable/verified and not easily manipulated: household demographics, education and employment status of the household head, characteristics of the dwelling, as well as ownership of other real-estate or major durables. Predicted consumption was then compared with the household specific poverty line to determine the PMT poverty status.

C. A ROADMAP FOR REFORM

8.22 **Resources need to be reallocated from untargeted, regressive privileges** which capture the majority of funding, estimated at about 4.3 percent of GDP in 2002, **toward targeted social assistance programs,** which currently channel only 0.4 percent of GDP.

8.23 **The scope for a reform of the system of privileges is large**. First, about half of the existing privileges are not related to merit. Opposition to the reform of the system of privileges is traditionally fueled by the argument that these rights are merit-based. While half of the privileges are granted to vulnerable groups or to citizens with special merits, and may be hard to reform, the other half can be reformed. The government may choose between several reform options, such as (i) grandfathering privileges for existing beneficiaries and stopping the granting of new privileges, (ii) monetizing privileges by using a flat benefit for reasonable consumption norms or quotas (e.g., the level of current consumption in the second quintile) or by replacing them with vouchers (quota-based, as opposed to open-ended consumer subsidies), and (iii) eliminating the very regressive privileges.

8.24 **The system of decentralized social assistance programs should be strengthened through improved financing and the better targeting of instruments**. The current system of decentralized financing and implementation generates substantial regional inequities, which hurt the poor from the poorer regions. The following steps may be considered:

- Transforming the unfunded mandate of the decentralized social assistance programs into one core program that is federally funded and monitored, and is locally implemented, which fulfills the role of safety net of last resort for the very poor and destitute.
- Using a program eligibility threshold aligned with budgetary resources(targeting, for instance, the poorest decile).
- Determining a reasonable program budget, based on the poverty gap of the first decile and reasonable assumptions about program leakage.
- Earmarking expenditures for this program through the Federal Equalization Fund, and distributing these funds to the regions (or retaining earmarked funds at regional level) proportional to the share of the regional poverty gap of the target group in the national poverty gap. This share can be obtained using nationally representative surveys such as the HBS or the NOBUS.
- Considering the development of poverty maps to further refine the allocation of the program funds at the sub-regional level.
- Using proxy means testing to determine who is eligible for the program. Such a method would substantially reduce current leakage rates. Alternatively, the targeting performance of the existing formal income test could be improved by considering additional criteria for program eligibility, related to housing conditions or endowment with key durables or real estate.
- Monitoring the program, using a combination of administrative and survey techniques, and improving program dissemination and access.

8.25 **The adequacy and the targeting performance of the child allowance program should be strengthened.** The child allowance program has the best targeting performance among targeted social assistance programs, largely because of the high correlation that exists between the presence of children in a household and poverty. Currently, the program channels about 0.2 percent of GDP, and its adequacy is very low - almost four times lower than it was in 1998.

8.26 To improve the poverty alleviation outcomes of the child allowance programs, the following measures may be considered:

- Improving program adequacy by raising the level of the benefit to the 1998 levels and by indexing the program benefit to inflation, to maintain its adequacy over time.
- Improving the targeting of the program benefit by granting higher benefits to vulnerable households.
- Improving the targeting of program beneficiaries. The resources of the program could be targeted toward very poor children by using a more conservative eligibility threshold.
- Use proxy means testing to determine who is eligible for the program.

CHAPTER 9. REFORMING HOUSING AND UTILITY SERVICES AND PROTECTING THE POOR[26]

Reforming housing and utility services sector is a priority item on the policy agenda, and there is a need to estimate the poverty and distributional impact of this reform. The chapter reviews the existing system of housing subsidies, the rationale for reforming these subsidies in light of their sizable budgetary cost and the links between reforming these subsidies and the overall energy sector reform. The chapter reviews the required policy measures to mitigate the negative poverty impact of moving to full cost recovery, including expanding the take-up of the housing allowance program among the poorest.

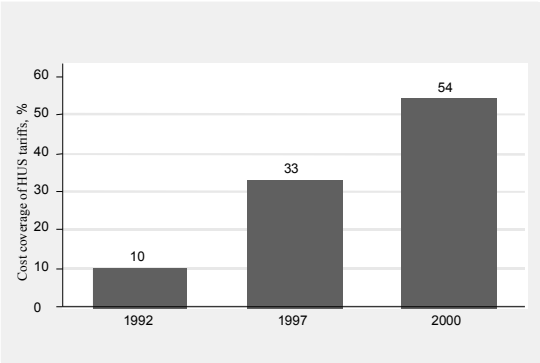
A. THE CURRENT SYSTEM OF HOUSING SUBSIDIES

9.1 The system of housing and utility services has been, and continues to be, an important area for reform. Tariffs for housing and utility services were far below international prices in Russia at the beginning of the transition. Both rents and utility tariffs were subsidized to the point of being provided practically free-of-charge. The reform of housing and utility tariffs is essential, not only to relieve the budget of the unsustainable burden and to reduce energy losses and waste, but also to revitalize the country's housing stock The inefficient allocation and poor maintenance of the housing stock is a major barrier to the development of housing and labor markets in Russia. Since 1992, the government has stated that the goal of the reform of housing and utility tariffs would be achieving the transition to full coverage of costs by residents, while simultaneously protecting low-income families. This principle has continued to be affirmed, although the deadline for achieving this goal has been pushed back, and a clear program defining the stages of how it is to be accomplished remains to be agreed on. Initially, it was thought that this could be achieved in stages over a five-year period, but the full transition to the new system has repeatedly been moved to a later date. The current date for moving to full cost coverage is 2008. Almost a decade after the start of the reform, the average cost coverage for housing and utility services (HUS) increased substantially to 54 percent, in 2000, up from 10 percent in 1992 (Figure 9.1).[27]

[26] This chapter draws on Decoster, Andre, and Alexander Puzanov, "The Distributional Effect of the Transition to Full Cost Coverage and the Introduction of a Housing allowance Program in Russia," Forthcoming.

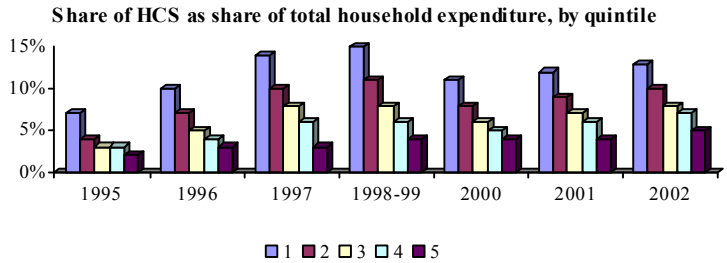
[27] For 2000, estimates are from Decoster and Puzanov (2004). For 1992 and 1997, estimates are from "Russian Federation: housing and Utility Services: Policy Priorities for the Next Stage of Reforms, " World Bank Report no. 17483-RU, February 1998.

Figure 9.1: Housing and Utility Services Cost Coverage, 1992-2000



Note: Cost coverage = ratio of tariffs over production costs

9.2 **The increase in HUS expenditures was particularly hard for the poorest quintile**. Evidence from the RLMS shows that the poor pay a higher share of expenditures for HUS services than the rich, and the differentiation has increased over time, peaking in 1998-99.[28] In relative terms, the largest increase in the share of HUS expenditures from 1995 to 2001 was recorded in the largest cities (six times in Moscow/St. Petersburg), followed by other cities (two times) and the rural areas (slightly less than two times). The highest income groups, regardless of location, pay little for HUS, with an effort ratio of less than 5 percent, as in the diagram below.



9.3 The government relies on two subsidization mechanisms - tariff discounts for privileged citizens, and housing allowances targeting low-income families - to mitigate the effects of the increases in rents and utility prices on household welfare.

9.4 **Tariff discounts for privileged citizens are still in existence.** A system of subsidies for privileged citizens, granting access to goods or services free-of-charge or at a fraction of their costs, has existed in Russia since Soviet times. Originally, the system was designed to reward certain categories of citizens for their civic merits (for example, war veterans) or to protect certain vulnerable strata of the population (families with many children or disabled people). During the transition period the system was expanded. A large number of HUS privileges were introduced in Russia after 1992, supporting particular occupational groups. Privileges were provided to people of particular occupations, such as customs officers, militiamen, police prosecutors, army officers, judges and others. The criteria of merit, poverty or vulnerability play no role in this subset of privileges. More than 10 new laws and over 30 amendments providing for a reduction in rents and utility rates for particular groups of citizens were introduced between 1991 and 2002. Households receiving privileges pay only part of their housing bill - typically 50 percent and sometimes 0 percent. About one-third of the population benefits from subsidized access to HUS because of this privileged status.

9.5 Targeted housing allowances are subsidies introduced since 1994 to limit the burden placed

[28] Ellen Hamilton, Sudeshna Ghosh Banerjee and Maka Lomaia (2004), "Exploring Housing Subsidies for Households in Russia," World Bank, mimeo

by utility expenditures on a family budget. Among the three main housing subsidy mechanisms used in Central and Eastern Europe or the former Soviet Union states – *life-line tariffs, cash transfers, and the notional-burden approach* – the Russian Federation opted for the last mechanism.[29] The formula for calculating the allowance has undergone some revisions over the past decade. Currently, housing allowances are available to families where the costs of rent and utilities (based on norms) exceed 22 percent of the total family income (lower in certain regions). An amendment to the HUS legislation in 2003 improved the poverty alleviation outcomes of the housing allowances. If the family's per capita income is below the regional Minimum Subsistence Level (MSL), the admissible burden is adjusted downwards by a coefficient equal to the ratio of family income to the MSL (see Box 9.1 for the formula).

Box 9.1: Determination of the Housing Allowance

Eligibility: The federal norms are (set until 2008):
- 18 m2 per person in households with three or more persons;
- 42 m2 for two-person households;
- 33 m2 for single-person households.

Utility service consumption norms: three climatic zones with different norms.

Income test: Formal and informal (e.g., family plot) family income and assets divided by number of family members.

Entitlements: If average family per capita income > MSL:[1]

$$HA = \max\{0, exp_{HUS} - (0.22 * inc_{FAM})\}$$

If average family per capita income < MSL:

Option 1: $HA = exp_{HUS} - [(0.22 * inc_{FAM} / MSL) * inc_{FAM}]$

Option 2: $HA = exp_{HUS} - 0.5 * wage_{MIN} * size_{FAM}$

Application: Local housing office or other local authority in charge of housing allowances.

Payment: Direct transfer to housing or utility provider.

[1]/ HA=housing allowance; MSL=regional minimum subsistence level; exp_{HUS}=HUS costs based on social standards; inc_{FAM}=total family income; $wage_{MIN}$=official minimum wage;s $size_{FAM}$ = number of household members.

9.6 **Federal standards were set in 1997 for the social norm of housing floor area, which is used in inter-budgetary relations.** This standard is currently adopted in the majority of the regions of Russia (Box 9.1). Other federal standards relate to the level of cost coverage (currently 90 percent) to production costs for housing and utility services (differentiated by the subjects of the Federation and updated through special Government Decrees every year); and to the maximum household own contribution to the housing costs (currently 22 percent of income) of the household. Within the federal norms, local administrations are allowed some discretion in administering the allowances, particular in setting the maximum household own contribution to housing costs.

B. THE SYSTEM OF HOUSING AND UTILITY SUBSIDIES: NEED FOR REFORM

9.7 **Reform of the systems of housing and utility payments remains important for a number of reasons**. ***First***, subsidies by the various levels of government absorb a large share of their resources. ***Second***, there remain a number of unfunded mandates that compromise efforts to reform the energy sector. While the federal government has mandated reductions in housing and utility costs

[29] **Life-line tariffs** restrict the price subsidy to an initial block of consumption (sometimes called basic need level), and offer a less costly alternative to across-the board- price subsidies. The mechanism is relatively simple to administer. It was implemented during the first part of the 1990s in many countries in Central and Eastern Europe. **Cash transfers** – earmarked for HUS or not – are an alternative mechanism to tariff subsidization**.** Romania and Bulgaria operate a Guaranteed Minimum Income program which includes an energy benefit component provided monthly to eligible families during the cold season. Finally, **the notional burden approach** is commonly found in the former Soviet countries. The admissible share of HUS expenditures in household consumption tends to vary between 15 and 30 percent. A similar program is found in the United States, with a burden limit of 50 percent.

for various population groups, it has not provided the necessary funds to the local authorities to accomplish this task. The result is that the utility providers have to subsidize part of the cost reductions. This is in addition to what they absorb in the absence of full cost coverage not directly reimbursed by the government. ***Third***, while the transfer payments play a role in mitigating poverty, they are neither well targeted nor very effective in reducing poverty. Most of the subsidies for housing services pay for privileges that do not go to the poor. The household allowances that go the poorer households are incomplete in coverage due to low take-up and poor targeting.

9.8 **The amount of subsidies earmarked for housing and utility services constitutes an important drain on scarce government resources.** Housing allowances and privileges are funded at both the federal and local levels, and are administered by the local level. The budgetary cost of discounted HUS tariffs for privileged citizens was 2.3 percent of GDP in 2002 – half of the amount spent on pensions and six times as much as what was spent on all targeted social assistance programs (including housing allowances). In contrast, the budget for housing allowances represented only 0.1 percent of GDP. In addition, providers lost an estimated 0.6 percent of GDP owing to the revenue gap of utilities that provide such services below cost, and the net increase in household arrears (quasi-fiscal cost). The total fiscal and quasi-fiscal cost associated with the HUS subsidization policy represented about 3 percent of GDP.

9.9 **Unfunded mandates are a problem, for local governments, in particular, but also for utilities that are forced to absorb the costs of the unfunded mandates.** Federal and local funds do not completely cover the liabilities associated with the complex set of allowances and privileges decreed under federal or sub-national laws. Municipalities have not been able to afford the federally mandated reductions in household and utility rates for certain privileged occupational groups. The financing of the implementation of the most costly law – (the Law on Veterans) is entrusted to the governments of the subjects of the Russian Federation, which are unable to fulfill such financial obligations. Even if the budgets of higher levels of the government provide compensation for reductions in utilities payments, some of the allocated funds never reach service providers. Most often, they disappear in local budgets. The end result is that the utility sector absorbs part of the cost for the privileges and allowances decreed by the government. In addition, the utilities also absorb part of the cost of providing services at prices that do not fully cover their costs.

9.10 **The system of housing allowances and privileges covers a large share of the population and is not limited to the lower quintiles**. The system of housing privileges covers about 32 percent of the population, while housing allowances cover only 6 percent of the population (see Table 9.1). The coverage of both sets of subsidies is fairly evenly spread across the population. Nevertheless the poorest quintile is the least well-covered - even for housing allowances, which are in principle a poverty-targeted program.

Table 9.1: Coverage of Social Protection Programs, by Type
(Persons in recipient households benefiting directly or indirectly from the program)

	Total	Post Benefit Quintiles				
		1	2	3	4	5
Housing allowances	6%	6%	8%	8%	6%	4%
Housing privileges	32%	26%	35%	35%	36%	28%

Note: the coverage estimates were weighted by the household weights and household size. Based on NOBUS 2003.
Source: Tesliuc and Zotova (2004)

The Distributional Impact of Existing HUS Subsidies is Anti-poor

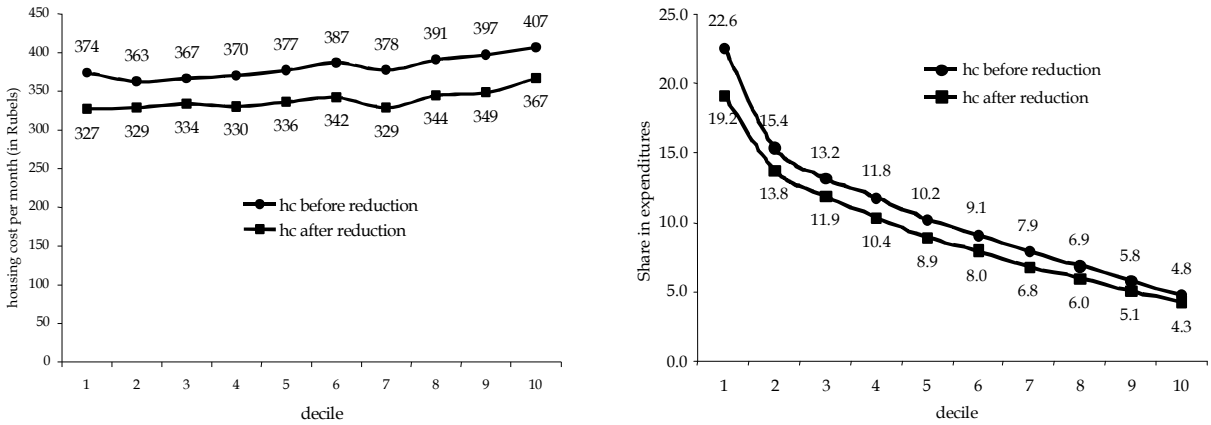
Box 9.2: The Assessment of the Distributional Impact of Existing HUS Subsidies and Allowances Requires the Construction of a Benchmark Situation From the Household Budget Data

Household budget data record information on household expenditures post-benefit – after the allowance or subsidy has been factored in. To determine if these allowances or subsidies reach a particular income stratum (consumption decile), we need to determine the household's income in the absence of these benefits. A first step is to estimate housing and utility bill in the absence of allowances or subsidies, and to add the estimate to the household consumption net of HUS costs.[1] The household's housing bill in the absence of the benefit is estimated based on information about the various utilities that a household consumes, the type of housing, and the surface area of the housing. Using additional information on household income and on whether the household benefits from a discount, as well as information on the various regional cost and norm parameters, the household's housing and utility bill is calculated on a net basis. For those households receiving a housing allowance, the allowance is calculated as the maximum social rent less the marginal tax rate multiplied by the household's cash income. Privileged households are assumed to pay only 50 percent of the calculated gross housing bill.

With information on both the gross and the net housing costs, the distributional impact of housing payments can be calculated. The welfare measure used is household expenditure per capita. Since there are some economies of scale in housing costs, and since poorer individuals tend to live in larger households, we would expect that per capita housing costs would rise with income. In addition, as income increases, households tend to occupy more surface area per capita. Indeed, gross housing costs per capita tend to be higher in the upper deciles than in the lower deciles (see Figure 9.2 in the text).

[1] An analysis has been carried out using the fourth quarter of the 2000 Household Budget Survey implemented by Goskomstat.

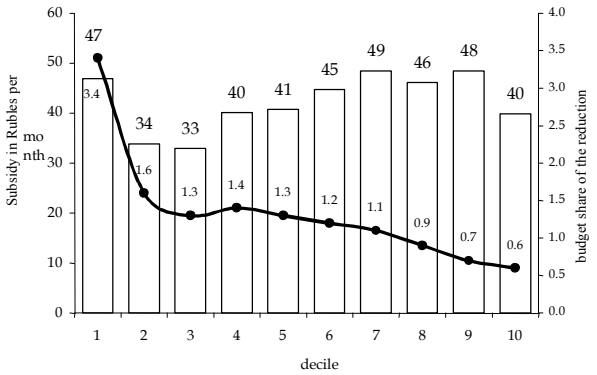
Figure 9.2: Level and Share in Household Expenditures of Housing Before and After Subsidy



9.11 **The simulated HUS subsidies and allowances are regressive, with most of the benefits going to the upper deciles**. The bars in Figure 9.3 show the level of the subsidy in household costs in rubles per month due to housing allowances and privileges. The subsidy declines steeply from the first to the second decile, then levels out and then starts to rise again from the fourth decile on, only to fall again in the tenth decile. It would appear that the housing allowances are most heavily concentrated in the poorest decile. But the reductions in housing costs are quite substantial from the fourth decile on, with the seventh and ninth deciles benefiting even more than the first decile. Table 9.2 shows the share of the total spending (estimated by the benchmark simulation) on housing subsidy by decile. Except for the bottom decile, the share taken up by the different deciles increases sharply from the fourth decile on. The largest share of the total subsidy goes to the top decile. All in all, housing allowances account for only about a quarter of the housing subsidies, while privileges account for the

other three-quarters of the total.

Figure 9.3: Level of the Transfers to Households in Rubles per Month (Left Axis, Bars) and Share of Transfers in the Total Household Expenditures, in Percent (Right Axis, Line)



Source:

Table 9.2: Targeting of the Housing Subsidy

Decile	Share of the budgetary cost
1	8.1
2	6.7
3	7.1
4	9.2
5	9.7
6	10.6
7	11.9
8	11.4
9	12.1
10	13.2
All households	9.7

Source:

Distributional Impact of Proposed Reforms

9.12 In this section we alter some key parameters in the benchmark model to assess the poverty and fiscal impacts of the two major elements of reform under consideration: removing privileges and increasing cost coverage. We also examine what would happen if all households eligible for the allowance took advantage of it. Table 9.3 lists the various simulations that were carried out.

Table 9.3: Description of the Simulations

Simulation	Description
A1	**Eliminate privileges**.
A3	**Increase the "burden" limit to the federal standard** of 22 percent.

A4	**Full take-up of the housing allowance program**: Allhouseholds that, in the benchmark situation, were eligible for a strictly positive housing allowance, but reported not applied for a discount in housing costs, are assumed to receive a housing allowance.
B1	**Transition to full cost recovery**: The *Maximum Social Rent* increases with the higher prices for the utilities. This induces changes in the housing allowance: it becomes higher (or positive when it was zero before). However, only those households receiving the housing allowance in the base case are assumed to receive the housing allowance

9.13 **Eliminating privileges would substantially reduce the cost of the housing subsidy and would have little impact on poverty.** Simulation A1 indicates that the cost of the housing subsidy could be reduced by about 75 percent if privileges were eliminated (Table 9.4). Eliminating privileges would have little impact on poverty, as virtually all of the housing subsidy goes to households in the upper deciles. The incidence of poverty would rise very slightly, from 22.6 percent to 22.9 percent (Table 9.5). The elimination of privileges is generally a progressive scenario: while all deciles experience a loss in living standards (as measured by the percentage change in household expenditure per capita), the loss is increasing through the sixth decile (Table 9.6).[30] The top four deciles also experience a loss that is on average greater than that experienced by the bottom three deciles (the population that falls roughly below the poverty line).

9.14 **Moving to the federal standards would yield a modest cost savings, with some declines in welfare.** Many regions have not moved to the federal standard of 22 percent for the marginal tax rate on income applied in calculating the Maximum Social Rent. The average implicit tax rate in 2000 was 0.173 percent. Thus, moving uniformly to federal standards would reduce the allowances received by the households. Since most of the households receiving allowances fall in the bottom of the distribution, living standards of the poor would be reduced, and poverty would be increased. The results from the simulation (A2) show that living standards incomes in the first few deciles would fall by about 0.6 percent, and in the third decile by about 0.4 percent—but not enough to alter the poverty rate (Tables 9.5 and 9.6). The incidence of poverty would remain virtually the same. The savings would be small—about 10 percent of the benchmark cost of the reductions (Table 9.4).

Table 9.4: Budgetary Effects of the Different Simulations in Billion Rubles per Year and as a Percentage Change of the Cost of the Reductions in the Benchmark Situation

		Housing Household Expenditures		Cost of the Subsidy	Change in the Cost of reductions (positive implies additional costs for the budget)	
		Before Subsidy	After Subsidy		In billion Rubles	As % of benchmark cost of reductions
Benchmark situation in 2000		209.5	185.4	24.1	-	-
Simulation						
A1	Eliminate privileges	209.5	203.6	5.9	-18.2	-76%
A3	t increase (22%)	209.5	187.8	21.7	-2.4	-10%
A4	Full take-up of allowances	209.5	165.1	44.5	20.4	85%
B1	Full cost recovery	369.7	318.3	51.4	30.0	125%

Source:

[30] Living standards are measured by household expenditure per capita, excluding housing expenditures. An increase in housing costs is assumed to be offset by a decrease in other expenditures. Thus the change in living standards is calculated as the change in housing costs post-benefit.

Table 9.5: Effect on Poverty and Inequality of the Simulated Reforms

		Poverty Incidence FGT (0)	Depth FGT (1)	Gini
Benchmark situation in 2000		22.6	6.6	0.350
Simulation				
A1	Privileges	22.9	6.7	0.350
A3	t increase (22%)	22.8	6.7	0.351
A4	Full take-up	21.0	5.5	0.340
B1	Full cost recovery	27.0	8.9	0.365

Source:

Table 9.6: Simulations of a Change in Living Standards, by Decile

Decile	A1	A3	A4	B1
1	-0.07	-0.66	17.1	-17.5
2	-0.30	-0.61	5.5	-10.6
3	-0.56	-0.44	2.6	-9.1
4	-1.01	-0.29	1.2	-7.9
5	-1.09	-0.16	0.6	-7.0
6	-1.17	-0.06	0.3	-6.5
7	-1.14	-0.03	0.1	-5.7
8	-0.91	-0.02	0.1	-4.9
9	-0.77	0.00	0.0	-4.2
10	-0.58	0.00	0.0	-3.5
All households	-0.76	-0.23	2.8	-7.7

Source:

9.15 **Improving the take-up so that every eligible household benefits from the allowance would improve living standards at the bottom of the distribution and would reduce poverty - but at high cost.** The take-up of housing allowances is very low. Many households that are eligible for an allowance do not apply for it. The data show that only 23 percent of the eligible households took the allowance. Thus, one potential way of improving living standards would be to improve the take-up of the allowance. Of course, this would raise the cost of the housing allowances. To determine the impact of a larger take-up, a simulation (A3) was carried out in which every household whose cash income made it eligible for an allowance was assumed to receive it. This proved to be costly: spending relative to the benchmark situation would increase by 85 percent, about 10 percent more than the amount being spent on privileges (Table 9.4). Thus, financing a substantial improvement in the take-up rate would require an elimination of privileges if the cost of the housing allowances is to be held constant. Moving to a full take-up of housing allowances would substantially improve living standards at the bottom of the distribution, particularly in the first and second deciles. Living standards in the first decile would improve by 17 percent (Table 9.6). Poverty rates would fall by almost 2 percentage points (Table 9.5). However, while the increase in the number of households receiving the allowance would substantially benefit those in the first decile, it would not be sufficient to move many households out of poverty.

9.16 **The transition to full cost recovery by the utilities would significantly increase public spending on housing subsidies, but would yield substantial revenues in the form of additional housing and utility payments.** This simulation (B1) is modeled by multiplying all current utility prices by the inverse of the cost coverage level prevailing in each region. The average cost coverage level for all utilities combined was about 54 percent in 2000; for electricity it was 81 percent. Moving to full cost coverage raises the gross housing bill for all households. At the same time, it increases the amount of the allowances that poor households receive as well as the amount of the housing subsidy that privileged households receive. The total cost of the subsidies (both allowances and privileges)

more than doubles relative to the benchmark case (Table 9.4). However, the revenues generated from the increase in cost recovery (the difference in gross housing costs between this simulation and the benchmark simulation) are more than three times the cost of the subsidy (allowances and privileges) in the full coverage scenario. It is important to note, however, that in the benchmark case price subsidies were not included in the cost of the housing subsidy, which comprised only the cost of the housing allowance and privileges. To the extent that that the various levels of government are explicitly subsidizing housing and utilities service providers, the subsidies (estimated in the benchmark model as 160.2 billon rubles) that would be saved by moving to full cost coverage could be used to offset the additional costs imposed by the higher allowances and privileges.

9.17 **Full cost recovery would significantly lower standards of living and worsen poverty.** All deciles would suffer a decline in living standards (Table 9.6) under the full cost recovery scenario. In principle, households that are already receiving a housing allowance would not pay more, as the allowance would increase to cover the growth in housing costs. However, poor households that do not benefit from an allowance would be especially hard hit since their housing costs – which already constitute a large share of their expenditures - would increase substantially. Privileged households would be forced, according the assumptions used in calculating the benchmark case, to shoulder half of the increase in the housing costs. Better off households that are not privileged would also have to bear the full brunt of the increase, but as housing costs account for a relatively smaller share of their expenditures, their welfare loss would not be as great. Thus, the decline in living standards would be particularly acute in the bottom deciles where there are a substantial number of poor households that are not receiving housing allowances. Households in the first and second deciles would need to decrease other expenditures by 17.7 and 10.6 percent, respectively, to pay for the increased cost of housing, while the top decile would incur a loss of welfare equal to 3.5 percent (Table 9.6). The poverty headcount would increase by 4.3 percentage points (Table 9.5).

C. POLICY RECOMMENDATIONS

9.18 **Housing privileges have remained substantially intact in the reforms adopted, though there appears to be some flexibility at the regional level.** The amendments to the Law "On Fundamentals…" approved in May 2003, provide for some changes in the system of the provision of privileges for rents and utility rates. Earlier, the Russian government proposed to the Duma to abolish privileges in their current form and introduce targeted allowances instead, but the proposal was not supported by legislators. According to the new law, most privileged groups will retain their current privileges and their amounts. At the same time, the law defines the sources for financing such privileges more precisely: part of these sources must be financed from the federal budget, while the other part must be financed from the budgets of subjects of the Russian Federation. Moreover, the law contains a provision allowing subjects of the Russian Federation to refuse to provide some privileges if their budgets cannot afford them. This provision is not due to come into effect until 2005. Though the new version of the law contains a number of positive improvements, it does not resolve the main problem - optimization and reduction of government obligations to subsidize housing and utility rates for different social and occupational groups.

9.19 **Reducing the amount spent on privileges will be key if the housing allowance benefit is expanded for the poor as full cost coverage takes effect.** As the simulations have shown, expanding the take-up of housing allowances by the poor will require the elimination of spending on privileges if the impact on the budget is to remain more or less neutral. Moving to full cost recovery without eliminating privileges will impose an even greater burden on the various levels of government. Reining in costs in a socially progressive manner - is important to ensuring that the government is able to afford the cost of the housing allowances. Otherwise, it is likely that the benefits of increased cost recovery that would go to the utility and housing providers will be undercut by the inability of the government to pay for housing allowances and privileges.

9.20 **Various means are available for reducing privileges.** Chapter 8 proposes several avenues

to achieving this, including monetizing privileges by means of a flat benefit.

9.21 **At the same time, measures will be needed to mitigate the negative poverty impact of moving to full cost recovery - including expanding the take-up of the housing allowance program among the poorest.** As incomes continue to grow, poorer households will be in a better position to shoulder the impact of moving to full price coverage. But in the short run, measures will be needed to deal with the negative consequences for poverty. While those receiving housing allowances would be largely protected from the move to full cost coverage to the extent that their housing costs are limited to a share of their income, the poor who do not benefit from housing allowances would be most vulnerable to the move to full cost coverage. The analysis of household data for 2000 suggests that more than three-quarters of households that are eligible for the housing allowance do not currently receive it. Expanding the program to include them would help cushion some of the negative impacts of moving to full cost recovery.

9.22 **Additionally, revising the formula used to calculate the housing allowance to improve targeting is desirable.** The analysis of the distribution of beneficiaries presented in Table 9.1 shows that the beneficiaries are more or less evenly spread out by quintile. Most likely, the income concept in calculating the housing allowance - which is tightly linked to forms of income that can be easily checked - needs to be revised. The government may want to consider using a proxy means test to determine who is eligible for the program. As illustrated in Chapter 8, this method would substantially reduce current leakage rates. Alternatively, the targeting performance of the existing formal income test may improve by considering additional criteria for program eligibility, related to housing conditions or to endowment of durables or real estate.

9.23 In the run-up period, further income growth, especially among the poor, will be important in cushioning the impact of the transition to full cost coverage.

CHAPTER 10. EDUCATION AND POVERTY

As is the case with health status, education and poverty are intertwined. Inadequate access to education and poor quality education are contributors to poverty, and poverty is often a contributor to children not being enrolled in school, discontinuing their education or being enrolled in low quality or irrelevant programs. A poorly educated population is a constraint to increasing the productivity and flexibility of the workforce and therefore is a constraint to economic growth.

This chapter shows that the mutually reinforcing relationship between poverty and inadequate educational opportunities is a serious problem in Russia, which has been worsening and may continue to worsen unless steps are taken to break the cycle. The educational challenges faced by the poor are shown to be twofold: (i) access to education is increasingly determined by income and wealth, with poverty having a negative impact on access to non-compulsory education and high quality modern educational programs; and (ii) funding for education is inequitably allocated. The chapter concludes with a list of poverty-related policy recommendations.

A. TRANSITION HAS INCREASED INEQUALITY IN EDUCATIONAL ATTAINMENT AND OUTCOMES

10.1 **Russia inherited an educational system from the Soviet Union that provided broad access to education regardless of ethnic background, gender or geographical location.** While there was no comparative measurement of education outcomes during Soviet times (the capacity for the objective assessment of learning outcomes is only now being developed), it is generally accepted that there was not significant variation across income groups or geographic areas in terms of the quality of education, especially in comparison with many OECD countries. Nearly all students received a basic educational grounding, which is reflected in an adult literacy rate that is reported to be near 100 percent (Rashid and Posarac, 2003). It is also noteworthy that the Soviet Union was among the first countries to introduce a complex system of affirmative action which supported students from peasants and working class families to access higher education. This system has collapsed, however, over the past 10 years, with only orphans now continuing to receive regular support from pre-school to higher education. Some regions continue to provide free school meals, textbooks, and even summer school grants for students based on poverty level, although these subsidies are not universal and tend to be irregularly provided.

10.2 **Declining birth rates and increasing in-migration and out-migration rates have influenced the structure of the school age population across the country, and this factor should be taken into consideration when the per capita indicators for the development of Russia's education system are calculated.** Between 1989 and 1997 the number of school-age children decreased by 3.6 million, and by 2010 an additional decline of 7.8 million is expected. The regions in the North West, the Far East and Siberia experienced the largest enrollment declines owing to out-migration, while the Central region saw the largest enrollment increases (World Bank, 1999). The peripheral areas of the North West, Far East and Siberia regions are likely to face even greater declines in the demand for education because of net out-migration in the coming years, while the Volga, Ural and Central regions will experience an increased demand for education owing to net in-migration.

10.3 **Despite Russia's strong position in terms of compulsory enrollment and completion, children from poor households have less access to pre-school and non-compulsory education, which is increasingly determined by income and wealth.**[31] Data from the 2003 NOBUS survey (the National Survey of Household Welfare and Program Participation) show that the net compulsory education enrollment rate (those in the 7-15 age group who are actually enrolled in compulsory education) for all income levels is 94-96 percent, which is relatively high by most transition country standards, and is close to Western European levels. Nearly 100 percent of Russian children eventually complete compulsory education. However, although according to the NOBUS survey nearly 90 percent of six year olds from the highest income deciles are enrolled in kindergarten, the relevant figure for the lowest income deciles is only about 75 percent. Children from poor households show a slightly higher tendency to enroll in compulsory education at age six – possibly reflecting lack of access to kindergarten. Yet six year olds from poor households are also more likely than higher income children not to be enrolled in any educational program.

10.4 **The more limited access of the poor to kindergarten and pre-school programs is a serious policy concern.** Lack of early childhood care and education, which is often combined with other problems such as sporadic attendance, absenteeism, and under-achievement, increases the chances that a child will begin compulsory education behind his or her peer group. As few teachers are trained to deal effectively with different ability levels in the classroom, and few schools have the resources to fund remedial programs, children who start out behind are very likely to continue to lose ground as they progress through compulsory education. The life prospects of the poor could increasingly be determined before the child begins compulsory education.

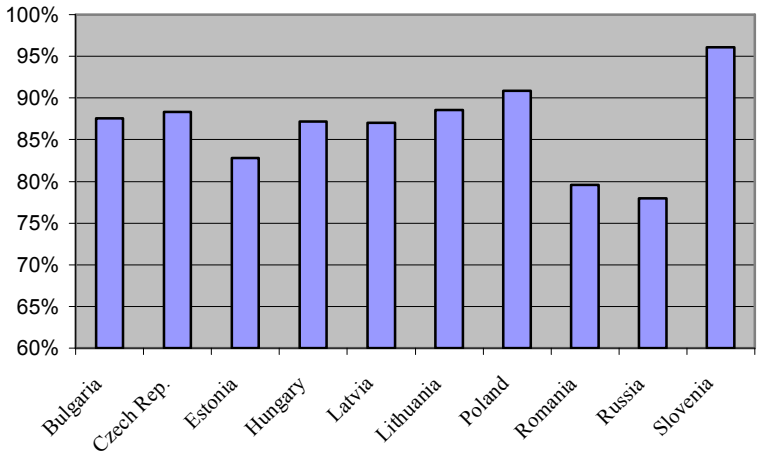
10.5 **Children from lower income households in Russia are also more likely to discontinue their education after the compulsory levels are completed.** Russia's net secondary enrollment rate for 16-17 year olds of about 78 percent (NOBUS 2003) is significantly below net secondary enrollment for Western Europe and North America, both of which average 89 percent, as well as below that for most comparable transition countries (Figure 10.1).[32] There is a significant correlation between poverty and non-enrollment in secondary education (Figure 10.2). While only 5 percent of 16-17 year olds from the highest income decile are not enrolled in secondary education, over 16 percent of 16-17 year olds from the lowest income decile are not enrolled. Furthermore, while over 16 percent of 16-17 year olds from the lowest income decile are still enrolled in compulsory education – reflecting a late start or grade repetition – only about 7 percent of 16-17 year olds from the highest income decile are still enrolled in compulsory education and over 6 percent are enrolled in tertiary education. The trend continues in tertiary education, where about 42 percent of 18-24 year olds in the highest income decile are enrolled, while less than 17 percent of those from the lowest income decile

[31] Compulsory education in Russia includes primary and lower secondary grades 1 to 9. Data used in the analysis are drawn from the 2003 NOBUS (the National Survey of Household Welfare and Program Participation) data; the 2001 and 2002 RLMS (the Russia Longitudinal Monitoring Survey) data; the 2002 Education Economics Monitoring data; the 2001 DVO (Tertiary education in Russia: social factors of inequity in access, motivation and demand) survey data; and the 2003 VTSIOM (Russian Public Opinion Survey Center) data. The NOBUS data are regionally representative and cover a population of just over 31,000 respondents between the ages of 6 and 24. While the RLMS data are also regionally representative, the sample size is small (about 1,300 school age respondents) compared to the NOBUS data. The DVO 2001 survey data represent 1,520 school children and their parents in four regions (Moscow, Pskov, Rostov and Perm) and the 2003 VTSIOM data cover a population of 3,000 in a representative Russian sample. Regional comparisons cover selected regions, which were chosen based on high, medium and low economic and social performances. All findings are discussed in terms of consumption deciles, the breakdown between poor and non-poor (based on the poverty line measured by consumption aggregate), gender and urban and rural location.

[32] UNESCO 2000 data. Given that there is no four year secondary education standard in Russia, the net secondary enrolment rate for the 16-17 age group is used to make cross-country comparisons of net secondary enrolment rates..

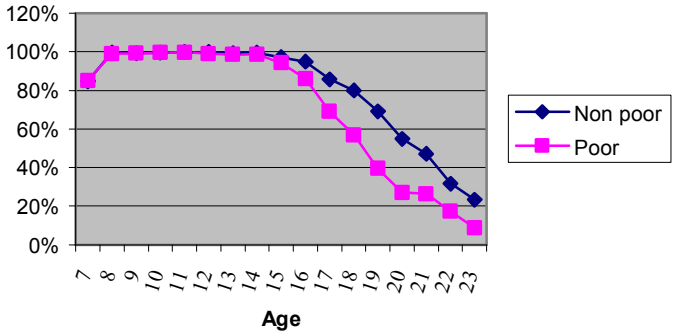
are enrolled.[33]

Figure 10.1: Net Secondary Enrollment Rate for Russia Compared with Other Transition Countries



Source: UNESCO 2000; NOBUS 2003 (Figure compares the NOBUS 2003 estimate of net secondary enrollment for 16-17 year olds to year 2000 net secondary enrollment data for other countries, the most recent data available for cross- country net enrollment rates from UNESCO).

Figure 10.2: Enrollment in Non-Compulsory Education for Poor and Non-poor Households, 2003



Source: NOBUS 2003, Bank staff calculations.

10.6 **On average, the lowest income populations have less schooling by two to three years than the highest income populations (**see Table 10.1). A comparison of years of schooling for rural and urban populations shows that rural populations have fewer years of schooling than urban populations irrespective of income group. The NOBUS data show that 15 percent of adults in rural areas terminated their education following primary education, compared to less than 6 percent in urban areas, and that 22 percent of adults in urban areas completed higher education compared to just over 8 percent in rural areas. A tendency for women to have fewer years of schooling than men is pronounced only in the lower income groups. The RLMS (the Russia Longitudinal Monitoring Survey) data show a similar trend.

[33] Data from the 2002 RLMS survey indicated an enrolment rate for 16-17 year olds of only 66 percent and an enrolment rate for 18-24 year olds of only 16 percent, compared to about 30 percent according to the 2003 NOBUS. The NOBUS data are in the chapter, as the NOBUS survey is more representative. At any rate, the most important finding – the trend toward non-enrolment for lower income groups – was clear in both surveys.

Table 10.1: Mean Years of Schooling for Adults According to Wealth, 2003

Consumption Deciles	1	2	3	4	5	6	7	8	9	10
Total	**10.0**	**10.3**	**10.5**	**10.8**	**11.1**	**11.4**	**11.5**	**12.0**	**12.4**	**13.0**
Rural	9.5	9.4	9.3	9.7	9.9	10.2	10.1	10.6	10.9	11.4
Urban	10.4	10.9	11.2	11.2	11.5	11.8	11.9	12.3	12.6	13.2
Male	10.4	10.7	11.0	11.1	11.3	11.6	11.8	12.1	12.5	13.0
Female	9.6	10.0	10.3	10.6	11.0	11.3	11.4	11.9	12.3	13.0

Note: Includes all individuals age 23 and older
Source: NOBUS 2003, Bank staff calculations.

10.7 **The dependence of educational attainment on income is also revealed in its regional variations.** In the South -- by far the poorest region with a GRP per capita in 2001 of only 28,000 rubles- over 10 percent of adults left school following primary education, whereas only around 4-5 percent of adults left school after primary education in the North West and Far East regions (with 53,000 and 56,000 rubles per capita GRP, respectively). In the comparatively affluent Ural and Central regions, with 97,000 and 70,000 rubles per capita GRP, respectively, 7 percent and 8 percent of children, respectively, discontinued their education after the primary level, reflecting a potential high variance of poverty in those regions. There is also variance in the completion of university level education across the regions, ranging from nearly 22 percent in the North West to just over 16 percent in the Volga region.

10.8 **The tendency of children and young adults from low income groups to discontinue their education after the compulsory levels, and to have lower levels of educational attainment (see Table 10.2) has a direct negative impact on their life chances.** In nearly all countries, higher levels of education are associated with a higher probability of employment and higher earnings. Goskomstat data show that, in 2002, 83 percent of the population with a tertiary or professional education was in the labor force, while the corresponding percentage for compulsory education graduates was 38 percent. The unemployment rate of compulsory education graduates was 19.7 percent in 2002, while that of higher education graduates was only 4.2 percent. According to Goskomstat, over 70 percent of higher education graduates between the ages of 18 and 65 are employed, while this share gradually falls with lower levels of attainment to 43.7 percent among those with only a compulsory education, and to 20.5 percent among those with only a primary education. Moreover, the mean monthly net income increases with level of education in Russia. The NOBUS data show that the standard deviation is very large, revealing a significant variation in income among workers -- a common finding in transition economies. The 2002 RLMS provides evidence that returns to education in Russia have became similar to those in Western economies. Higher education graduates between 18 and 25 earn salaries that are more than 1.5 times higher than the salaries of those who have only a secondary education, while this difference is more than 2 times higher for the age 36-64 category.[34]

[34] The analysis also reveals a gender disparity in wages, as women with the same level of education receive 1.5 to 1.8 lower salaries than men. Women with a higher education receive approximately the same salaries as men without a higher education.

Table 10.2: Non-poor Have Higher Education Attainment than Poor (%)

	Non-poor	Poor
No primary education	1.58	3.52
Primary	7.06	12.26
Lower secondary	10.69	16.8
Full secondary	16.85	22.65
Initial vocational with secondary certificate	6.31	7.81
Initial vocational without secondary certificate	3.64	3.53
Secondary vocational	29.14	24.05
Incomplete higher education	3.09	1.28
Higher education	21.28	8.05
Postgraduate	0.34	0.04
Total	100	100

Note: Includes all individuals age 23 and older
Source: NOBUS 2003; Bank staff calculations.

10.9 **The ability to pay the required private contributions for education is a serious poverty issue in Russia today.** According to the 2002 RLMS data, the top income quintile accounted for 46 percent of private spending on education, while the bottom income quintile paid about 2 percent of all private funding. As for urban and rural comparisons, the rural population has a higher tendency to report the high costs of studying as a major constraint to continuing education. On the other hand, the urban population was twice as likely to cite the need to find employment as a reason for discontinuing education, a finding that reflects the shift of available employment to the cities. Across regions, the South and Siberia, with a relatively low GRP per capita, cite the problem of high costs of education (33.9 and 31.64 percent, respectively) far more often than the relatively more affluent North West and Far East regions (9.66 and 11.62 percent, respectively).

10.10 **Poverty in Russia has an increasing impact on access to high quality and relevant educational programs.** The evidence presented below suggests that low income in Russia has become a constraint for many students to access to the type and quality of education that will promote better life chances and thus help to break an increasing cycle of poverty in the country. As in most countries with open enrollment policies, there is evidence that children from wealthier households tend to enroll disproportionately in more competitive programs, schools that tend to send more students to higher education, and better resourced schools. The 2001 DVO (Tertiary Education in Russia: Social Factors of Inequity in Access, Motivation and Demand) data, which surveyed urban secondary students in four regions, showed that 40 percent of eleventh grade students from families in the highest income quintile attend a *lyceum* or *gymnasium* (as distinct from a general secondary school), while only 15 percent of those from families in the poorest quintile attend such schools.[35] Access to computers, the internet and foreign languages was also found to be lower among low income families. Around 80 percent of students categorized as poor had three or fewer foreign language lessons per week, while the majority of students from high income families had more than five such lessons per week. Although no country can be expected to ensure equality of educational outcomes with regard to the types of schools attended, the challenge for Russia is to do a better job of promoting access to educational opportunities which will allow a level playing field in the competition for more elite schools.

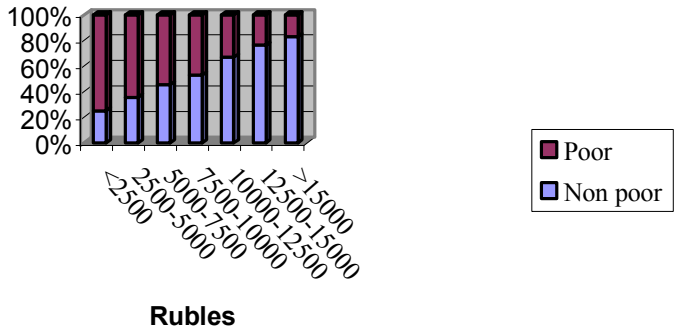
10.11 **Low income is also a barrier to entering high quality university programs.** According to the 2001 DVO data, only 15-50 percent of children from poor families were accepted into a higher education institution, while almost 80 percent of those from better-off families gained admittance to higher education institutions. The study shows that the characteristics of the secondary school attended play a strong role at the entrance stage. It is clear that the better the school is in terms of

[35] The 2001 DVO data, which focused only on urban areas in a small number of regions, is not representative for Russia and, while considered indicative, should be interpreted in view of its limited focus.

number of specialized academic subjects and the number of foreign language classes, the higher the chances are of entering a university or college. The 2003 VTSIOM (Russian Public Opinion Survey Center) data showed that 95 percent of entrants from high income families enter a higher education institution upon their first application, while only about 10 percent of students from low income families (those with incomes below 5,000 rubles) succeed on their first try. Students from low income families are also much more likely to attend a higher education institution that was not their first choice, and are more likely to attend evening courses. The 2001 DVO data show correlation between the choice of a university department by secondary graduates and economic factors. Students from higher income families tend to be accepted into more competitive economics and law departments, while students from lower income families tended to be accepted into technical and engineering programs.

10.12 **The deepening inequality in terms of access to better schools and programs is compounded by a rise in privately financed education and is further worsened by an increasing incidence of informal payments.** Not surprisingly, high income households tend to make higher private contributions to their children's education than lower income households, although it is likely that lower income households tend to contribute a higher share of disposable income to their children's education. Nearly 80 percent of the non-poor spent more than 15,000 rubles on their children's education during the previous school year, while only 20 percent of poor households managed to make a similar private contribution (see Figure 10.3). On the other hand, almost 80 percent of poor households spent less than 2,500 rubles on their children's education, while the corresponding figure for non-poor households is only 20 percent. This large disparity in nominal contributions is a concern in terms of its potential long term negative impact on quality for those schools with large populations of students from poor households.

Figure 10.3: Private Expenditure on Education by Poor and Non-poor Households, 2003



Sources: NOBUS 2003; and Bank staff calculations.

10.13 **There is also a significant variation in spending on tutoring between the lowest and highest income households, which gives children from higher income households an advantage in terms of being selected for better schools or more desirable types of education.** The NOBUS survey shows that over 40 percent of households from the highest income decile spent more than 2,000 rubles on private tutoring in 2003, while 60 percent of households in the lowest income decile made barely any contribution to tutoring.

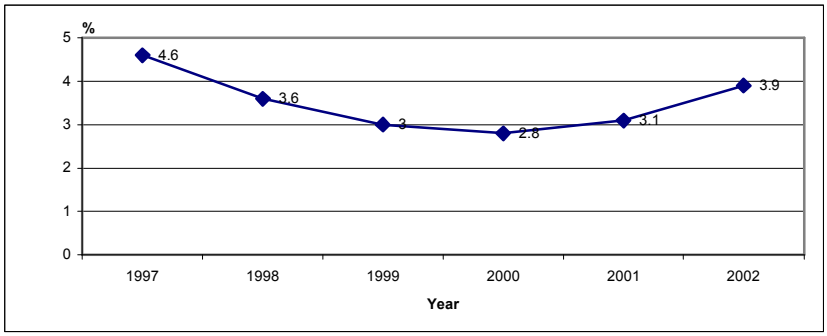
10.14 **The cost of transportation is another contributor to lack of access to quality schools and programs.** There is a considerable variation in spending on transportation between the lowest and highest income households. Children from higher income households have a clear advantage in terms of having access to better schools or more desirable types of schools. A large share of lower income households spent less than 250 rubles for their children's transportation in the previous year, while a comparatively large share of households in the higher income groups spent more than 2,000 rubles per year on transportation.

10.15 **Finally, access to textbooks may also be related to poverty.** The mean household spending on textbooks was 472 rubles per year. However, over 50 percent of households in the lowest income decile spent less than 250 rubles on their children's textbooks. At the same time, a large share of households in the upper income deciles could afford to spend over 750 rubles on textbooks. This variance in private expenditure for textbooks could reflect that some regions provide free textbooks to disadvantaged students, and therefore poor populations need to spend less on books. More research is needed to ensure that textbook subsidies, where they exist, are actually poverty targeted. Generally, urban populations showed higher spending on textbooks than rural populations.

B. FUNDING FOR EDUCATION IS INEQUITABLY ALLOCATED

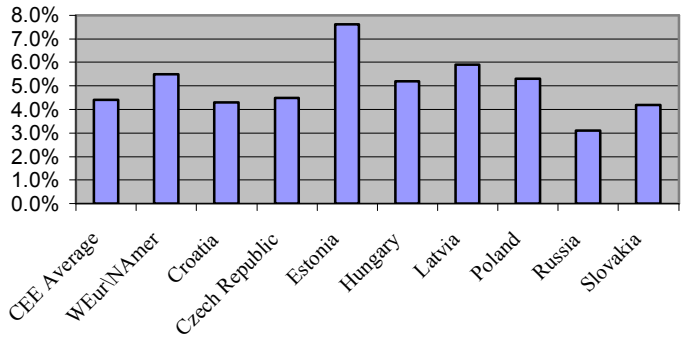
10.16 **Public funding for education has declined since 1997over, as the fiscal consolidation following the 1998 financial crisis was largely achieved at the expense of social spending** (see Figure 10.4). Although spending as a share of GDP has increased since 2000, it continues to be low in comparison with OECD countries and with the Baltic states and most Central and Eastern European countries (see Figure 10.5). There is concern as well about the efficiency with which the already inadequate resources are used. In addition to the common problems associated with persistent under-funding of the system (including decaying infrastructure, inadequate educational resources, under-trained and under-paid teachers, etc.), inadequate and inefficiently used resources have meant that Russia has not been able to allocate the resources needed to target funding to disadvantaged groups, or to schools in which educational performance is low.

Figure 10.4: Education Expenditures as Percentage of GDP, 1997-2002



Source: Morozov, 2004

Figure 10.5: Education Expenditures as a Percent of GDP: Country/Regional Comparisons

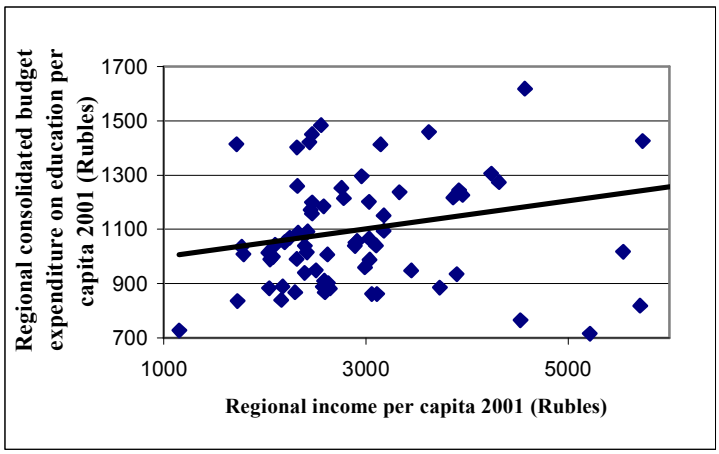


Source: UNESCO: 2002

10.17 **Uneven regional funding for education has led to inequalities in access and quality**. Russia's sheer size and diversity and the increasing fiscal decentralization since independence (only

0.7 percent of GDP spent on education represents federal funding) have led to a steep rise in inequality in spending per capita for education among local governments. The majority of financing for education comes from municipal budgets (63.2 percent of the total as of 2001), followed by regional budgets (19.0 percent) and the federal budget (17.8 percent, the bulk of which is for universities and vocational education). According to Roshtchina (2004), consolidated budget expenditure on education per student positively correlates with the number of education institutions in the region and with per capita income levels i.e. negatively correlates with the poverty level (see Figure 10.6). Poorer regions provide more limited education opportunities, especially at higher education institutions, and the regional variations are exacerbated by the fact that higher income regions tend to spend more on education from both public and private resources.

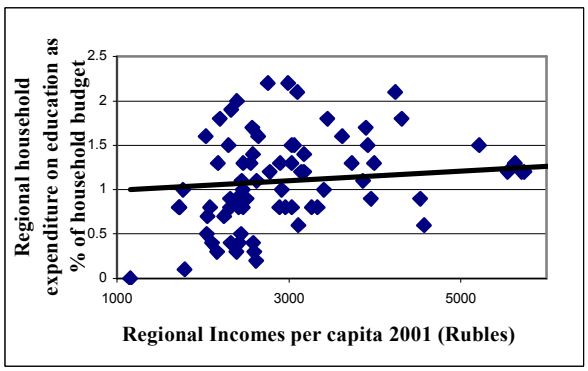
Figure 10.6: Regional Incomes and Regional Consolidated Budget Expenditures on Education, Rubles per Capita, 2001



Source: Roshtchina, 2004

10.18 **Private spending on education also shows significant regional variation.** In Moscow, over 59 percent of households spent more than 15,000 rubles per child per year, while in regions such as the Ingushetiya Republic over 63 percent of households spent less than 2,500 per child. Regions such as the Far East and the Ural region show high spending on their children's education (over 25 percent of the population spent over 15,000 rubles), while households in the South show a relatively low level of spending on their children's education (over 35 percent of the population spent less than 5,000 rubles). It is worth mentioning that household expenditure on education as a percentage of total household expenditure is very low in Russia. Households spend on average just over 1 percent of their household budget on education, although there is some regional variation. The share of household spending on education is positively correlated with regional per capita income (see Figure 10.7).

Figure 10.7: Regional Household Expenditure on Education as % of Household Budget and Regional Income per Capita 2001 (Rubles)



Source: Roshtchina, 2004

10.19 **Provision of scholarships is not adequately targeted on the poor.** According to the NOBUS, the percentage of the population receiving scholarships in initial and secondary vocational and higher education is slightly higher among the poor than among the non-poor (see Table10.3). However, the total number of poor who are enrolled at these levels is significantly smaller than the non-poor population, meaning that the total amount of scholarship funding is heavily skewed toward the non-poor. The amount of scholarship funding awarded to individuals also seems to be skewed toward the non-poor. Among those who receive scholarships in initial vocational education, only 2 percent of students from the lowest income deciles received more than 500 rubles over a three-month period, while the corresponding percentage for students from the highest income deciles was 36 percent. The trend for scholarships in secondary vocational and higher education is similar.

Table 10.3: Percentage of Poor and Non-poor Population Receiving Scholarships

Initial vocational education	Receiving scholarship (%)
Non-poor	65%
Poor	72%
Secondary vocational education	
Non-poor	29%
Poor	46%
Tertiary education	
Non-poor	23%
Poor	35%

Source: NOBUS 2003, Bank staff calculations.

C. POLICY RECOMMENDATIONS

10.20 The analysis presented in this chapter leads to a number of policy recommendations (for a more in depth review of education policy recommendations, see the World Bank's recent policy note, *The Modernization of Education in Russia: Outstanding Issues,* 2004). Poverty-oriented recommendations for education are described below.

- ***Provide adequate and equitably distributed public financing.*** The education reforms and actions needed to increase educational access, and to improve the quality and relevance of education, will be possible only with an increased mobilization of financial resources for education. The 3.7 percent of GDP that Russia currently devotes to spending on education compares to an average of 5.5 percent in OECD countries and about 4.5 percent for Central and Eastern Europe. Given demographic declines and internal migration, increased funding for education should be combined with measures – such as per student funding mechanism – which provide incentives for more efficient use of resources.

- ***Improve the targeting of remedial programs and other investments aimed at poor and disadvantaged groups.*** Although neither the Federal level nor any region should be expected to commit to equal per student recurrent funding across educational jurisdictions, Much more could be done in Russia to target investment funding for remedial programs to groups, geographic areas or schools where educational performance problems are identified. As a first priority, programs should be more explicitly targeted to support early childhood development (particularly by increasing access to pre-school/kindergarten for the poor), as well as children with special learning needs and those from disadvantaged families. Although more research needs to be carried out in Russia, the payoff to expanding early childhood development programs for the poor have been convincingly demonstrated in many OECD countries. To the extent that they do not already exist, regional education authorities together with social welfare institutions should identify transparent criteria for such targeting. The free provision of services such as students' meals and textbooks consumes a significant part of the education budget, but these subsidies do not contribute to greater equality. Non-educational

subsidies such as school meals, transportation and summer camps, should be provided free of charge only to disadvantaged students, as identified by local social welfare institutions, while consideration should be given to better targeting of educational materials and textbooks.

- **Although this may be politically difficult, challenge Russia's long-standing policy of granting free admission to higher education institutions only to the best students, who come predominantly from higher socioeconomic levels.** While admission to higher education institutions should continue to be granted on the basis of academic merit (e.g. standards should not be lowered in the name of more equitable admissions), the funding of higher education can be made more equitable. It should be a high priority in Russia to bring transparency and consistency to the student fee system in higher education, as well as to spending for non-educational student subsidies, such as student board, housing, transportation, etc. As fees have become prevalent in the higher education system, the case for making fees universal and allocating free admission based not only on merit but also on need would be an important element in a transparent fee and scholarship system. Defining a viable mechanism for means-testing higher education applicants would be a key step in this university entrance reform process.

- ***Finance students rather than schools.*** The traditional process of budget allocation to schools, whereby each school prepares its budget based on input norms, does not promote an efficient or equitable allocation of scarce resources for education in Russia. New per capita funding models, which have been successfully developed and implemented in several of Russia's regions, should be expanded to other regions. Such an objective measure of the funding devoted to education is a prerequisite for ensuring adequate resources for the system and for better targeting resources to disadvantaged populations.

- ***Improve instructional quality in secondary schools through establishing standards and assessing performance against those standards.*** As income has been shown to be a factor in access to and the quality of post-compulsory education, more focus and more resources should be devoted to improving quality and relevance at this level. A consultative process is needed that is aimed at defining competence-based standards that are linked to measurable performance outcomes (as opposed to merely prescribing, in the traditional way, what teachers should teach). Following this process, priority should be given to developing curriculum materials (of which textbooks are only part of a package), education technologies, including information and computer technology programs, and new teaching methodologies.

- ***Increase the relevance of secondary vocational programs.*** Reforming the secondary vocational education system is the highest priority for action in education, and is the one reform area that has the highest potential for short-term results. New broad-based curricula should be developed that provide all children with broad skills and competencies. Providing children with the tools needed for flexibility and labor mobility in Russia's dynamic economy is a much better poverty measure than training children for specific occupations for which there may or may not be a demand throughout their lives.

- ***Develop the education administration's capacity to monitor poverty and its relationship with education.*** The Russian education administration does not currently monitor the impact of poverty on education outcomes, or the impact of education on socioeconomic status. While federal education administration should not establish its own capacity for collecting and monitoring poverty data, it should develop a capacity to analyze and use poverty data and indicators provided by other government or non-governmental sources. One of the primary roles of the federal level in a decentralized system should be to develop the capacity to monitor the allocation of both public and private resources for education across socioeconomic groups and geographic areas, and to promote a minimum level of spending per student across all groups and areas. Developing a poverty monitoring capacity in the Federal Ministry of Education is also linked to the above recommendation to begin targeting

remedial programs to regions, localities or individual schools in which problems with quality or educational access have been identified. The development of a capacity for the assessment of student performance is a complementary action in terms of targeting resources to under-performing groups or areas.

CHAPTER 11. RUSSIA'S HEALTHCARE: INCREASING VULNERABILITY OF THE POOR

Globally, poverty and ill-health are intertwined; the poor are more likely to suffer from poor health and this in turn affects the poor's ability to improve economically. Russia is no exception. Health status in Russia is worse for the poor, and lower income groups are more likely to engage in riskier behaviors such as frequent use of spirits. There is also inequity in health status across regions, and this is becoming worse since the 1998 crisis. Russia's young and economically productive population groups suffer both from non-communicable diseases, such as cardiovascular disease and accidents, and the re-emergence of infectious diseases such as AIDS, which could significantly affect GDP growth over the next decade. But the health care sector is currently inadequate to the task of addressing these issues. It require downsizing, restructuring, and reallocation across regions. It still lags decades behind most EU countries. Finally, out-of-pocket payments are growing and disproportionately hurt the poor and the medically vulnerable. Steps are needed to protect the poor as well as the non-poor from falling into impoverishment due to demands for payment at the point of service.

A. THE POOR AND GENERAL HEALTH STATUS

11.1 **The association of poverty and poorer health reflects causality in both directions: poverty breeds ill-health, and ill-health keeps poor people poor**. Illness may have a substantial impact on income and may even make a difference between being above the poverty line and below the poverty line. Furthermore ill-health is associated with substantial health care costs. Health status and economic growth and development are also linked. Lagging health outcomes add significantly to lowered productivity, e.g., in terms of sick leaves, absenteeism, and improving outputs. Investments in health (along with education) are essential for labor productivity.

11.2 **Poor people have worse health status in Russia** (Table 11.1). Nearly half of the lowest consumption group quintile reported a bad or very bad health status in the NOBUS survey. The upper quintiles reported a much better health status relative to the lower consumption quintile groups. This is especially surprising given that there is considerable evidence in the literature that the poor systematically under-report their own level of poor health, as well as their needs/illnesses. Hence, the reported numbers might be conservative relative to the real level of poor health of the lower income groups. By international standards, all quintiles score poorly. For example, a full 90 percent of Canadians reported good or very good health status in a 1998/99 survey (Health Canada, 2004).

11.3 **The poor are also more likely to engage in risky behaviors that contribute to poor health status**, as shown in Table 11.2. The frequency of the heavy use of vodka and other hard spirits decreases as income increases. The lower income groups are more likely to engage in heavy drinking. Similar results were found for the consumption of beer and wine.

Table 11.1: Self-Reported Health Status (%)

Consumption Quintiles	Good or Very Good	Satisfactory	Bad or very bad
1 poorest	38	16	47
2	39	20	41
3	39	20	41
4	43	21	35
5 richest	52	20	28

Source: NOBUS survey, 2003

Table 11.2: Income Levels and Use of Vodka, Cognac, Liqueurs, and Other Spirits (%)

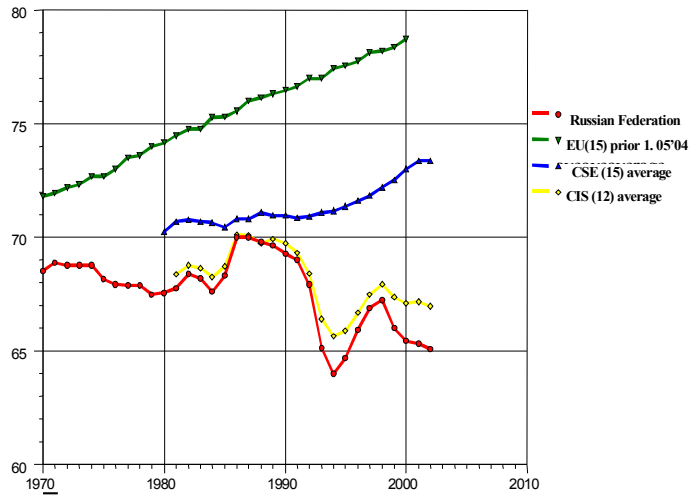
	Consumption Quintilles					
	1	**2**	**3**	**4**	**5**	**Total**
Several times a week	31	19	19	17	14	100
Practically every day	40	22	13	13	12	100

Source: NOBUS survey, 2003.

11.4 **The health status of the Russian population generally does not compare well with to that in many middle-income countries** (see Table 11.3). From an epidemiological standpoint, this poor health status has been due to both communicable and non-communicable diseases. But other factors link with poor health status, such as the socio economic turmoil caused by the transition (Field and Twigg, 2000), and lifestyles involving such risk factors as tobacco use, heavy alcohol consumption, high-fat diets, nutritional deficits in poorer regions and lack of exercise (Lock et al., 2002; Malyutina et al., 2002; Men et al., 2003).

11.5 **The general health status in Russia also is worse than in most transition economies. Life expectancy has been declining since the mid-1980s, with a particularly sharp fall after the transition years of the early 1990s and again since the 1998 economic crisis** (see Figure 11.1). In the 1950s and 1960s, health status showed little variation among European countries. However, since the 1970s the health of people in Western Europe has improved steadily, while for people in Central and Eastern Europe it has stagnated, and for those in the former Soviet Union – including Russia -- it has deteriorated sharply (Asvall and Alderslade, 2002).

Figure 11.1: Trends in Life Expectancy at Birth for Europe and Russia, 1970-2003



Source: WHO Health for All Database, 2004.

11.6 **Over three-fourths of the decline in life expectancy during the transition was due to an increased mortality rate for ages 25-64.** Overall, non-communicable ailments, such as

cardiovascular diseases (heart disease and stroke), and injuries (often caused by abuse of alcohol) accounted for the greatest share (65 percent) of the decline in life expectancy. In addition, chronic liver diseases and cirrhosis accounted for 2.4 percent of the decline, and other alcohol-related causes for 9.6 percent. This was the case even though, according to the Russian Longitudinal Monitoring Survey (RLMS), alcohol consumption declined in 1992-98. Cancer accounted for only 0.7 percent (Notzon et al., 1998). Infectious diseases, including pneumonia and influenza, accounted for 5.8 percent.

11.7 **The health status is particularly acute for Russian males**. If the current death rate remains constant, about 42 percent of Russian males 15 years old today will be dead before the age of 60 (see Table 11.3). In Poland the equivalent figure is 23 percent; in lower middle income countries 20 percent on average. In essence, Russian adult males who are in the prime years of economic activity are falling sick, and dying at a more rapid rate than those in other countries, with which Russia competes. This translates into a loss of productivity relative to what could have been realized from people at the peak of their economically active years.

Table 11.3: Economic and Health Status: Russian Federation and Selected Transition Countries

	GNP per Capita (PPPs)	Incidence of TB per 100,000	Prevalence of Smoking (% Adult Males)	Male Life expectancy at Birth	Probability of Dying for Males of Age 15 to 60 (%)
	(2001)	(2000)	(2000)	(2001)	(2001)
Poland	9,370	36	54	69	22.6
Mexico	8,240	38	51	70	18.0
Brazil	7,070	68	38	64	25.9
Russian Federation	**6,880**	**132**	**63**	**59**	**42.4**
Turkey	5,830	36	65	67	21.8
Kyrgyz Republic	2,630	153	60	62	33.5
Lower Middle Income	4,700	119	59	67	20.5
Upper Middle Income	8,500	55	42	68	21.8

Source: World Development Indicators, World Bank, 2003.

11.8 **There is also a correlation between lower social and income status and the increase in mortality in Russia in the last decade as well** (Plavinski, et al. 2003). In the 1990s, there was no recorded increase in mortality in men with university degrees. The most pronounced differences were found among participants with the lowest level of education; this pattern held for heart diseases and deaths from cancer. Men in lower socioeconomic groups were most affected by the sharp increases in mortality in the 1990s.

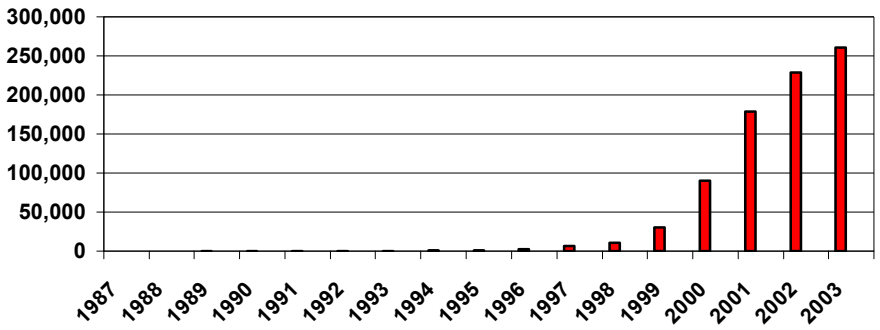
11.9 **Infectious diseases, thought to be under control in the late 1980s, have resurged in the Russian Federation since transition, which is having a negative impact on potential growth**. The incidence of tuberculosis (TB) is 10 times that of most EU countries. The incidence of HIV/AIDS is also growing. According to the Russian Federal AIDS Center, Russia now has over 1 million HIV positive individuals, and, together with Ukraine, has one of the highest HIV growth rates worldwide.[36] Until now, HIV has predominantly been transmitted among intravenous drug users who share needles (the high-risk core transmitters), but the disease is spreading rapidly to the general population through sexual contacts (particularly via prostitution) and blood transfusions. The younger generation is disproportionately affected, with about 60 percent of the HIV-infected individuals being between 20 and 30 years of age. Overall, the female/male ratio is 1:3 among the registered cases.

11.10 **This trend in HIV cases is a serious threat to the long-term growth and welfare**

[36] In the absence of rigorous epidemiological surveillance, the data must be treated with great caution.

prospects of the country[37] (Figure 11.2). If no policy changes are made, estimates suggest that by 2010 the death toll from HIV/AIDS may be very large, and the cumulative number of HIV-infected individuals may rise to at least 2.3 million. Under conservative assumptions, this could lead to a decline in GDP of 10 percent by 2020 relative to a scenario without the spread of HIV. This is likely to be accompanied by an even larger decline in the labor supply.

Figure 11.2: Officially Reported Cases of HIV in the Russian Federation, 1987-2003



Source: Federal AIDS Center, Moscow, 2004

B. REGIONAL VARIATION IN HEALTH STATUS

11.11 **The summary national health statistics do not tell the full story. An equally fundamental issue is the variation in health outcomes by geographic region and socioeconomic variation** (see Table 11.4)**. There are enormous interregional variations, in terms of both mortality and morbidity.** Infant and child mortality across regions has a fivefold variation (WHO, 2003). The incidence of TB has a more than twelve-fold variation by region. Life expectancy (male and female) across the regions varies by as much as 16 years (European Observatory, 2003).

Table 11.4: Mortality Rate by Cause of Death by Region (per 100,000 population)

	Infectious and Parasitic Diseases	Tuberculosis	Neoplasm	Diseases of Blood/Blood-Forming Organs	Diseases of Respiratory System	Digestive Tract Diseases	Accidents, Poisoning and Injuries
Russian Federation Maximum	25.0	20.6	205.5	849.4	70.5	44.6	219.9
Maximum (worst region)	92.2	80.3	282.2	1,338.4	134	564.2	444.7
Minimum (best region)	4.7	2.3	56.9	198.6	9.3	9.7	37.3
Median	22.9	19.0	189.8	719.6	66.3	43.4	53.8

Source: Goskomstat, 2000

11.12 **This regional variation is growing worse** (Tables 11.5 and 11.6). Variations in the rates of infant mortality and in average life expectancy at birth increased in the years immediately following the 1998 economic crisis.

Table 11.5: Infant Mortality by Region, 1999-2001 (per 1,000 live births)

Region	Years

[37] The full report and simulation model are available at: www.worldbank.org.ru

	1999	2000	2001
Maximum (worst region)	40.3	33	42.1
Minimum (best region)	10.1	9.4	8.1

Source: Goskomstat

Table 11.6: Average Life Expectancy at Birth by Regions of the Russian Federation, 1999-2001

Region	Years								
	1999			2000			2001		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Maximum (longest life expectancy)	73.4	68.1	78.6	74.0	68.6	79.0	74.6	70.0	79.1
Minimum (shortest life expectancy)	56.0	50.7	62.1	56.1	50.4	63.0	56.4	51.1	62.8

Source: Goskomstat

11.13 **Disparities exist in urban-rural areas and may be growing**. Life expectancy for males is a full 2 years less in rural regions (Goskomstat, 2003). There is a broad perception by rural regional leaders that alcoholism, drug use, suicide, and child malnutrition rates are growing dramatically in rural areas (World Bank, selected focus group studies, 2003).

C. AN INEFFECTIVE HEALTH DELIVERY SYSTEM: THE IMPACT ON POVERTY AND HEALTH

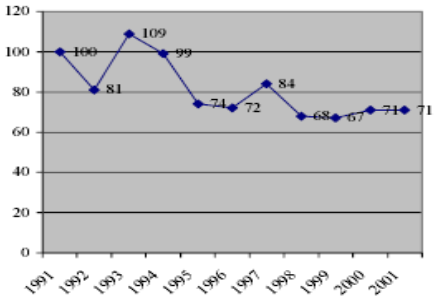
Healthcare Funding

11.14 **Is reversing the trend in mortality and helping the poor a matter of additional public funding or are there additional and/or associated changes needed? One issue is overall level of expenditures, but the effectiveness of expenditures in improving health outcomes and in reaching the poor depends on the policy and the institutional environment.** This involves both targeting funding and spending it well. Weak policy and institutional environments will result in little in the way of gains (World Bank, Basic Services for the Poor, 2003). Investment in health has high returns, but only if this investment is made carefully, and if concerns with quality and efficiency are built into the system. These conditions are not currently met in Russia.

11.15 **There is some evidence that Russia's funding for health care improves health outcomes and should be directed toward protecting the vulnerable populations**. A study by Ivaschenko (2003) examined the impact of poverty and public health spending on inter-regional and inter-temporal variation in longevity in the Russian Federation. The study showed that regional poverty and real public health expenditure per capita correlated with the observed variations in longevity across regions, and over time. Males as a group showed a significant correlation with changes in expenditures.

11.16 **While it is difficult to determine causality, the decline in health status roughly parallels the decreases in public sector health care expenditures, in real terms** (see Figure 11.3). The Government expenditures on health care have declined in real terms by one-third in the past decade, particularly in the early 1990s, and in 1998 there was another fall in real expenditures. Since 1998, public sector expenditures on health care have stabilized and have had a slight upturn.

Figure 11.3: Total Public Expenditures on Health, 1991-2001 (constant prices, 1991 = 100)



Source: GoskomStat database using index deflators of GDP.
Note: Includes budget and health insurance contributions.

11.17 **Public sector expenditures, measured as a share of GDP, have fluctuated between 3 and 4 percent since 1995, with some drops after the 1998 crisis.** Health expenditures followed a U-curve: initially they declined from their pre-crisis level as a percent of GDP until 2000-2001 and then recovered (see Table 11.7). Health expenditures differed from the "non-social" non-interest expenditures of the budget, which demonstrated only a moderate decline after the 1998 crisis. Thus, in the aftermath of the 1998 crisis the necessary fiscal consolidation in Russia was achieved primarily at the expense of health and other social expenditures.

Table 11.7: Budget Expenditures in 1997-2002 (% of GDP)

	1997	1998	1999	2000	2001	2002
Non-Interest Expenditures	40.4	36.2	31.1	30.0	31.5	34.6
Education	4.6	3.6	3.0	2.8	3.1	3.9
Health	**3.5**	**3.4**	**2.9**	**2.8**	**2.9**	**3.2**
Social Protection	16.0	13.3	9.7	8.9	10.9	12.6
Other	16.3	15.9	15.5	15.5	14.6	14.9

Source: World Bank, 2004.

11.18 **Russia's public sector spending for health care, as measured by share of GDP, is low if compared with EU countries which spend from 6-8 percent of GDP on average**. At the same time, if compared with middle-income countries, Russia spends similar amounts in terms of public sector spending as a share of GDP.

11.19 **Public (government) expenditures as a share of GDP, as a result, may not automatically be considered as "low" by international comparisons**. Similarly, it is not clear whether overall expenditures – public plus private -- are too low. Internationally, total (public plus private) health spending as a share of GDP generally increases as GDP increases, with the lower-to-middle income countries (GDP < $10,000 per person) allocating less than 6 percent of GDP, whereas higher income countries all spend more than 7 percent. Russia's spending, for both public and private together is 5.3 percent.

11.20 **The implementation of Mandatory Health Insurance (MHI) has not generated additional funding or other expected favorable results**. The regions, under the legislation in the early 1990s, were to collect a new payroll tax and allocate budget funds for the non-working population. The equalization transfers have never been earmarked for health, and regions have mostly been unwilling to pool necessary funds under the regional health insurance funds as legislated. This has effectively created two parallel health care financing systems: the insurance system and the regional budgetary allocations. Further, MHI has actually led to the erosion of budgetary allocations for health; increases in payroll have been offset by cuts in the budget.

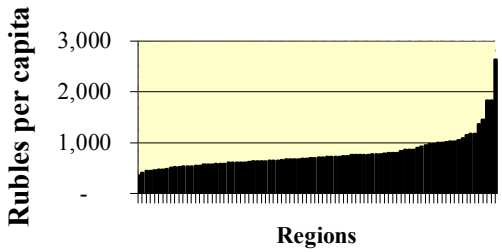
11.21 **Even more to the point is the relative lack of public sector funding to cover the cost of**

free medical services. The policy objective of free access to a basic package of services for all has not always been met. This has had some effect on the poor. The poor often receive a different level and style of care. They visit outpatient clinics less often, and the duration of their hospital stays is shorter relative to that of upper income groups (Shiskin, 2001). This could be due to supply-side (provider)behavior, or to differences in health-seeking behaviors. The health impact is not clear. Survey results discussed later in this chapter more fully address this issue in the context of the affordability and access of care.

Allocation of Funding Across Regions

11.22 **Regional inequities are growing. Per capita public spending variations, even when adjusted for variations in input prices, are currently more than sevenfold across the 89 regions – from 355 rubles to 2,635 rubles per capita, for example, in 2001** (see Figure 11.4). The budget allocation formula across regions and within regions tends to be the same as in Soviet times – input-based, such as number of beds or staff, — instead of being based on population or health needs. This formula does not provide the necessary incentives for improvements in or restructuring of service delivery. For example, if unneeded beds and/or facilities are abolished, then funding is decreased, instead of being re-allocated to needed care services.

Figure 11.4: Health Expenditures per Capita by Region, PPI Adjusted, 2001

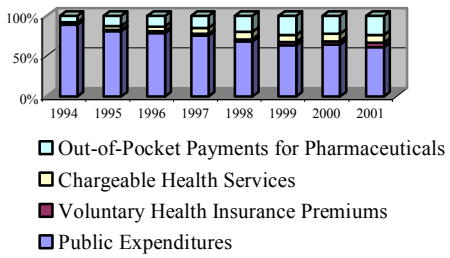


Source: World Bank, 2004.

D. THE GROWING OUT-OF-POCKET EXPENDITURES AND THE IMPACT ON THE POOR AND VULNERABLE GROUPS

11.23 **The private healthcare sector is growing** (see Figure 11. 5)**, but is not always recognized, integrated, or well-regulated**. Private expenditures are estimated to be from 30 to 55 percent of all spending on health in Russia, depending on the source of information (see, for example, WHO, 2002; Russian Independent Institute for Social Policy, 2003; Beliaeva, National Health Accounts, 2001). Most private sector activity is linked the pharmaceutical sector and the direct out-of-pocket payments for pharmaceuticals by consumers. Moreover, potent pharmaceuticals, including antibiotics, can often be purchased without a prescription (Nurgozhin, 2001). Drugs available on prescription elsewhere in Europe are often available overthecounter. It is estimated that over the counter medicines account for over 60 percent of dispensing in Russia (Mossialos, 1999).

Figure 11.5: Trends in Public Versus Private Sector Expenditures, 1994-2001



Sources: Independent Institute for Social Policy, 2003; WHO, 2001

11.24 **The reliance on imports (70 percent) and the limited public finances have meant that drug prices can be decisive in determining access to pharmaceuticals.** There has been an attempt to institute price controls on both the manufacturers' prices and the mark-ups along the distribution chain. Standard health benefits guaranteed for all Russian citizens include all inpatient and outpatient services, except for outpatient pharmaceuticals and for services not considered medically necessary, such as dentistry and cosmetic surgery. The government also has instituted social categories that are exempted from paying for an explicit list of outpatient drugs. These categories include specific disease categories, limited numbers of pensioners (80 years and above), veterans of wars, and Chernobyl victims. Nevertheless, charging for services, both officially and unofficially, has increased over the last several years in response to the cutbacks in public spending.

11.25 **According to the HBS data (IISP, 2003), the share of household revenues spent for health care is increasing over time**. In 1994, the share of health services and the share of medical devices and personal hygiene items in the overall amount of household expenses were 0.4 percent and 2.5 percent, respectively. In 2000, these values increased to 0.9 percent and 3.5 percent, respectively. However, there is a substantial difference across income groups. The highest decile in 2000 spent a higher share of income for health services relative to the lowest share (1.8 percent to 0.2 percent). In the most recently available survey results of 2002, the higher and lower share of incomes for health services was 2.8 percent to 1.4 percent. This suggests some measure of equity across income groups, though the percentage burden is increasing over time. This pattern does not hold for some expenditures, however, such as pharmaceuticals. The poorest people spent a higher proportion for drugs in 2000 (4.1 percent to 3 percent).

11.26 **The HBS reporting tends to be lower than either the NOBUS survey or independent surveys**. Perhaps the most detailed independent household out-of-pocket payment analysis was carried out by the Institute for Social Studies (Moscow) and Boston University's School of Public Health, in 1998-99, on 3,000 households across Russia (Boykov et al., 2000). It found that, on average, each Russian household spends 14 percent of income on drugs and medical care: 7 percent for drugs, 3 percent for dental care, 3 percent for hospital expenses, and 1 percent for outpatient medical care. However, the lower the income of the respondents was, the higher the percentage of the income spent for drugs and medical care. The analysis divided households into four income groups. The lowest income group spent a very high 33 percent of income on drugs (22 percent), hospital care (4 percent), outpatient care (3 percent) and dental care (5 percent). The highest income group spent only 9 percent of total income on drugs (4 percent) and other medical services (5 percent).

11.27 **The level of public sector funding relative to a bloated public sector infrastructure have combined to force providers to resort to private charging of services, often within public institutions, especially for specialized and surgical services**. The "shadow market" for services was estimated at $600 million in 2001 (Satarov, 2002). Various non-governmental surveys and studies in Russia estimate 15-60 percent of patients using hospital services make shadow payments. Payments also exist for other types of services including outpatient (4 to 38 percent), diagnostic (21-45 percent), and dental (80-84 percent). Some of these services, notably dental services, may not be covered by

the government (Russian Independent Institute for Social Policy, 2003).

11.28 **The NOBUS survey found that about 35 percent of all households paid for health care or health services when seeking hospital care.**[38] Over 95 percent reported that the payment was out-of-pocket, with about 5 percent reporting that insurance or enterprises or other means were found to pay for services. The results for both outpatient and inpatient services show that the higher consumption groups pay more, in terms of rubles, for similar types of services, and more for both official and unofficial encounters. This could signal that there is price discrimination by providers or that the upper income groups demand more.

11.29 **At the same time, the poor and lower income groups are disproportionately hurt for out-of-pocket payments as a share of consumption, regardless of service or care setting**. Table 11.8 shows the average expenditures for medical services for those households that sought medical services and paid either officially or unofficially. Payment amounts reflect an episode of care on an outpatient or inpatient (hospital) basis.

Table 11.8: Mean Expenditures for Medical Services, 2003 (rubles)

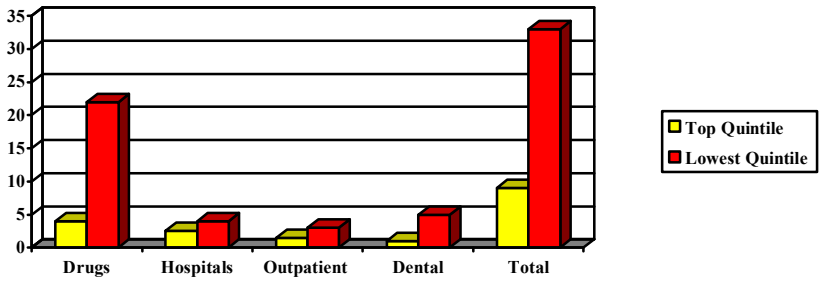
	Outpatient Care		Hospital Care				
	Paid Officially	Paid Unofficially	Official Payment	Unofficial	Additional Drugs	Food	Other
Mean	1,277	984	2,736	2,201	1,261	1,006	1,026
Consumption Quintiles							
1	904	838	2,255	1,903	927	756	827
2	984	787	2,274	2,432	1,158	608	739
3	1,362	890	2,945	1,987	1,222	1,028	664
4	1,103	1,096	2,841	2,036	1,355	928	1,006
5	1,664	1,096	3,112	2,457	1,521	1,412	1,455
Urban	1,341	983	3,013	2,197	1,280	929	1,181
Rural	1,072	986	2,023	2,212	1,209	1,237	640

Source: NOBUS survey, 2003.

11.30 **The poorer income groups pay more as a percentage of their consumption**. Figure 11.6 shows payments as a percentage of consumption for types of medical services, for households in the lowest and highest consumption groups which reported expenditures for care. The poor pay more, as a percentage of income, across all categories of services. Figure 11.7 shows payments as a percentage of consumption for official and unofficial medical services across all consumption groups. The poorer groups consistently pay more as a percentage of consumption for all categories of services, and by setting (inpatient/outpatient), and also as a percentage officially and unofficially.

[38] There is no question on payment for outpatient care or services, nor is there any question regarding pharmaceuticals.

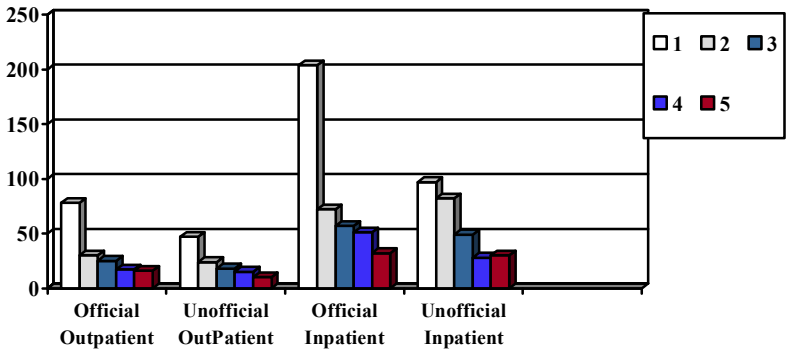
Figure 11.6: Expenses for Types of Medical Services as a Share of Total Consumption for the Lowest and Highest Quintile Consumption Groups (%)



Source: NOBUS survey, 2003

11.31 **In some categories shown in Figure 11.7, the percentage is almost equal to or greater than the total average consumption levels**. For the bottom three quintiles, the inpatient costs are 50 percent of average consumption, or even more. In one category the average payment is twice as much as the average consumption. This is for the lowest income quintile for unofficial payments connected with inpatient care. If health care costs exceed total consumption averages, this suggests that a number of families may be facing impoverishment -- falling into poverty -- or deeper into poverty -- as a result of healthcare needs.

Figure 11.7: Expenses for Official and Unofficial Medical Services as a Share of Total Consumption, by Consumption Group Quintiles (%)



Source: NOBUS survey, 2003.

11.32 **A significant number of respondents in NOBUS, from 50-60 percent across every consumption group, indicated that they sought paid medical services because there were no free providers, or because it was difficult to find the necessary specialist providers in their geographic area.** This suggests that paid services are common and well-established. Providers typically charge for most patients across income groups and for all ranges of services.

11.33 **Access is an issue, partly due to availability of physicians, but part was related to the affordability of care and services.** Table 11.9 provides specific information on obstacles to access to services. Of those not seeking care even when confronted with health problems, about 20 percent reported affordability – ability to pay – as the reason. The table provides a breakdown of this group of 20 percent of respondents. Nearly half were from the two lowest income quintiles. At the same time, some households in every consumption quintile reported the inability to pay as a reason for not seeking care. Table 11.9 also shows that the availability of a specialist was an issue three times as often in rural areas as in urban areas. The confluence of poor in rural areas is reflected in the higher percentage of lower income groups reporting problems of finding a specialist as well. Rural poor face not only availability issues but also travel and time costs, relative to urban dwellers.

Table 11.9: Access and Affordability: Reasons for Not Seeking Care Services, 2003 (%)

	Consumption Quintile					Urban/ Rural	
	1	**2**	**3**	**4**	**5**		
No Doctors of Medical Specialty in Area	34	23	18	15	10	25	75
Difficult to Arrange a Visit	15	24	18	22	21	86	14
Cannot Afford Necessary Services	32	22	20	17	9	72	28
Other Reasons	21	18	20	19	21	75	28

Source: NOBUS survey, 2003.

11.34 **A little over 10 percent of respondents indicated that money was the issue either partially or entirely in the use of pharmaceuticals.** Table 11.10 provides data on the affordability and use of pharmaceuticals as a follow-up to seeing the physician. Over 72 percent of all households responded that care was followed completely. However, the remainder did not follow the prescribed treatment completely, or they did not follow it at all. Again, of those who did not follow the prescribed treatment, the percentages vary by consumption group, with the lower quintiles reporting that this occurs in 40-50 percent of households, with only 26 percent of such households in the highest consumption quintile.

Table 11.10: "Have You Followed the Prescribed Treatment?" (%)

	Consumption Quintile				
	1	**2**	**3**	**4**	**5**
Only prescriptions which are free	21	23	21	20	16
Partly not followed, due to lack of money for drugs and procedures	21	24	21	19	14
Not followed at all, due to lack of money	22	27	16	22	12
Not followed for other reasons	15	18	19	20	27

Source: NOBUS survey, 2003.

E. POLICY RECOMMENDATIONS

11.35 **The health financing reforms and the decentralization policies of the last decade have had unintended consequences and public funding overall has declined. There are, furthermore, clear signals of failures in efficiency and in equity, and failures related to protecting the poor.** Russia is now grappling with sweeping reforms for the sector. No one unifying vision has yet emerged. Regardless of the model chosen, efforts are needed to improve health status and health outcomes and to better target Russia's poor and vulnerable groups. This will require changes at the policy level along a number of different dimensions. Interventions will be necessary that are specific to the poor and the impoverished (who fall into poverty due to health problems), and improvements in general policy directions. Three areas for change and intervention are recommended below.

Out-of-Pocket Payments

11.36 **The evidence is consistent: by any measure or survey, out-of-pocket payments are growing, and this appears to be hurting the poor and vulnerable groups in disproportionate ways**. Lower income groups are even afraid to seek care in many cases.

11.37 Several policy changes could be developed to deal with this problem. Such actions are as follows:

1. **Begin to formalize informal payments through a standardized co-payment system**. All services need not be chargeable, only very selectively. Such a system need not be complicated, or burdensome administratively. For example, there could be modest daily payments for hospital stays.
2. **Develop explicit protections from these co-payments for the poor and medically vulnerable groups**.
3. **Inform and educate patients regarding their responsibilities for co-payments under current law, but also inform patients and families of their rights and entitlements to free guaranteed services**.

These actions could result in greater transparency in revenues for health facilities with some of the monies used to offset costs for those in need.

11.38 **A fundamental issue is understanding who the poor and medically vulnerable are.** The poor are not always well-identified, neither by the government at the central and regional levels nor by the provider community. Poorer groups that might be thought of as partially protected or even exempt from payment for drugs or services nevertheless report large out-of-pocket payments. Part of the issue is the targeting of exemptions. Exemption groups are mostly from the Soviet era and are based to a great degree on disease categories. There is a mismatch of the categorically exempt and the truly needy. Not every person in specified disease categories or other demographic categories may be in need of free pharmaceuticals all of the time, for example, although the principle of encouraging access for those in need is exemplary. In rural areas, the Soviet-era targeting policy utilized school-based programs of nutrition, preventive measures and routine care, but this model has been hurt by funding cuts. Once targeting improves greater public funding may be needed. The Ivaschenko (2002) study, for example, shows the positive effect of publicly financed health services on life expectancy, which is particularly larger for those regions that experience higher incidences of poverty.

Health Care System Restructuring to Improve Equity and to Better Reach the Poor

11.39 **Russia needs to revamp and restructure its health financing and delivery system. Major changes are needed to improve both efficiency and equity, as well as access to services.** The following are priorities for change in the short-term.

1. Increase the Geographic Equity of Public Health Expenditures

11.40 Allocation based on population and on criteria such as need and level of poverty could make possible a redistribution of funds and a cross-subsidization from richer regions to poorer ones, and from the healthy to the sick. There is wide variation across regions in the current per capita amount budgeted for health care. Under current financing and budget arrangements, public expenditure on health reflects the historical norms and revenue raising capacity of each region rather than the health needs of the population.

2. Improve Pooling at the Regional or Federal Level to Drive Efficiency Gains and Better Target Poor Populations

11.41 In the short-term, greater pooling and improved allocation could occur under the Territorial Insurance Funds. Pooling at the regional level creates larger risk-pools than at the rayon level and thus allows for redistribution from the healthy to the sick. In addition, pooling at the regional level can help to reduce fragmentation in funding streams, can facilitate the rationalization process and can facilitate a reallocation of funds between health facilities and services to improve allocative efficiency to more cost-effective outpatient services. Pooling also adds leverage to the purchasing function, with a single larger purchaser able to strategically manage resources and contract selectively or according to performance-based standards with health care providers, both public and private.

3. Unify and Re-Configure the Benefit Package of free Guaranteed Services

11.42 Guaranteed services should equal the available revenues, using improved cost data for services, and should be split into three types of services:

- Fully covered services (free to the patient at the point of service)
- Partially covered services (co-payments could be made up to a yearly maximum per insured person). An example of this would be a small per day payment while in hospital, as noted above.
- Services not covered at all.

11.43 **The poor, the vulnerable groups and pensioners should be exempt from co-payments**. The overall package of guaranteed services should also be reconfigured. There are two important areas of change that might be considered:

- **Introduce coverage of some drugs outside of the hospital.** This would encourage patients to receive more services, especially day surgery, on an outpatient basis. Evidence from other CIS countries (Estonia and the Kyrgyz Republic) suggests that savings would accrue from this change.
- **Restructure/ add social service benefits for the poor, the elderly and the vulnerable, including community-based services to support the elderly and the disabled to stay at home as long as possible.** A differentiated network of providers could offer services such as home social and nursing care, day care, medical aids and homes for the elderly and nursing home care. Some of the existing community hospitals could be redesigned for social beds or turned into nursing homes. Recent changes in the Chuvasia Republic offer a good example of what is possible.
- **Autonomize the Delivery System, Create Public Trusts or Public Corporations**

11.44 **This would move regional-level health facilities directly off budget and make them dependent on purchasing contracts. Facilities, in turn, would be accountable for certain services but would retain flexibility for the use of funding paid to them by the purchaser.** Work on this transition in Russia is under way, and the World Bank has supported this work through its non-lending services: "non-profit organizations." The government will need to ensure that Article 41 of Constitution still works – free provision of care under the State Guarantees regardless of a facility's legal status. Additional special by-laws and other regulations may be needed to address specific health sector issues as part of broader legislation on non-profit organizations. The autonomization process provides a great opportunity to facilitate optimization and rationalization through facility network mergers. The efficiency issue becomes internalized to the hospital management level.

11.45 International experience also suggests that as providers merge, and accounting becomes more transparent, the incidence of informal payments will decrease, as has happened in parts of Eastern Europe such as the Czech Republic and Poland. This can indirectly address the burden for the poor and promote less impoverishment for the non-poor at the point of service.

Public Health Interventions

11.46 **Finally, the deteriorating health status issue requires closing the health gaps through public health policies and interventions to protect the poor and the vulnerable sub-populations and to control risk factors.** Such initiatives could include the following actions.

1. **Increase the role of cross-sectoral policies**

2. **Formulate and implement policies and strategies that include other sectors beyond the health sector, such as:**

- Transport policies (on road safety)
- Agriculture policies
- Economic development and trade policies(for food and price incentives to encourage the consumption of more fruits and vegetables and less fatty meat)
- Education policies(with an emphasis on the education of young adults on risk factors and how to control them);
- Pragmatic policies to control the excessive consumption of alcohol, especially among the lower income groups.
- Focused health care access, preventive services, and nutritional supplement programs as part of larger rural development strategies

3. **Adopt and implement policies to stimulate the demand for cost-effective prevention and practices by individuals**

4. **Move toward full implementation of the Framework Convention on Tobacco Control, which was adopted by WHO member states in May 2003. This includes:**
   - Higher taxes on cigarettes and other tobacco products
   - Bans/restrictions on smoking in public and work places
   - Comprehensive bans on the advertising and promotion of all tobacco products
   - Logos and brand names
   - Better consumer information on the health risks of tobacco
   - Warning labels on the health risks of tobacco and help for smokers who wish to quit.

5. **Allocate sufficient public resources for hiv/aids control, and lower the cost of ARVs.** This will ensure the effective prevention of Russia's teenagers and young adults, particularly interventions among the high-risk, high-vulnerability groups. Government responses have been weak and patchy to date, with emphasis on mass screening for HIV, but relatively little emphasis on effective prevention among the high-risk core transmitters and the bridge populations. The government will need to reform the approach to the purchase of antiretroviral (ARV) drugs to ensure better access to quality assured, competitively-priced drugs. Brazil and South Africa provide two examples of much lower prices and the expedited use of generics. Average costs of ARVs in these two countries are six to seven times less per person per year than in Russia.

11.47 The current Federal Anti-HIV/AIDS Program will last from 2002 to 2007. It may need to be revised to reflect the epidemic at hand, and to address the unacceptably high costs of ARVs which severely limits access by the lower income groups to a new generation of ARVs for HIV/AIDS management.

PART IV. POVERTY MONITORING

CHAPTER 12. HBS BASED POVERTY MONITORING

Efforts to enhance the monitoring and analysis of poverty in Russia should include work to improve a on improving the statistical infrastructure and developing systems for making the data available to a wide community of researchers. This chapter examines the main issues related to improving HBS-based poverty monitoring and sets out possible solutions to some of these issues.

A. THE DATA BASE FOR POVERTY MONITORING

12.1 The official poverty monitoring in Russia is largely based on data from the Household Budget Survey (HBS) provided by Goskomstat of Russia. (Goskomstat has been renamed Federal Service for State Statistics (FSSS) in the government reform in the Spring of 2004.) The HBS in Russia has been operating since 1952. This makes it one of the longest running household budget surveys in the world. The present design dates back to 1997 and now comprises around 49,000 households per quarter, with the same sample of households interviewed each quarter. This very large sample is necessary to provide data not only at the national level but also for each of the 89 subjects of the Russian Federation.

12.2 At the same time, academics and government agencies are using the Russian Longitudinal Monitoring Survey (RLMS) data because of its (i) open access; (ii) multi-purpose facilitating broad policy analysis; (iii) representativeness at the federal level; and (iv) transparent methodology. This has resulted in many research and policy analysis pieces based on the RLMS, and much of the knowledge of poverty and household behavior outside Russia is based on analysis using the RLMS data. However, the disadvantages of the RLMS for poverty monitoring include the following: (i) the small sample size, which does not allow poverty analysis at the regional level; (ii) its infrequence (once a year, typically in the fall, so that there is no coverage of seasonality); (iii) its dependence on external funding, (it was not undertaken in 1999, when the depth of the crisis at the household level was felt); and (iv) its non-official status (its estimates are not used in official policymaking).

12.3 The joint Government of Russia, World Bank and U.K. Department for International Development (DFID) project for Enhancing Measurement, Monitoring, and Analysis of Poverty in Russia is focused at the outset on joint work with the government agencies to enhance the official HBS as an important component of the poverty monitoring system (see Box 12.1). In this regard, a number of activities were aimed at the improvement of the HBS methodology and poverty measurement, the evaluation of the current administrative data system together with recommendations for its improvement, the enhancement of the targeting of social programs targeting, launching of open access to household datasets in compliance with Russian legislation and international recommendations.

Box 12.1: Activities Implemented in Stage I Under the Joint Government of Russia, World Bank and U.K. Department For International Development (DFID) Project for Enhancing Measurement, Monitoring and Analysis of Poverty in Russia

- Recommended Welfare Indicator for HBS and feasible indicator based on the examination of broader data sets from Russia
- Welfare consistency of regional poverty lines
- Improvement of household expenditures recording procedures in HBS based on Personal Diary
- Interviewer management/ non-response training workshop for regional supervisors
- Examining of the United Kingdom experience of Field Surveys Division structure
- Development of an improved sample design for HBS based on Population Census data (2002)
- Improvement of weighting and editing procedures for HBS data
- Design and pilot testing new poverty and social indicator questions for inclusion in HBS program
- Establishment of principles for open access to micro data
- Report on poverty, growth, and inequality, 1997-2000: dynamics and profile
- Report on regional dynamics of poverty: linking changes in poverty outcomes to regional economic conditions and regional policies

B. BROADENING THE POVERTY INDICATORS

12.4 **In order to provide an adequate base for measurement and monitoring, the current set of HBS data has to be expanded to include the measurement of the non-monetary dimensions of poverty.** Most of the poverty indicators currently available from the HBS are monetary indicators. However, complete monitoring of poverty also requires the measurement of non-monetary indicators and social exclusion. There are three categories of such questions.

- Indicators of relative deprivation
- Subjective indicators
- Indicators of social exclusion

12.5 **The identification of deprivation was started during the July-September 2003 survey.** This was based on sample of 3,500 households that were asked to say which items on a list indicated poverty or severe poverty. Those items endorsed by 90 percent or more respondents will comprise the list of deprivation indicators to be included in the HBS from 2005. Examples of such deprivations include cases in which households cannot afford meat or fish meals at least twice a week, do not have even crude furniture for daily use, or cannot buy new clothing and footwear for children as they grow. The preliminary findings are that many of the indicators can be derived from questions already contained in the HBS, or from minor modifications to them.

12.6 **Subjective poverty and the selection of the respondent within the household is an important issue.** There will probably be about the same number of new questions on such subjective indicators as whether people feel themselves to be poor, what they consider to be the minimum income needed to make ends meet, and whether they consider themselves to be better or worse off than a year ago, as well as their expectations for the year to come. However, an important consideration will be who in the household will be asked to answer, since these questions are attitudinal and the responses are attributes of an individual rather than of a whole household. If it is the usual HBS respondent, then the responses are likely to be primarily the opinions of women who are housewives. One possibility for randomizing responses to these questions is to ask them of the

household member who has the next birthday following the day of the interview. However, this would raise issues of operational practicalities and cost. The third group is expected to comprise about nine additional questions on social exclusion. These will cover issues such as access to employment, education and health care services, and the quality and accessibility of water supplies.

12.7 **A HBS adjustment pilot is needed to test all these questions.** This is necessary, in order to make sure that the questions are properly understood by the respondents and to ensure that there is no adverse effect on the response to the HBS. The Federal Service for State Statistics (FSSS) plans to carry out a small-scale pilot before the full implementation of the new survey instrument in 2005.

C. IMPROVING SAMPLE DESIGN

12.8 **The current HBS sample design includes complex issues of selecting and preserving respondents within the survey.** The current sample design of the HBS was introduced in 1997 and comprises 49,000 households. Once selected, households are retained indefinitely. This represents a large response burden and, over time, a deteriorating level of response can be expected, as there is certain to be some attrition with each succeeding round of the survey. Although there is replacement of non-responding households, there is no systematic rotation of households to minimize the response burden and to refresh the sample to take account of households in newly constructed areas. Another problem is that the design is now based on a 10 year old sample frame – the 1994 micro-census. For all these reasons the FSSS have decided to review the sample design and aims to introduce a new design from the beginning of 2005 using the 2002 population census as the frame.

12.9 **No sample design will be optimal for all possible purposes of HBS data utilization.** Compromises have to be made between conflicting objectives. In particular, the HBS is not just a poverty survey: it exists to meet other important requirements, including weights for the CPI and National Accounts. Potential conflicts may arise from priorities being given to national estimates at the federal level or to regional data; to annual data or to quarterly data; to cross-sectional analyses or to longitudinal analyses; to estimates relating to the total population or to sub-groups of the population. Decisions on all of these issues will have important consequences for the sample design. Moreover, there are finite financial resources for the HBS and the redesign needs to take account of the practicalities of data collection and of considerations such as the size of interviewer workloads, interviewer travel, and the employment status of interviewers (they are permanent staff and cannot simply be dismissed if the work in their area reduces).

12.10 **A draft sample redesign proposal was submitted by consultants to the FSSS in November 2003.** It comprises a quarterly, two-stage probability, repeat sample of 24,500 households in which the samples are separately selected each quarter thus giving an annual sample of 98,000 households each year. Although this would reduce the interviewer workload, compared with the current design, it would double the effective annual sample since the current design revisit the same households each quarter so that the annual sample remains at 49,000 separate households. It is also proposed to incorporate a systematic rotation so that half of the households interviewed in the first quarter of one year are revisited to form half of the first quarter's sample for the next year, half of the second quarter's sample is revisited in the second quarter of the next year, and so forth. This will result in strong gains in the precision of the estimates of annual change.

12.11 **The HBS longitudinal aspects requires consideration.** In addition it is proposed that at some later time a separate panel sample of 7,000-8,000 households should be revisited each quarter for two or three years. In principle, there is no such thing as a longitudinal study of households – only of individuals - and this raises practical problems in that household composition changes from wave to wave of a panel survey. This means that individuals need to be traced and interviewed in their new households along with other members of these new households. Apart from the costs and practical difficulties of doing this, there are severe analytical complexities. The assumption is that the mobility rates of individuals in Russia are so low that tracing individuals will not be a major problem. This

assumption needs to be tested, however.

12.12 **The response rates in the proposed new design should be higher than under the present HBS.** This should be the case both for the main sample, which will revisit each household just twice, with the two interviews a year apart, and for the panel (if the panel element will be implemented), which will retain households for just two or three years instead of indefinitely as at present. In addition, any conditioning effects, whereby respondent behavior may be affected by being included in the survey, should be less than at present for the same reasons.

12.13 **Interviewer workloads are another issue.** The proposals for interviewer workloads - assuming that the number of interviewers will be approximately the same at present (1,724), - are for 16 households per interviewer per quarter in urban areas and 12 in rural areas (compared with 25 households per quarter in urban areas and 20 in rural areas at present). This would give a total annual sample of just under 69,000 in urban areas and just over 29,000 in rural areas. However, this means that interviewer workloads comprise on average just one interview a week in rural areas and not much more than that in urban areas. In fact, they have other work as well, as they need to collect diaries from households as well as conducting interviews, and they have some coding functions to perform. Nevertheless, the average weekly workload seems light. This could be important, as the new survey may impose additional work for interviewers. For example, the new sample design will involve a much larger proportion of households, being interviewed for the first time. Establishing initial contact with such households on average requires more interviewer effort than simply revisiting existing sample households for whom best times to call may already be well known to the interviewer, and for whom appointments may have been made at the previous visit. In addition, if it is decided to adopt personal diaries as the preferred method of collecting daily expenditure data, this will require more work on the part of interviewers, as they will need to contact each household member to enlist co-operation and to explain what is needed, instead of just one person, as at present. The question of whether these additional tasks will balance the 35 to 40 percent reduction in the number of households included in each interviewer's assignment will need to be carefully assessed and piloted.

D. IMPROVING DATA QUALITY : DATA COLLECTION AND STATISTICAL ADJUSTMENT

Data Collection

12.14 **Response rates for the Russian HBS are currently at about 80 percent. This is quite high for a budget enquiry but the figure is misleading.** Non-response is at its highest when households are included in the sample for the first time, and for a panel survey the true non-response rate should be the sum of the initial non-response figure plus further "attrition" at subsequent rounds of enquiry. When the sample was newly selected in 1997, the response rate was around 63 percent. The true figure will almost certainly have declined since then, as some initially responding households will have declined to participate with each round of the survey. The effect of this is disguised to some extent, as newly selected households substitute for non-responding households. Although this maintains the sample and hence the estimates of variance and sampling error, it does not wholly compensate for non-response bias.

12.15 **In fact, the HBS response rate may be considered to be low and, in common with most countries**, **it will be lower still in cities and urban areas**. One reason for this is very probably that Russia is one of the few developed or transition countries that does not make any kind of incentive payment, in cash or in kind, to cooperating households (see Box 12.2). In most countries incentives are paid where households are asked to undertake something in survey enquiries over and above simply answering questions. In the case of budget surveys, households are required to keep an expenditure diary. Incentives do not necessarily have to be cash payments. If resources are insufficient to pay more than a nominal amount, small gifts or even lottery tickets may be an economic and

effective alternative. The lack of incentive payments may affect response rates in two ways. First, there is the direct impact on households' willingness to cooperate if they expect to be paid for their time and trouble. Second, there is the indirect impact that affects interviewer confidence in trying to enlist respondent cooperation. Interviewer confidence is an important factor in obtaining good response rates and is one reason why more experienced interviewers usually are more successful than inexperienced ones. In a recent meeting of interviewers in the Moscow region to obtain feedback on a test of personal diaries (see below), interviewers voiced strong criticism of the fact that there are no incentives. Apart from incentives, response may be improved by interviewer training that is targeted on methods for maximizing response and by management techniques that will improve interviewer motivation and morale.

Box 12.2: Improving Survey Response Rate: The Georgian Experience

It is difficult to quantify the effects on response rates of improved interviewer management, but when similar measures were taken with respect to the Georgian HBS during 2001 and 2002 response rates rose every quarter from 72 percent in the last half of 2001 to 88 percent by the end of 2002, and were maintained at that level for the first half of 2003. There are several reasons why the situations in Georgia and the Russian Federation are not directly comparable – such as the huge difference in geographic size, the scale of the two surveys, and the fact that in Georgia an incentive is paid to cooperating households. Nevertheless, the Georgian experience does support the view that better interviewer management and training can yield substantial benefits in terms of improved response rates. And, apart from improved response rates, the Georgian work showed substantial gains in the quality of the data collected - for example, with fewer missing data items and a reduction in the expenditure/income imbalances.

12.16 **Interviewer management is likely to be improved if the organizational structure for carrying out surveys permits the employment of specialists in various fieldwork management operations**. At present the survey organization within the FSSS is structured so that each survey (HBS, Labor Force Survey, etc.) is managed separately with its own field force. Data collection might benefit in several ways if the fieldwork operations of these surveys were to be unified. These benefits could include the following:

- Greater concentration, expertise and experience of in fieldwork operations.
- The Development of greater experience and expertise among interviewers if they work across a range of surveys.
- Greater efficiency in deploying interviewer resources close to their work areas, which would minimize travel time. And interviewers might be able to be used more intensively if they work on several surveys, especially in urban areas.
- More flexibility to provide cover for interviewers who suddenly become unavailable, for example through sickness.

12.17 **A potential problem of data collection in Russia arises from the large number of regional offices to which the responsibility for actual operations is devolved and from the huge size of the country.** Reliable and consistent data, free from local bias, require firm adherence to uniform procedures for data collection. However, although data collection is notionally controlled from the center, it would be surprising if there were not some important departures from the laid down procedures among the separate 89 regional offices and because of the wide diversity of conditions that they represent. Central supervision over such a vast territory and large number of local offices constitutes a major and continuing challenge. At the interviewer management workshops, held under the joint poverty project, it became apparent that in some ways different offices do different things with regard to interviewer management and there was a frequently expressed wish for more standardization or detailed recruitment and training materials and procedures from the center.

12.18 **The Russian HBS uses two principal forms of data recording instruments; questionnaires, and a diary, in which households record day-to-day expenditures.** The diary is kept for a two-week period in each calendar quarter but is kept by just one person on behalf of the

whole household. This "family diary" (FD) system is fairly typical among budget surveys in transition countries. In contrast, such surveys in many other countries use Personal Diaries (PDs) whereby a diary is completed by each adult household member (and children as young as 7 years of age in some countries). The argument in favor of PDs is that they are better able to capture expenditures of a personal kind such as alcohol and tobacco, daily travel, personal toiletries, entertainment, food eaten outside the home, etc. (FDs may well under-record expenditure on these kinds of items.) It is likely that in a modern society, and especially in an urban society, traditional household spending behavior, whereby expenditure is largely undertaken by, or controlled by, one person within a household, is decreasingly the norm.

12.19 Assessing the HBS level of under-reporting is important for knowing the reliability of the HBS. To examine whether under-recording of this kind does in fact occur in the Russian HBS, and if so, to what extent for each item and for what kinds of households, an experiment was carried out during the 2003 third quarter of the HBS. A sample of 3,500 HBS households containing more than one person aged 14 or over was used in the experiment. The sample was a stratified random sample covering all federal districts of the Russian Federation, 44 subject areas, large cities, other urban settlements and rural areas. The chief conclusion to be drawn from the experiment is that PDs result in higher levels of expenditure recording (about 6 percent in urban areas and 11 percent in rural areas). At the same time, the PDs influenced response rates and interviewer workload. The initial sample size of 3,500 households was reduced to 1,874, or 53.5 percent, that actually took part in the experiment. The coding load for interviewers rose by 63 percent, and the number of personal interviews they had to hold with household members rose 50 percent to 100 percent (by the interviewers' own estimates).

12.20 First hand information from interviewers is valuable in assessing the effective methods of HBS information collection. In November 2003, as part of an evaluation process, 20 interviewers from the Moscow and Moscow oblast areas, who had worked on the experiment, were invited to attend a feedback meeting. They were generally antagonistic to the idea and said that their workloads would be substantially increased by PDs since they would have to visit households more often and at less "social" hours to find people at home. However, these results may give a misleading picture for several reasons. First, the sample comprised only households with more than one person (when one person households are included it is likely that the proportion of households for which all diaries are completed will rise, although the proportion of total non-response may also rise). Second, the experiment was carried out at households already in the HBS, and which were therefore accustomed to the lower response burden of FDs. With newly selected households under the sample redesign it may be that the reception of PDs would be better. Third, the interviewers views on PDs seemed highly prejudiced by, and inseparable from, their views on response problems more widely, especially the problems they perceived to arise from the lack of any incentive payment.

Statistical Adjustment

12.21 **Editing and weighting are two main tools used for statistical adjustment.** Under the current HBS system, data are edited to correct for inconsistent responses and are weighted to produce estimates for the total population from sample data (base weights) and to make some adjustment for household non-response. There is no attempt at an imputation procedure to adjust for item non-response – i.e., where some data items are missing from otherwise responding households.

12.22 **The review process and the proposals for alternative data editing systems had been completed by the end of 2003**. However, it is important that the recommendations should be tested, and two experiments for this are proposed. The first, to test a new edit and imputation system based on the Canadian Census Edit and Imputation System (CANCEIS), is planned to be carried out using simulated questionnaires from three regions. At the moment, the funding of supplementary activities is being determined. The work on the simulation experiment to test alternative weighting systems has already started and is expected to be completed by the end of August 2004.

E. CREATING OPEN ACCESS TO MICRO DATA

12.23 **The rationale for open access to micro data** is driven by the fact that it is now widely accepted that no official statistical agency can expect to have sufficient in-house capacity and expertise to generate full analytic value from the data it collects and that therefore micro data should be made available to a much wider community of research interests.

12.24 **UN agreements on data open access.** This general thrust is also evident in Article 1 of the UN Fundamental Principles of Official Statistics,[39] which states that "*Official statistics provide an indispensable element in the information system of a democratic society, serving the government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information."* However, Article 6 provides that "Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes." Reconciling these two objectives is a challenge facing all national statistical offices, especially in the provision of access to micro data.

12.25 **Currently, micro data from HBS are available only to staff of the FSSS.** This means that research analyses based on micro data are limited to those that the FSSS has the resources to carry out. However, the FSSS wishes to open up access to household datasets to the extent possible under Russian law. In a paper to the Seminar Session of the 2003 Conference of European Statisticians, Vladimir Sokolin, Chairman of Goskomstat, said "*..beginning in 2005 it is planned to provide researchers with anonymous microdata of household budget surveys."*[40] A key objective of the joint World Bank-DFID-Russian poverty project therefore is to assist the FSSS in this process, in accordance with international standards and recommendations.

12.26 **The work on opening micro data to the general public covers, in particular, the following issues:**

1. *Acquisitions and deposits*. It is important that, when deposited, datasets are accompanied by metadata, and there is an international standard for this – the Data Documentation Initiative – that specifies the requirements for metadata. In the United Kingdom the archiving of data is

[39] UN Fundamental Principles of Official Statistics, UN Statistical Commission, 1994.

[40] *Confidentiality of Statistical Data -The Russian Federation*, Vladimir Sokolin, Goskomstat of Russia. Invited paper. Statistical Confidentiality and Access to Micro Data, Proceedings of the Seminar Session of the 2003 Conference of European Statisticians. UN, New York and Geneva, 2003.

carried out by an independent agency, the Data Archive (UKDA), but depositors retain ownership and copyright of their deposited material. Depositors are also responsible for ensuring that the micro data are properly anonymized to ensure that confidentiality is protected.

2. *Users and access.* Terms and conditions of access need to be set out, including whether to charge for data. In the United Kingdom, data are provided free of charge to academic users. Other users are charged only for the cost of provision but not for the data themselves. Terms and conditions of access include the following:

    a. To use only for purposes of non-commercial research or teaching

    b. To preserve at all times the confidentiality of information pertaining to individuals and/or households where the information was created less than 100 years ago, and not to attempt to use the data deliberately to compromise confidentiality

    c. To acknowledge the original creators of the data, depositors or copyright holders, in any publication

    d. To declare in any publication that the data creators bear no responsibility for the further analyses or interpretation

    e. To supply the UKDA with two copies of any published work based on the datasets

    f. To notify the UKDA of any errors discovered in the data

3. *Preservation.* Although they are invisible to outside users, good preservation procedures are vital to the long-term storage of data. This entails not only physical conditions of storage but storage formats as well.

4. *Organizational structures.* There are various models, ranging from fully centralized to completely distributed, and there are advantages and disadvantages to each.

12.27 Although a new statistical law is expected to be passed in the next few years and provision for open access to micro data depends upon its adoption, the FSSS has taken a decision in principle to proceed with an open access. The intent now is to take action with development work in parallel with the legislative process so that the new facility will be available as soon as possible after the new law is enacted.

12.28 **From the beginning of 2005 nearly all of the statistical enhancements, designed to improve the quality and efficiency of the survey and which have been progressed through 2003 and 2004, are scheduled to be incorporated into the mainstream survey.** In summary, these developments comprise better fieldwork management procedures, an improved and more efficient sample design, better adjustment methods, questionnaires that provide for more comprehensive poverty measurement, and more general access to the micro data.

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ANNEXES TO CHAPTER 1

Table A1.1: Spatial Price Indices by Region and Territory 2002

Ter. code	Oblast & Regions	Population	Food	Non-food	Total
	Russian Federation	**143.330**	**100**	**100**	**100**
	Region 1	**0.627**	**160.2**	**149.8**	**155.7**
402	Taimyr autonomous region	0.044	170.7	152.3	162.8
7174	Yamalo-Nenetskiy autonomous region	0.509	149.8	141.6	146.3
7700	Chukotka autonomous region	0.074	225.2	205.1	216.6
	Region 2	**1.022**	**126.0**	**131.2**	**128.2**
1113	Nenetsky autonomous region	0.045	164.9	134.5	151.9
4700	Murmansk oblast	0.978	124.2	131.0	127.1
	Region 3	**6.964**	**121.5**	**131.2**	**125.7**
500	Primorie territory	2.125	117.9	116.4	117.3
800	Khabarovsk territory	1.486	112.4	137.0	123.0
1000	Amur oblast	0.982	98.6	110.8	103.8
3021	Kamchatka oblast (rest)	0.352	155.0	163.6	158.7
3051	Kariakskiy autonomous region	0.028	241.3	188.6	218.7
4400	Magadan oblast	0.229	150.7	145.9	148.6
6400	Sakhalin oblast	0.585	134.9	160.6	145.9
9800	Sakha (Yakutia) Republic	0.983	138.8	146.3	142.0
9900	Evreiskaya autonomous oblast	0.195	105.1	103.5	104.4
	Region 4	**20.498**	**99.9**	**97.0**	**98.6**
100	Altay territory	2.621	85.3	89.7	87.2
406	Evenkiyskiy autonomous region	0.018	166.8	119.4	146.5
409	Krasnoyarsk territory (rest)	2.953	111.4	100.5	106.7
2523	Irkutsk oblast (rest)	2.570	103.8	97.6	101.2
2555	Ust-Ordynskiy Buriatskiy autonomous region	0.142	102.1	95.4	99.2
3200	Kemerovo oblast	2.940	96.6	95.5	96.1
5000	Novosibirsk oblast	2.717	106.0	101.2	103.9
5200	Omsk oblast	2.127	85.2	88.1	86.4
6900	Tomsk oblast	1.061	98.9	104.4	101.3
7635	Chita oblast (rest)	1.158	112.1	109.9	111.2
7667	Aginskiy Buriatskiy autonomous region	0.080	99.0	99.9	99.4
8100	Buriatiya Republic	1.019	100.3	93.0	97.2
8400	Altay Republic	0.205	99.4	93.7	97.0
9300	Tyva Republic	0.310	103.0	94.7	99.5

9500	Khakassiya Republic	0.575	103.1	99.2	101.4

Continued Table A1.1

Ter. code	Oblast & Regions	Population	Food	Non-food	Total
	Region 5	**12.011**	**104.9**	**105.8**	**105.3**
3700	Kurgan oblast	1.074	93.0	96.8	94.6
6500	Sverdlovsk oblast	4.545	106.4	109.0	107.5
7139	Tumen oblast (rest)	1.340	107.4	105.7	106.7
7172	Khanty-Mansiyskiy autonomous region	1.424	123.7	138.7	130.1
7500	Chelyabinsk oblast	3.629	98.1	91.5	95.3
	Region 6	**13.237**	**102.2**	**101.5**	**101.9**
1116	Arkhangelsk oblast (rest)	1.384	98.1	99.5	98.7
1900	Vologda oblast	1.301	100.4	92.2	96.9
2700	Kaliningrad oblast	0.943	100.3	109.1	104.1
4000	St. Petersburg city	4.596	108.4	110.3	109.2
4100	Leningrad oblast	1.650	99.4	95.6	97.8
4900	Novgorod oblast	0.711	91.4	95.8	93.3
5800	Pskov oblast	0.778	92.9	84.7	89.4
8600	Karelia Republic	0.756	102.8	90.9	97.7
8700	Komi Republic	1.117	103.1	102.8	103.0
	Region 7	**36.482**	**102.5**	**101.9**	**102.3**
1400	Belgorod oblast	1.498	88.7	84.8	87.0
1500	Briansk oblast	1.410	92.4	84.8	89.1
1700	Vladimir oblast	1.574	88.0	78.2	83.8
2000	Voronezh oblast	2.415	88.7	87.0	87.9
2400	Ivanovo oblast	1.191	87.5	93.3	90.0
2800	Tver oblast	1.552	94.6	93.6	94.2
2900	Kaluga oblast	1.059	93.4	86.4	90.4
3400	Kostroma oblast	0.766	87.6	85.4	86.6
3800	Kursk oblast	1.285	87.6	89.6	88.5
4200	Lipetsk oblast	1.229	92.7	81.9	88.1
4500	Moscow city	8.539	132.5	144.9	137.8
4600	Moscow oblast	6.410	103.2	101.0	102.3
5400	Orel oblast	0.884	87.3	81.5	84.8
6100	Riazan oblast	1.255	90.9	82.3	87.2
6600	Smolensk oblast	1.098	96.4	80.0	89.4
6800	Tambov oblast	1.241	85.2	85.8	85.5
7000	Tula oblast	1.690	91.7	79.7	86.6
7800	Yaroslavl oblast	1.386	94.2	87.4	91.3

Continued Table A1.1

Ter. code	Oblast & Regions	Population	Food	Non-food	Total
	Region 8	**31.642**	**93.9**	**92.4**	**93.3**
2200	Nizhniy Novgorod oblast	3.598	96.2	93.3	95.0
3300	Kirov oblast	1.560	93.2	96.1	94.4
3600	Samara oblast	3.259	104.7	107.3	105.8
5300	Orenburg oblast	2.199	91.3	88.6	90.1
5600	Penza oblast	1.504	82.5	90.8	86.1
5731	Perm oblast (rest)	2.776	99.3	98.6	99.0
5759	Komi-Permyatskiy autonomous region	0.148	91.5	83.4	88.0
6300	Saratov oblast	2.676	92.0	99.8	95.3
7300	Ulianovsk oblast	1.440	90.0	88.8	89.5
8000	Bashkortostan Republic	4.091	91.2	83.6	87.9
8800	Mariy El Republic	0.750	94.5	84.0	90.0
8900	Mordoviya Republic	0.910	95.4	89.8	93.0
9200	Tatarstan Republic	3.768	88.9	89.5	89.2
9400	Udmurtiya Republic	1.616	97.7	87.2	93.2
9700	Chuvashiya Republic	1.346	93.2	82.0	88.4
	Region 9	**20.847**	**91.0**	**93.4**	**92.0**
300	Krasnodar territory	4.988	93.4	97.7	95.2
700	Stavropol territory	2.643	93.9	95.7	94.7
1200	Astrakhan oblast	1.009	92.4	93.3	92.8
1800	Volgograd oblast	2.637	92.1	91.3	91.7
2600	Ingushetiya Republic	0.466	93.8	107.5	99.7
6000	Rostov oblast	4.286	87.7	95.2	90.9
7900	Adygeia Republic	0.445	92.4	84.7	89.1
8200	Dagestan Republic	2.180	89.7	89.9	89.8
8300	Kabardino-Balkariya Republic	0.782	89.6	81.1	85.9
8500	Kalmykiya Republic	0.306	81.7	88.7	84.7
9000	Severnaya Asetiya Republic	0.678	88.5	81.2	85.3
9100	Karachaevo-Cherkessiya Republic	0.429	83.5	82.2	82.9

Table A1.2: Average Poverty Line by Region and Territory 2002 (rubles per capita per month)

		Poverty Line			Higher Poverty Line		
Ter. code	**Oblast & Regions**	**Food**	**Non-food**	**Total**	**Food**	**Non-food**	**Total**
	Russian Federation	**570**	**486**	**1056**	**703**	**549**	**1251**
	Region 1	**1061.1**	**737.7**	**1798.8**	**1307.0**	**831.7**	**2138.8**
402	Taimyr autonomous region	1112	743	1854	1369	837	2206
7174	Yamalo-Nenetskiy autonomous region	1000	692	1693	1232	780	2012
7700	Chukotka autonomous region	1452	1047	2499	1789	1183	2972
	Region 2	**819.9**	**651.0**	**1470.9**	**1009.9**	**735.5**	**1745.5**
1113	Nenetsky autonomous region	1078	650	1729	1328	733	2062
4700	Murmansk oblast	808	651	1459	995	736	1731
	Region 3	**691.5**	**633.5**	**1325.0**	**851.7**	**715.2**	**1566.9**
500	Primorie territory	667	560	1228	822	633	1455
800	Khabarovsk territory	646	664	1310	796	749	1545
1000	Amur oblast	556	535	1091	685	604	1289
3021	Kamchatka oblast (rest)	898	800	1697	1106	903	2008
3051	Kariakskiy autonomous region	1379	929	2308	1698	1049	2747
4400	Magadan oblast	855	724	1579	1053	818	1871
6400	Sakhalin oblast	772	788	1560	951	890	1841
9800	Sakha (Yakutia) Republic	786	687	1474	968	774	1743
9900	Evreiskaya autonomous oblast	597	514	1110	735	580	1315
	Region 4	**570.0**	**468.4**	**1038.5**	**702.1**	**528.8**	**1230.9**
100	Altay territory	489	437	925	602	493	1095
406	Evenkiyskiy autonomous region	947	580	1528	1167	654	1821
409	Krasnoyarsk territory (rest)	641	492	1134	790	556	1346
2523	Irkutsk oblast (rest)	593	472	1065	730	532	1262
2555	Ust-Ordynskiy Buriatskiy autonomous region	581	444	1025	716	500	1215
3200	Kemerovo oblast	547	464	1012	674	524	1199
5000	Novosibirsk oblast	604	489	1093	744	552	1296
5200	Omsk oblast	488	421	908	601	475	1076
6900	Tomsk oblast	563	510	1073	693	576	1269
7635	Chita oblast (rest)	637	522	1159	785	589	1374
7667	Aginskiy Buriatskiy autonomous region	560	455	1015	690	512	1202
8100	Buriatiya Republic	571	436	1006	703	491	1194
8400	Altay Republic	565	451	1015	695	508	1204
9300	Tyva Republic	585	437	1022	721	492	1213
9500	Khakassiya Republic	588	480	1068	725	542	1266

Continued Table A1.2

		Poverty Line			Higher Poverty Line		
Ter. code	**Oblast & Regions**	**Food**	**Non-food**	**Total**	**Food**	**Non-food**	**Total**
	Region 5	**593.3**	**515.2**	**1108.5**	**730.7**	**582.1**	**1312.9**
3700	Kurgan oblast	524	476	999	645	538	1183
6500	Sverdlovsk oblast	599	535	1134	738	605	1343
7139	Tumen oblast (rest)	609	513	1122	750	579	1329
7172	Khanty-Mansiyskiy autonomous region	704	662	1367	867	746	1614
7500	Chelyabinsk oblast	557	446	1003	686	504	1190
	Region 6	**582.2**	**501.0**	**1083.2**	**717.1**	**566.3**	**1283.5**
1116	Arkhangelsk oblast (rest)	560	489	1049	690	552	1242
1900	Vologda oblast	569	462	1031	701	523	1224
2700	Kaliningrad oblast	568	527	1095	699	596	1295
4000	St. Petersburg city	621	541	1162	765	611	1377
4100	Leningrad oblast	569	483	1052	701	546	1247
4900	Novgorod oblast	515	480	995	634	544	1178
5800	Pskov oblast	523	426	950	644	483	1128
8600	Karelia Republic	580	451	1031	714	510	1225
8700	Komi Republic	582	500	1082	716	565	1281
	Region 7	**581.8**	**502.9**	**1084.7**	**716.6**	**568.8**	**1285.5**
1400	Belgorod oblast	509	415	923	627	469	1095
1500	Briansk oblast	521	416	936	642	470	1112
1700	Vladimir oblast	500	388	888	615	439	1055
2000	Voronezh oblast	502	424	926	618	480	1098
2400	Ivanovo oblast	491	463	954	605	524	1129
2800	Tver oblast	528	472	1000	650	535	1185
2900	Kaluga oblast	526	431	957	648	487	1136
3400	Kostroma oblast	493	429	922	607	486	1093
3800	Kursk oblast	491	432	924	605	489	1095
4200	Lipetsk oblast	523	404	927	645	457	1101
4500	Moscow city	756	711	1467	932	804	1735
4600	Moscow oblast	589	499	1088	725	564	1289
5400	Orel oblast	494	401	895	609	453	1062
6100	Riazan oblast	512	409	921	631	463	1094
6600	Smolensk oblast	543	395	938	669	447	1116
6800	Tambov oblast	484	429	913	596	486	1082
7000	Tula oblast	521	397	918	641	450	1091
7800	Yaroslavl oblast	528	437	965	650	495	1145

Continued Table A1.2

		Poverty Line			Higher Poverty Line		
Ter code	**Oblast & Regions**	**Food**	**Non-food**	**Total**	**Food**	**Non-food**	**Total**
	Region 8	**533.9**	**447.5**	**981.4**	**657.6**	**505.5**	**1163.2**
2200	Nizhniy Novgorod oblast	540	457	997	665	517	1182
3300	Kirov oblast	525	473	998	646	536	1182
3600	Samara oblast	602	525	1126	741	592	1333
5300	Orenburg oblast	523	429	952	645	484	1129
5600	Penza oblast	467	442	909	575	501	1076
5731	Perm oblast (rest)	567	478	1045	698	540	1238
5759	Komi-Permyatskiy autonomous region	511	395	906	629	446	1075
6300	Saratov oblast	523	491	1014	644	555	1200
7300	Ulianovsk oblast	513	433	946	631	489	1121
8000	Bashkortostan Republic	517	400	917	637	451	1088
8800	Mariy El Republic	539	401	940	664	452	1117
8900	Mordoviya Republic	548	447	995	675	506	1181
9200	Tatarstan Republic	509	424	933	627	478	1105
9400	Udmurtiya Republic	552	418	970	680	471	1152
9700	Chuvashiya Republic	522	385	907	642	435	1077
	Region 9	**517.6**	**437.5**	**955.1**	**637.6**	**493.7**	**1131.3**
300	Krasnodar territory	530	465	995	653	525	1178
700	Stavropol territory	532	448	980	655	506	1161
1200	Astrakhan oblast	526	451	976	647	509	1156
1800	Volgograd oblast	524	444	968	646	501	1147
2600	Ingushetiya Republic	534	435	969	658	486	1144
6000	Rostov oblast	499	453	951	614	511	1125
7900	Adygeia Republic	520	398	918	641	449	1090
8200	Dagestan Republic	515	393	908	634	442	1076
8300	Kabardino-Balkariya Republic	510	362	872	628	407	1036
8500	Kalmykiya Republic	468	411	879	577	463	1040
9000	Severnaya Asetiya Republic	505	364	869	622	410	1032
9100	Karachaevo-Cherkessiya Republic	476	375	851	586	422	1008

Table A1.3: Incidence of Poverty by Region and Territory 2002

Ter. code	Oblast & Regions	Sample Size	Poverty Line			Higher Poverty Line			Per capita cons, rubles per month
			Head-Count	Gap	Severity	Head-Count	Gap	Severity	
	Russian Federation	**194118**	**19.6**	**5.1**	**2.0**	**29.0**	**8.1**	**3.3**	**2159**
	Region 1	**3800**	**9.5**	**2.7**	**1.1**	**13.8**	**4.2**	**1.8**	**4531**
402	Taimyr autonomous region	1260	34.2	10.1	4.1	44.2	14.9	6.6	3045
7174	Yamalo-Nenetskiy autonomous region	1040	3.2	0.7	0.2	6.0	1.4	0.5	4826
7700	Chukotka autonomous region	1500	37.7	12.1	5.5	48.8	17.0	8.2	3394
	Region 2	**3100**	**12.3**	**3.0**	**1.1**	**20.6**	**5.1**	**2.0**	**2867**
1113	Nenetsky autonomous region	1340	31.6	12.3	6.4	43.9	16.5	8.8	2260
4700	Murmansk oblast	1760	11.4	2.5	0.9	19.5	4.6	1.6	2895
	Region 3	**16180**	**21.4**	**5.8**	**2.4**	**30.7**	**8.9**	**3.8**	**2347**
500	Primorie territory	2520	24.2	6.5	2.6	35.3	10.1	4.3	1949
800	Khabarovsk territory	2440	17.0	4.9	2.1	26.0	7.4	3.2	2631
1000	Amur oblast	1900	20.8	5.4	2.0	29.6	8.4	3.4	1846
3021	Kamchatka oblast (rest)	1720	13.8	3.0	1.0	22.0	5.3	1.9	3192
3051	Kariakskiy autonomous region	1280	36.1	10.8	4.7	48.9	16.1	7.3	3105
4400	Magadan oblast	1880	33.7	10.4	4.5	43.9	14.8	6.8	2323
6400	Sakhalin oblast	1620	22.6	5.5	2.1	31.4	8.7	3.5	2549
9800	Sakha (Yakutia) Republic	1800	21.8	6.4	2.7	28.7	9.3	4.1	2890
9900	Evreiskaya autonomous oblast	1020	18.7	4.8	1.7	27.1	7.6	3.0	2081
	Region 4	**31578**	**20.8**	**5.6**	**2.3**	**30.1**	**8.7**	**3.7**	**1831**
100	Altay territory	2980	18.8	4.3	1.5	29.0	7.3	2.7	1759
406	Evenkiyskiy autonomous region	1100	32.8	11.2	5.5	43.5	15.5	7.9	2449
409	Krasnoyarsk territory (rest)	2860	12.3	2.8	1.0	19.9	4.9	1.8	2283
2523	Irkutsk oblast (rest)	2800	15.0	3.5	1.2	23.4	6.0	2.2	2273
2555	Ust-Ordynskiy Buriatskiy autonomous region	1000	46.5	14.6	6.4	59.6	20.7	9.7	1281
3200	Kemerovo oblast	3040	21.1	5.5	2.1	30.6	8.7	3.6	1553
5000	Novosibirsk oblast	2740	25.2	6.8	2.6	35.7	10.5	4.4	1615
5200	Omsk oblast	2600	20.7	6.2	2.9	28.3	9.1	4.2	1675
6900	Tomsk oblast	2020	16.6	4.8	1.9	24.3	7.3	3.1	1961
7635	Chita oblast (rest)	2020	30.0	8.2	3.4	42.3	12.6	5.4	1983
7667	Aginskiy Buriatskiy autonomous region	1080	42.3	13.5	6.0	51.9	18.8	8.9	1320

Continued Table A3

Ter. code	Oblast & Regions	Sample Size	Poverty Line			Higher poverty line			Per capita cons, rubles per month
			Head-count	Gap	Severity	Head-count	Gap	Severity	
8100	Buriatiya Republic	2120	31.9	9.6	4.4	42.7	13.9	6.5	1370
8400	Altay Republic	1558	31.6	9.0	3.8	42.6	13.4	6.0	1459
9300	Tyva Republic	1840	41.6	16.4	8.4	51.6	21.2	11.4	1329
9500	Khakassiya Republic	1820	22.4	6.1	2.5	32.6	9.4	4.0	1759
	Region 5	**11620**	**18.8**	**5.2**	**2.1**	**25.8**	**7.9**	**3.4**	**2125**
3700	Kurgan oblast	1860	28.8	8.7	3.7	40.8	12.7	5.7	1460
6500	Sverdlovsk oblast	3980	21.8	6.0	2.4	29.3	9.0	3.9	1858
7139	Tumen oblast (rest)	1240	16.0	3.5	1.2	22.9	6.0	2.2	2246
7172	Khanty-Mansiyskiy autonomous region	1520	3.4	0.5	0.1	6.7	1.2	0.3	4015
7500	Chelyabinsk oblast	3020	19.3	5.6	2.4	25.6	8.2	3.7	1871
	Region 6	**19240**	**11.7**	**2.9**	**1.1**	**19.6**	**4.8**	**1.9**	**2133**
1116	Arkhangelsk oblast (rest)	1820	11.3	2.5	0.9	18.2	4.3	1.6	2067
1900	Vologda oblast	2020	14.8	3.9	1.5	22.1	6.3	2.5	2067
2700	Kaliningrad oblast	1960	24.1	6.9	3.1	36.1	10.5	4.7	1792
4000	St. Petersburg city	3720	3.1	0.4	0.1	8.7	1.2	0.3	2513
4100	Leningrad oblast	2040	14.1	3.2	1.1	25.3	5.6	2.0	1837
4900	Novgorod oblast	1800	24.0	6.4	2.5	33.3	9.9	4.1	1478
5800	Pskov oblast	1900	20.6	5.1	1.9	31.0	8.3	3.3	1677
8600	Karelia Republic	1700	12.3	2.7	1.0	19.4	4.8	1.8	2158
8700	Komi Republic	2280	15.9	4.8	2.1	23.9	7.1	3.2	2171
	Region 7	**42680**	**15.2**	**3.6**	**1.3**	**24.5**	**6.1**	**2.3**	**1823**
1400	Belgorod oblast	1900	6.8	0.9	0.2	12.8	2.2	0.6	1778
1500	Briansk oblast	1800	24.4	6.0	2.2	38.4	10.0	3.9	1407
1700	Vladimir oblast	2200	15.2	2.9	0.9	25.5	5.7	1.9	1582
2000	Voronezh oblast	2760	23.7	6.0	2.2	34.0	9.6	3.9	1404
2400	Ivanovo oblast	1620	25.4	6.1	2.4	36.1	9.9	4.0	1475
2800	Tver oblast	2720	21.2	5.1	1.8	31.6	8.3	3.2	1715
2900	Kaluga oblast	1820	10.3	2.0	0.7	18.8	3.9	1.3	1886
3400	Kostroma oblast	1920	23.9	6.3	2.4	35.9	10.0	4.1	1336
3800	Kursk oblast	1980	24.0	5.5	1.8	36.0	9.3	3.4	1288
4200	Lipetsk oblast	1780	12.4	2.8	0.9	20.0	4.8	1.8	1942
4500	Moscow city	5520	8.6	1.5	0.4	17.0	3.2	1.0	2454
4600	Moscow oblast	4040	16.8	4.8	2.0	24.9	7.4	3.2	1780
5400	Orel oblast	2000	12.7	2.9	1.0	22.0	5.1	1.9	1716
6100	Riazan oblast	2020	17.5	4.3	1.6	27.5	7.1	2.8	1584

Continued Table A1.3

Ter. code	Oblast & Regions	Sample Size	Poverty Line			Higher Poverty Line			Per capita cons, rubles per month
			Head-count	Gap	Severity	Head-count	Gap	Severity	
6600	Smolensk oblast	1800	19.5	4.2	1.4	30.3	7.5	2.7	1302
6800	Tambov oblast	2200	20.0	4.5	1.5	29.6	7.6	2.8	1510
7000	Tula oblast	2300	8.8	1.4	0.4	18.8	3.3	0.9	1633
7800	Yaroslavl oblast	2300	11.9	3.1	1.3	19.2	5.0	2.1	1836
	Region 8	**38420**	**21.4**	**5.6**	**2.2**	**31.4**	**8.9**	**3.6**	**1621**
2200	Nizhniy Novgorod oblast	3320	21.5	5.5	2.1	32.2	8.9	3.6	1531
3300	Kirov oblast	2500	18.9	5.4	2.1	28.0	8.2	3.5	1863
3600	Samara oblast	3460	20.3	5.8	2.5	28.2	8.7	3.8	1896
5300	Orenburg oblast	2580	13.4	2.4	0.7	23.1	4.9	1.5	1893
5600	Penza oblast	1900	16.8	4.0	1.4	27.3	6.8	2.6	1591
5731	Perm oblast (rest)	3340	20.0	5.2	2.0	30.2	8.2	3.4	1727
5759	Komi-Permyatskiy autonomous region	1160	43.4	12.1	4.6	55.7	18.1	7.7	1249
6300	Saratov oblast	3080	26.0	7.8	3.5	35.6	11.3	5.2	1598
7300	Ulianovsk oblast	2040	28.8	8.4	3.5	39.0	12.4	5.5	1349
8000	Bashkortostan Republic	3700	20.1	4.9	1.8	29.3	8.0	3.1	1585
8800	Mariy El Republic	1900	38.7	11.9	5.1	50.9	17.1	7.9	1347
8900	Mordoviya Republic	1760	30.9	8.1	3.2	44.8	12.9	5.3	1427
9200	Tatarstan Republic	3760	20.4	5.0	1.9	30.8	8.2	3.2	1509
9400	Udmurtiya Republic	1920	21.0	4.7	1.6	30.1	8.0	3.0	1773
9700	Chuvashiya Republic	2000	19.9	5.2	2.0	32.9	8.7	3.4	1193
	Region 9	**27500**	**28.9**	**7.9**	**3.2**	**40.0**	**12.0**	**5.1**	**1428**
300	Krasnodar territory	3620	25.2	6.9	2.8	36.7	10.6	4.5	1500
700	Stavropol territory	2740	29.8	7.1	2.5	41.3	11.5	4.5	1481
1200	Astrakhan oblast	1800	25.4	6.5	2.4	34.5	10.2	4.1	1797
1800	Volgograd oblast	3080	23.1	5.7	2.1	35.0	9.3	3.6	1515
2600	Ingushetiya Republic	960	46.7	13.6	5.9	58.2	19.5	8.9	1549
6000	Rostov oblast	3720	21.2	5.2	1.9	31.4	8.5	3.4	1468
7900	Adygeia Republic	1860	22.0	5.4	2.0	31.8	8.8	3.5	1768
8200	Dagestan Republic	2460	55.6	18.1	8.1	68.6	24.9	12.0	886
8300	Kabardino-Balkariya Republic	1900	41.7	12.5	5.4	50.5	17.9	8.3	1143
8500	Kalmykiya Republic	1820	36.4	11.8	5.4	45.8	16.3	7.9	1247
9000	Severnaya Asetiya Republic	1920	25.6	6.7	2.4	35.0	10.5	4.2	1323
9100	Karachaevo-Cherkessiya Republic	1620	18.2	4.4	1.5	26.6	7.1	2.7	1535

Annexes to Chapter 3
Annex 3.1. Inequality Measures

Regional inequality measures (Gini):

Following Kakwani (1980), we compute the unweighted Gini for regional average GRP as follows:

$$G_U = (\frac{1}{2\bar{y}_U}) \frac{1}{n(n-1)} \sum_i^n \sum_j^n |y_i - y_j|$$

,

yi and *yj* are the incomes per capita of region i and j respectively. n is the number of regions, and *yu* is the unweighted mean of the per capita GRPs. *G* varies from 0 for perfect equality to 1 for perfect inequality.

The weighted Gini index weights each difference of per capita GRPs by respective population proportions.

$$G_W = (\frac{1}{2\bar{y}}) \sum_i^n \sum_j^n | y_i - y_j | \frac{p_i p_j}{P^2}$$

$\bar{y}$ is the national mean per capita GDP. pi and pj are the populations of regions i and j respectively. P is the national population, and n the number of regions. Gw varies from 0 for perfect equality to P/pi - 1 for perfect inequality. If pi is small compared to P, i.e., if the region with a small proportion of the population produced all the GRP then the value for perfect inequality would approach 1.

Theil index decomposition.

Let y_i be an income of the *i* th household (out of the population *n*). The *Theil entropy index T* is defined by :

$$T = \frac{1}{n} \sum_i^n \frac{y_i}{\mu} \log \frac{y_i}{\mu}, \qquad (1)$$

where μ is the mean income, while the *Theil mean log deviation index* T_0 is given by:

$$T_0 = \frac{1}{n} \sum_i^n \log \frac{\mu}{y_i} \qquad (2)$$

This inequality can be divided in the components *B* (between regions inequality) and W_g (within regions):
Where *W* and W_0 represented sum of contribution to the overall inequality due to the inequality *within* each of the regions , and *B* and B_o in the contribution to the national inequality due to the inequality *between* mean incomes μ_g for regions *g*=1,...,*G*. If the weight of *g* th region in the population is given by w_g , and the income share by v_g , and T_{0g} and T_g are correspondingly Theil mean log deviation and Theil entropy indices for the region *g*, the following basic formula for decomposing both Theil indices into the within-region (first term) and between-regions (second term) components holds:

$$T = W_g + B = \sum_{g=1}^G v_g T_g + \sum_{g=1}^G v_g \log \frac{v_g}{w_g}, \qquad T_0 = W_{0g} + B_0 = \sum_{g=1}^G w_g T_{0g} + \sum_{g=1}^G w_g \log \frac{w_g}{v_g}. \quad (3)$$

Inequality can be decomposed for any other groupings, not only regions., provided that the population can be partitioned in such mutually exclusive groups: for example, urban and rural residence, level of education , age group, employment status etc.

Annex 3.2 A Tale of Two Regions[41]

Among a dozen richest regions of Russia and among a dozen poorest regions of Russia based on their GRP per capita level there are two regions in the European part of Russia that are seemingly similar in their climate and location: Ivanovo oblast (around USD 800 per capita in 2002 at current exchange rate) and Samara oblast (among the richest, with USD 2,500 per capita in 2002). Understanding their fortunes may help to shed some light on the economic and political roots of regional inequality in Russia.

If anything else would be equal, Ivanovo oblast was as well placed in transition as Samara oblast: it is closer to capital (300 kilometers instead of 1000), smaller and likely easier to govern (1 million inhabitants as opposed to 3 million); both regions have had predominantly urban population (80 percent) with equally well educated workforce (12 percent with higher education). Ivanovo was praised as the main textile industrial center of Russia (over 50 percent of all textile production in the country) and a "city of brides" (due to its focus on textile industry employing mostly women), Samara had an image as a "sweet" and "beer" city with one of the largest and most famous chocolate factories and breweries located there. Prior to the transition (1985), the two oblasts have had strikingly similar living standards with average per capita income exactly at 185 rubles per month, similar level of wages, employment rate, and enrollment rates in higher education. Housing stock per capita was greater in Ivanovo, as well as enrollment rates in pre-school education, while Samara did have more doctors per capita.

By 2002 these two regions moved apart. Ivanovo had much lower average monthly wage (just over USD 85 as apposed to over USD140 in Samara), and had significant level of unemployment. Samara region attracted several large investors (Nestle, General motors), while Ivanovo was struggling to attract at least one and had low and deteriorating investment rating. Samara was one of the largest contributors to the Federal budget (2.9 percent of consolidated Federal budget revenues), while Ivanovo was relying on Federal transfers to balance its budget. Though social indicators of access to health and education remained similar, Ivanovo experienced one of the largest population losses in Central Russia (11% percent between 1989 and 2002), while Samara regions held its population steady. Ivanovo acquired a reputation of a disaster zone, akin to "rusting belt", with industrial production that does not find external markets (only 5 percent is exported), while Samara region has become well renowned as the home of "Detroit on the Volga river" with over a quarter of its industrial output exported.

Key difference between regions was a composition of their outputs. Samara did rely on two sectors that were positively affected in transition – it was a home of the main Russian car manufacturer (AVTOVAZ) and had a vibrant oil production and processing. Car purchases in CIS skyrocketed despite economic crisis. While all stock of known oil resources in Samara would only barely cover Russia's annual oil output, its position on the main oil transport road from Siberia and own resource base created favorable conditions for development of oil processing. Ivanovo was stuck with uncompetitive outdated textile industry suffering large negative external shocks due to opening to the international markets, and inherited some heavy machine buildings loosing its customers due to the transition recession.

Corruption and criminality were main countervailing factors working against Samara's success. Particularly notorious mafia gangs surrounding car production and marketing explain the paradox: despite being ranked by the Ministry of Economy and Trade among the top 3 Russian region by their production potential, Samara was ranked as only "average potential/moderate risk " and quite close to "low potential/moderate risk" Ivanovo's rating by an independent Expert Investment Rating Agency.

[41] Various Goskomstat data from "Regions of Russia", "Expert" database of the Russian regions, Ministry of Economy and Trade.

***Political factors* were** also important. Ivanovo has become one of the Communist party strongholds, but suffered from instability and often changed regional Governments. That did not promote much the image of the region among potential investors, as well as constant interference in the operation of key businesses. Samara was governed more than 10 years by the same person – Mr. Titov, an independent reform –minded politician, with strong ties to business circles and connections to central authorities (its role in the privatization and subsequent bankruptcy deal of the largest car manufacturer was particularly prominent). Tempering with the foreign trade regulations concerning car imports in favor of domestically produced cars made the regional administration really famous. Despite being a controversial figure, regional leadership influence on the economic development of the region is now deemed to be positive.

***Social factors*.** GRP per capita is an important determinant of poverty but not a single one. Ivanovo oblast had one of the highest poverty rate in European Russia, 25 percent in 2002 according to the recommended methodology, but that was surprisingly close to poverty rate for Samara region, 20 percent. Gini index of inequality in Ivanovo was .25 while in Samara it reached .33. There are no data to link directly these outcome with the data on corruption and governance, but here is a possible missing part of the picture explaining why despite an economic success Samara did not manage to achieve a significant poverty reduction.

This story is an illustration of a finding that overwhelming contrasts between regions reported in the statistical data are to a large extent due to an illusion, the actual living standards vary much less. The real issue for policy makers is not to arrest the tendency for regional differentiation, but to ensure that economic development is beneficial for the population and the poor in particular in every region.

Table A3.1: Economic Indicators by Region

Region*	Population, thous.*	GRP per capita, Rbls in 2002 prices **			Survey Disposable Resources, Rbls per capita in 2002 prices			Survey Consumption, Rbls per capita in 2002 prices**		
	2002	1997	1999	2002	1997	1999	2002	1997	1999	2002
RUSSIAN FEDERATION		**53,226**	**52,607**	**65,249**	**37,402**	**20,116**	**33,675**	**24,824**	**15,685**	**25,904**
Center										
Belgorod oblast	1,511	33,579	36,025	43,482	37,921	20,416	28,773	28,186	15,911	24,258
Briansk oblast	1,379	24,375	23,533	29,969	24,374	14,537	24,885	19,498	12,411	19,042
Vladimir oblast	1,524	28,977	29,392	34,970	24,414	14,217	23,168	18,379	12,236	19,909
Voronezh oblast	2,379	33,782	33,424	37,054	26,799	17,403	25,347	18,467	12,356	20,039
Ivanovo oblast	1,148	24,388	22,025	25,668	23,682	11,616	20,025	18,423	10,634	17,279
Kaluga oblast	1,042	33,498	32,326	38,593	26,692	16,625	26,656	20,124	14,025	22,719
Kostroma oblast	737	33,802	33,843	37,415	22,491	13,884	22,317	17,844	11,827	17,402
Kursk oblast	1,235	31,185	32,102	37,806	28,932	16,435	25,037	20,957	14,164	19,127
Lipetsk oblast	1,213	47,933	47,338	58,622	30,950	18,917	31,871	22,237	15,216	24,534
Moscow oblast	6,618	45,431	46,652	56,032	27,577	17,164	30,328	22,310	14,945	26,875
Orel oblast	860	31,941	34,633	45,159	31,682	19,646	29,565	22,529	15,507	21,848
Riazan oblast	1,228	38,202	37,671	44,554	24,677	13,603	25,295	19,714	11,855	22,268
Smolensk oblast	1,049	34,804	40,114	44,805	36,969	13,526	22,036	19,237	11,796	20,076
Tambov oblast	1,178	24,281	26,268	33,286	22,454	18,062	24,704	17,406	14,652	20,062
Tver oblast	1,471	33,410	35,773	39,956	25,054	13,494	27,864	18,688	11,618	21,798
Tula oblast	1,676	35,930	34,625	40,508	28,090	15,031	24,962	22,396	13,445	21,591
Yaroslavl oblast	1,368	51,386	51,776	63,650	30,975	17,865	30,903	23,608	15,053	24,578
Moscow city	10,383	143,242	142,714	192,622	122,530	46,031	66,799	61,328	31,422	50,609
North West										
Karelia Republic	716	47,107	48,490	58,108	34,443	21,715	38,517	24,651	16,584	29,760
Komi Republic	1,018	83,200	79,520	91,506	41,452	31,827	44,092	25,156	18,557	32,534
Arkhangelsk oblast	1,336	47,117	50,528	63,384	31,189	20,493	37,930	22,085	15,972	27,655
of which Nenetsky a.O.	42			398,562		22,182	54,071		16,776	35,782
Vologda oblast	1,270	53,053	57,909	65,068	40,926	19,407	38,429	25,629	15,519	27,608
Kaliningrad oblast	955	34,113	32,969	43,032	29,448	23,331	27,300	22,885	14,688	24,118
Leningrad oblast	1,669	40,154	42,787	60,979	24,766	17,130	25,988	19,894	14,557	22,645
Murmansk oblast	893	71,926	73,359	76,154	55,972	44,200	59,894	34,249	25,085	37,344
Novgorod oblast	694	35,895	40,445	45,905	26,128	18,073	28,296	19,316	14,534	21,693
Pskov oblast	761	26,587	28,981	32,366	22,515	14,233	28,579	17,834	12,229	21,811
St. Petersburg city	4,661	57,616	57,947	78,911	35,726	23,320	40,617	27,925	19,935	34,105
South										
Adygeia Republic	447	17,139	17,433	18,800	22,819	13,703	27,530	18,930	12,134	22,630
Dagestan Republic	2,577	11,616	10,872	16,470	13,249	7,777	12,452	10,177	7,345	11,593
Ingushetiya Republic	467	9,168	6,982	8,227	18,784		14,503	13,233		14,295
Kabardino-Balkariya R.	902	16,607	18,193	26,074	18,463	10,989	17,801	14,640	9,922	14,466
Kalmykiya Republic	292	32,737	27,804	46,151	19,530	10,497	18,297	14,794	8,847	15,773
Karachaevo-Cherkessiya R.	440	18,010	17,503	23,953	24,346	15,532	23,876	20,470	13,027	19,541
Severnaya Osetiya R.	710	14,874	16,992	23,602	21,961	15,117	22,043	17,468	13,317	18,101
Krasnodar territory	5,125	35,159	38,825	45,757	25,392	14,433	26,267	17,959	11,677	21,029
Stavropol territory	2,735	25,415	25,028	31,255	29,731	14,888	26,538	19,993	11,343	19,874
Astrakhan oblast	1,005	30,338	34,307	44,584	22,895	17,032	33,527	17,405	13,456	24,904
Volgograd oblast	2,699	36,523	32,469	41,586	26,445	13,817	26,051	19,110	11,073	21,505
Rostov oblast	4,404	23,414	24,799	33,415	26,482	16,067	25,968	19,723	13,862	21,601
Volga										
Bashkortostan Republic	4,104	46,791	44,649	52,345	30,033	19,600	31,474	19,267	14,206	23,054
Mariy El Republic	728	27,041	25,899	25,945	19,911	12,653	18,597	14,505	11,127	15,685
Mordoviya Republic	889	22,027	21,412	27,371	25,253	13,456	22,435	19,270	11,904	18,277
Tatarstan Republic	3,779	57,111	56,413	69,289	28,343	16,019	28,388	20,210	13,893	21,847
Udmurtiya Republic	1,570	47,096	44,647	52,955	32,701	21,389	31,744	22,707	14,494	21,822
Chuvashiya Republic	1,314	28,543	26,122	30,324	22,243	11,757	25,884	16,791	10,101	19,410
Kirov oblast	1,504	34,296	33,821	35,730	30,288	15,936	28,160	21,512	12,906	22,318
Nizhniy Novgorod oblast	3,524	44,882	44,316	55,874	34,837	15,380	27,840	26,652	12,844	23,393
Orenburg oblast	2,179	43,183	40,615	47,267	29,876	17,008	28,631	19,824	13,760	23,231
Penza oblast	1,453	27,490	27,147	30,874	23,416	13,179	24,815	18,916	11,298	20,211
Perm oblast	2,820	58,929	59,177	68,920	33,332	19,922	37,029	21,004	15,809	26,293
of which Komi-Permyatskiy A.R.	136			21,365		8,545	17,187		7,290	14,071
Samara oblast	3,240	65,740	62,320	73,474	38,561	22,755	41,260	24,467	16,913	26,505
Saratov oblast	2,668	34,178	31,868	39,230	30,463	15,266	24,540	20,366	12,777	21,542
Ulianovsk oblast	1,383	32,433	31,383	35,239	25,303	14,796	22,751	19,375	12,639	18,772

Region*	Population, thous.* 2002	GRP per capita, Rbls in 2002 prices ** 1997	1999	2002	Survey Disposable Resources, Rbls per capita in 2002 prices 1997	1999	2002	Survey Consumption, Rbls per capita in 2002 prices** 1997	1999	2002
Ural										
Kurgan oblast	1,019	30,764	28,603	31,483	38,581	14,739	24,692	20,243	11,951	18,960
Sverdlovsk oblast	4,486	46,039	43,104	54,851	42,834	18,147	32,695	30,089	14,708	25,969
Tumen oblast	3,265	233,796	231,804	294,042	73,215	41,812	80,914	45,040	27,227	48,443
of which Khanty-Mansiyskiy A.R.	1,433			405,985		53,252	102,851		34,048	55,765
of whihch Yamalo-Nenetskiy A.R.	507			550,997		67,528	113,496		37,426	67,845
Chelyabinsk oblast	3,604	49,096	44,171	50,884	37,381	20,229	32,891	26,425	16,174	23,184
Siberia										
Altay Republic	203	26,323	24,872	31,278	27,215	13,057	22,954	20,978	11,693	19,016
Buriatiya Republic	981	32,992	33,532	39,822	24,306	14,769	22,614	17,686	12,346	19,501
Tuva Republic	306	17,740	18,116	22,057	21,745	11,100	21,977	16,068	9,637	17,968
Khakassiya Republic	546	45,806	41,473	44,890	31,112	20,298	31,628	22,642	15,879	23,855
Altay territory	2,607	23,461	23,343	29,010	25,232	15,443	27,774	19,424	12,753	20,691
Krasnoyarsk territory	2,966	69,531	68,392	79,565	39,183	26,935	46,576	27,500	18,775	31,914
Of which Taimyr A.R.	40			71,585		39,725	55,958		30,960	37,175
Of which Evenkiyskiy A.R.	18			48,339		27,782	35,525		21,299	30,528
Irkutsk oblast	2,582	57,746	52,813	57,945	32,863	23,035	38,166	23,782	17,857	28,914
Of which Ust-Ordynskiy Buriatskiy A.R.	135			28,110		13,821	16,900		11,968	14,423
Kemerovo oblast	2,899	43,184	42,979	49,883	31,649	18,328	28,917	22,532	15,205	23,004
Novosibirsk oblast	2,692	36,423	36,152	48,295	38,539	15,987	27,683	22,448	13,386	22,485
Omsk oblast	2,079	37,843	33,276	43,739	32,090	15,700	31,644	18,065	13,974	24,312
Tomsk oblast	1,046	60,431	58,056	77,360	38,277	20,562	37,433	25,899	16,530	26,596
Chita oblast	1,156	34,220	32,602	38,974	29,879	14,739	28,123	22,881	12,696	22,641
of which Aginskiy Buriatskiy A.R.	72			22,704		10,393	20,803		8,797	16,100
Far East										
Sakha (Yakutia) Republic	949	108,761	109,103	121,072	50,552	34,797	50,996	31,623	24,100	38,188
Primorie territory	2,071	47,452	47,454	48,757	35,847	19,984	32,478	27,950	17,094	25,733
Khabarovsk territory	1,436	53,670	54,926	70,742	36,940	24,345	47,610	26,571	19,437	33,217
Amur oblast	903	45,966	42,671	51,613	43,928	17,251	27,902	22,614	14,573	23,599
Kamchatka oblast	359	84,294	71,920	70,657	80,506	34,968	54,401	36,224	25,439	41,333
of which Kariakskiy A.R.	25			144,224		34,537	41,819		29,367	38,598
Magadan oblast	183	133,252	104,069	114,536	57,080	28,901	39,936	38,909	22,445	36,051
Sakhalin oblast	547	85,718	98,096	103,089	43,361	28,024	50,904	32,437	20,678	37,943
Evreiskaya autonomous oblast	191	31,206	28,460	34,813		19,215	34,219		14,569	25,081
Chukotka autonomous region	54	157,867	111,153	220,265		33,543	49,592		32,127	44,640
Maximum	10,383	233,796	231,804	550,997	122,530	67,528	113,496	61,328	37,426	67,845
Minimum	18	9,168	6,982	8,227	13,249	7,777	12,452	10,177	7,290	11,593

* For consistency over time this and all subsequent tables reports summary statistics at the regional level inclusive of smaller regions for 1999 and 2002 (e.g. data for Kamchatka oblast include Kariakskiy a.r. for 2002 in GRP, and for 1999 and 2002 for disposable resources and consumption); population data also include the smaller constituent region into the larger one.
** CPI indices by regions used for deflation.

Source: Goskomsat and HBS data, 1997-2002.

Table A3.2: Poverty Indices by Region (percent of population with corresponding welfare index below the poverty line)

	Recommended methodology*			Survey disposable resources and official constant poverty line **			Money incomes and official current poverty line***		
	1997	1999	2002	1997	1999	2002	1997	1999	2002
RUSSIAN FEDERATION**	**24.7**	**35.9**	**19.6**	**45.1**	**58.9**	**45.1**	**25.0**	**37.6**	**30.7**
Official all-Russia ***							***20.8***	***28.7***	***25.0***
Center									
Belgorod oblast	6.3	24.5	6.8	26.3	45.6	27.0	18.9	26.9	25.0
Briansk oblast	24.3	40.6	24.4	45.2	56.9	45.0	18.6	45.0	33.8
Vladimir oblast	20.9	40.0	15.2	45.1	62.3	43.8	24.3	40.8	36.7
Voronezh oblast	26.4	48.1	23.7	49.7	57.8	47.9	24.0	33.8	33.8
Ivanovo oblast	31.3	54.3	25.4	58.6	79.8	61.6	27.0	64.9	67.4
Kaluga oblast	19.5	35.3	10.3	39.2	55.1	42.4	22.8	47.0	40.1
Kostroma oblast	30.8	45.1	23.9	48.9	59.7	46.9	19.8	38.1	37.5
Kursk oblast	27.0	31.1	24.0	53.1	57.6	58.6	22.6	35.0	35.9
Lipetsk oblast	20.9	27.9	12.4	35.0	45.1	27.6	17.7	25.9	25.8
Moscow oblast	19.9	46.0	16.8	51.2	61.4	51.7	22.7	27.6	28.6
Orel oblast	18.8	26.0	12.7	35.8	44.1	36.3	21.7	35.9	31.4
Riazan oblast	28.4	44.1	17.5	49.6	62.0	42.9	21.2	52.4	31.1
Smolensk oblast	29.5	44.3	19.5	36.7	65.6	52.1	18.4	27.2	26.2
Tambov oblast	30.6	29.8	20.0	55.1	52.4	42.4	21.2	27.9	26.8
Tver oblast	29.9	51.6	21.2	51.1	65.8	46.5	23.1	67.4	41.0
Tula oblast	16.4	37.7	8.8	36.5	58.9	34.9	16.6	31.2	22.1
Yaroslavl oblast	22.8	41.8	11.9	39.8	53.7	34.6	18.5	27.7	21.4
Moscow city	2.1	23.1	8.6	24.3	37.4	30.4	16.1	23.3	21.0
North West									
Karelia Republic	16.4	29.5	12.3	39.7	49.2	40.8	19.6	26.2	20.0
Komi Republic	27.3	42.2	15.9	45.4	58.5	43.6	16.7	22.1	21.5
Arkhangelsk oblast	21.9	38.0	11.3	51.4	65.8	45.5	25.3	49.5	28.8
of which Nenetsky a.O.		64.8	31.6		83.3	51.6			31.5
Vologda oblast	17.5	35.2	14.8	31.8	49.7	35.9	19.9	37.3	23.3
Kaliningrad oblast	30.5	45.4	24.1	54.8	65.1	56.4	24.5	37.4	40.2
Leningrad oblast	24.2	34.4	14.1	53.6	65.9	49.0	24.3	51.5	41.9
Murmansk oblast	18.3	34.7	11.4	42.1	42.9	32.4	16.8	19.8	24.5
Novgorod oblast	32.1	39.4	24.0	51.4	53.5	48.1	17.8	24.0	31.8
Pskov oblast	30.8	44.3	20.6	53.5	64.0	44.2	28.6	51.2	31.8
St. Petersburg city	12.4	21.7	3.1	48.4	54.9	34.6	22.9	33.2	21.1
South									
Adygeia Republic	23.5	40.7	22.0	49.0	59.5	40.2	40.2	54.8	35.6
Dagestan Republic	66.4	71.3	55.6	79.9	87.0	85.2	53.9	67.2	47.9
Ingushetiya Republic	59.5		46.7	86.9		89.7	76.9	95.1	87.6
Kabardino-Balkariya R.	46.6	51.6	41.7	62.1	73.0	61.6	39.8	46.6	29.4
Kalmykiya Republic	42.3	59.8	36.4	63.6	81.5	66.9	46.0	78.1	57.4
Karachaevo-Cherkessiya R.	22.8	33.2	18.2	55.3	61.6	46.5	41.0	64.6	38.8
Severnaya Osetiya R.	26.2	33.9	25.6	45.1	45.7	41.0	33.9	31.2	24.9
Krasnodar territory	35.5	55.9	25.2	48.4	64.5	47.0	24.2	35.3	32.7
Stavropol territory	29.7	55.0	29.8	50.5	63.6	52.4	34.8	45.2	39.1
Astrakhan oblast	34.0	42.7	25.4	56.6	64.0	47.3	27.8	42.9	26.2
Volgograd oblast	33.1	54.5	23.1	48.5	63.9	47.6	24.1	58.1	31.5
Rostov oblast	29.6	41.0	21.2	50.5	54.3	46.4	19.4	25.3	26.9
Volga									
Bashkortostan Republic	29.1	40.7	20.1	49.3	54.9	40.9	25.2	30.3	23.1
Mariy El Republic	38.1	53.7	38.7	62.3	71.8	65.1	52.1	69.0	54.7
Mordoviya Republic	31.7	52.3	30.9	52.2	69.0	55.1	38.6	68.1	43.6
Tatarstan Republic	26.0	39.7	20.4	48.5	59.4	46.7	17.9	24.1	24.0
Udmurtiya Republic	16.1	37.7	21.0	37.2	52.0	36.9	24.6	49.5	31.8
Chuvashiya Republic	35.6	57.4	19.9	52.6	71.7	39.2	28.8	68.2	42.3
Kirov oblast	23.1	45.2	18.9	39.3	58.8	41.2	30.8	56.6	36.3
Nizhniy Novgorod oblast	15.0	46.0	21.5	45.7	67.0	43.7	17.3	38.0	22.9
Orenburg oblast	28.6	38.7	13.4	50.3	56.7	42.3	22.9	35.6	33.3
Penza oblast	26.1	48.8	16.8	55.4	67.6	41.6	38.0	68.7	39.4
Perm oblast	24.2	39.8	20.0	41.3	54.5	44.2	18.3	25.6	24.1

	Recommended methodology*			Survey disposable resources and official constant poverty line **			Money incomes and official current poverty line***		
	1997	1999	2002	1997	1999	2002	1997	1999	2002
Of which Komi-Permyatskiy A.R.		76.2	43.4		80.4	71.0		37.5	70.4
Samara oblast	20.4	39.9	20.3	43.2	55.8	43.9	18.3	23.4	28.4
Saratov oblast	29.8	48.2	26.0	46.9	62.2	52.5	32.1	43.0	38.5
Ulianovsk oblast	32.0	47.1	28.8	47.2	59.0	50.0	17.1	31.4	43.1
Ural									
Kurgan oblast	37.8	56.3	28.8	35.8	67.2	53.7	42.6	56.5	47.8
Sverdlovsk oblast	14.9	51.6	21.8	35.0	57.4	42.8	23.1	35.6	24.9
Tumen oblast	21.0	25.7	16.0	30.4	70.6	39.5	13.4	17.8	16.1
Of which Khanty-Mansiyskiy A.R.		17.0	3.4		36.8	20.5			11.8
Of whihch Yamalo-Nenetskiy A.R.		18.8	3.2		30.9	13.6			7.6
Chelyabinsk oblast	14.5	32.6	19.3	45.4	55.4	39.6	23.3	32.0	30.2
Siberia									
Altay Republic	36.4	54.0	31.6	53.4	72.9	57.8	39.2	61.0	37.8
Buriatiya Republic	39.6	51.7	31.9	60.9	73.5	63.7	44.3	50.5	39.1
Tuva Republic	49.7	70.0	41.6	75.7	90.2	68.2	62.4	78.6	49.9
Khakassiya Republic	21.2	38.1	22.4	54.6	65.4	45.9	27.6	45.0	33.4
Altay territory	25.4	45.0	18.8	45.4	60.4	40.7	45.7	56.4	38.9
Krasnoyarsk territory	20.2	37.4	12.3	38.9	50.5	34.2	19.7	25.1	25.6
Of which Taimyr A.R.		49.6	34.2		77.9	56.4			31.8
Of which Evenkiyskiy A.R.		44.3	32.8		95.3	82.6			67.8
Irkutsk oblast	22.9	30.8	15.0	42.3	49.9	38.9	27.3	29.9	33.9
Of which Ust-Ordynskiy Buriatskiy A.R.		49.9	46.5		77.5	79.0			82.7
Kemerovo oblast	24.4	42.2	21.1	40.3	59.4	54.0	17.9	27.9	23.5
Novosibirsk oblast	27.3	53.6	25.2	32.7	68.4	52.0	39.3	61.1	44.7
Omsk oblast	31.8	39.0	20.7	40.4	65.0	44.9	23.4	38.5	24.3
Tomsk oblast	17.9	37.9	16.6	38.2	53.0	40.5	19.8	27.2	23.3
Chita oblast	29.9	59.0	30.0	64.9	82.8	62.1	61.2	88.8	57.3
of which Aginskiy Buriatskiy A.R.		70.7	42.3		95.1	80.8			74.5
Far East									
Sakha (Yakutia) Republic	29.6	37.1	21.8	46.5	59.4	50.6	28.3	33.2	23.8
Primorie territory	22.8	41.4	24.2	49.5	68.2	57.4	28.6	39.8	46.6
Khabarovsk territory	27.4	40.5	17.0	49.1	64.1	43.6	24.1	28.2	28.6
Amur oblast	27.5	47.1	20.8	31.5	70.7	60.2	27.9	44.9	47.7
Kamchatka oblast	52.1	43.3	13.8	47.1	72.8	52.4	25.9	33.6	35.5
Kariakskiy autonomous region		53.4	36.1		81.8	82.0			47.7
Magadan oblast	23.4	50.7	33.7	46.6	68.2	66.8	25.9	46.3	25.5
Sakhalin oblast	26.3	49.6	22.6	58.8	66.1	54.3	32.8	36.5	33.3
Evreiskaya autonomous oblast		55.4	18.7		75.7	48.3			38.7
Chukotka autonomous region		52.1	37.7		91.5	80.6			43.9
Maximum	66.4	76.2	55.6	86.9	95.3	89.7	76.9	95.1	87.6
Minimum	2.1	17.0	3.1	24.3	30.9	13.6	13.4	17.8	7.6

* Consumption indicator based on HBS (methodology proposed in Gibson and Poduzov (2003)) and regionally consistent poverty line (methodology Proposed in Kakwani (2003)); see chapter 1.

** Disposable resources indicator for HBS constructed by Goskomstat and 2002 official poverty lines by regions deflated back to 1997 by Goskomstat (expert estimates);

*** Model estimate produced by Goskomstat based on regional money balances of personal incomes and current official poverty lines.

**** Russian Federation figures as a sum of regions

***** Official poverty counts at the level of Russian federation are obtained from a separate model that is not consistent with the regional models. As a result the sum of poverty in Russian regions is always greater than the official published estimate of poverty for the entire country.

Note: The official poverty line changed as of 2000, limiting the time comparability of figures relying on the official poverty lines.

ource: Goskomsat and staff estimates based on HBS data for 1997-2002.

Table A3.3. Inequality by Region (Gini indices)

	Survey consumption per capita			Survey disposable resources per capita		
	1997	**1999**	**2002**	**1997**	**1999**	**2002**
RUSSIAN FEDERATION *	**0.346**	**0.340**	**0.330**	**0.412**	**0.386**	**0.388**
Official all-Russia **				***0.444***	***0.422***	***0.419***
Center						
Belgorod oblast	0.310	0.252	0.239	0.398	0.342	0.264
Briansk oblast	0.305	0.303	0.298	0.348	0.333	0.367
Vladimir oblast	0.278	0.285	0.260	0.330	0.321	0.297
Voronezh oblast	0.299	0.330	0.319	0.407	0.416	0.363
Ivanovo oblast	0.320	0.285	0.248	0.379	0.304	0.283
Kaluga oblast	0.271	0.295	0.257	0.325	0.311	0.282
Kostroma oblast	0.296	0.285	0.264	0.340	0.315	0.296
Kursk oblast	0.339	0.276	0.313	0.438	0.323	0.405
Lipetsk oblast	0.332	0.295	0.287	0.388	0.323	0.362
Moscow oblast	0.253	0.323	0.317	0.292	0.336	0.355
Orel oblast	0.343	0.274	0.293	0.407	0.327	0.351
Riazan oblast	0.323	0.321	0.304	0.373	0.348	0.328
Smolensk oblast	0.329	0.310	0.277	0.421	0.353	0.305
Tambov oblast	0.324	0.294	0.285	0.374	0.360	0.335
Tver oblast	0.279	0.295	0.303	0.368	0.324	0.375
Tula oblast	0.304	0.294	0.249	0.347	0.320	0.284
Yaroslavl oblast	0.331	0.351	0.287	0.402	0.384	0.335
Moscow city	0.359	0.368	0.340	0.421	0.400	0.364
North West						
Karelia Republic	0.301	0.297	0.336	0.357	0.345	0.407
Komi Republic	0.341	0.375	0.378	0.454	0.517	0.420
Arkhangelsk oblast	0.269	0.297	0.292	0.358	0.354	0.376
Of which Nenetsky a.O.		0.372	0.388		0.393	0.432
Vologda oblast	0.323	0.301	0.329	0.454	0.343	0.403
Kaliningrad oblast	0.339	0.334	0.342	0.383	0.521	0.377
Leningrad oblast	0.272	0.254	0.241	0.308	0.289	0.284
Murmansk oblast	0.303	0.343	0.282	0.389	0.454	0.373
Novgorod oblast	0.324	0.295	0.324	0.393	0.335	0.380
Pskov oblast	0.316	0.304	0.328	0.360	0.331	0.410
St. Petersburg city	0.265	0.265	0.261	0.308	0.291	0.291
South						
Adygeia Republic	0.293	0.289	0.388	0.336	0.312	0.422
Dagestan Republic	0.338	0.335	0.283	0.401	0.339	0.312
Ingushetiya Republic	0.430		0.292	0.429		0.306
Kabardino-Balkariya R.	0.362	0.312	0.314	0.397	0.335	0.363
Kalmykiya Republic	0.353	0.317	0.322	0.391	0.325	0.379
Karachaevo-Cherkessiya R.	0.355	0.288	0.294	0.387	0.346	0.360
Severnaya Osetiya R.	0.305	0.301	0.285	0.357	0.321	0.327
Krasnodar territory	0.306	0.353	0.324	0.376	0.389	0.377
Stavropol territory	0.334	0.320	0.320	0.447	0.389	0.436
Astrakhan oblast	0.307	0.342	0.384	0.363	0.399	0.465
Volgograd oblast	0.324	0.319	0.324	0.383	0.363	0.373
Rostov oblast	0.331	0.338	0.313	0.380	0.357	0.339
Volga						
Bashkortostan Republic	0.336	0.332	0.346	0.438	0.405	0.414
Mariy El Republic	0.304	0.318	0.314	0.369	0.340	0.351
Mordoviya Republic	0.321	0.327	0.299	0.379	0.347	0.339
Tatarstan Republic	0.356	0.366	0.320	0.414	0.380	0.398
Udmurtiya Republic	0.265	0.301	0.300	0.360	0.407	0.377
Chuvashiya Republic	0.313	0.347	0.288	0.366	0.360	0.323
Kirov oblast	0.296	0.305	0.291	0.369	0.332	0.334
Nizhniy Novgorod oblast	0.328	0.310	0.338	0.375	0.356	0.366
Orenburg oblast	0.356	0.314	0.291	0.449	0.346	0.348
Penza oblast	0.298	0.279	0.284	0.344	0.309	0.335
Perm oblast	0.331	0.347	0.366	0.423	0.383	0.450
Of which Komi-Permyatskiy A.R.		0.340	0.288		0.360	0.337
Samara oblast	0.311	0.357	0.326	0.415	0.419	0.450

Saratov oblast	0.331	0.328	0.327	0.387	0.366	0.351
Ulianovsk oblast	0.318	0.339	0.313	0.371	0.362	0.335
Ural						
Kurgan oblast	0.399	0.323	0.309	0.423	0.366	0.373
Sverdlovsk oblast	0.305	0.335	0.315	0.377	0.357	0.338
Tumen oblast	0.365	0.373	0.363	0.437	0.467	0.463
Of which Khanty-Mansiyskiy A.R.		0.372	0.349		0.446	0.462
Of whihch Yamalo-Nenetskiy A.R.		0.342	0.349		0.419	0.413
Chelyabinsk oblast	0.310	0.320	0.301	0.411	0.359	0.380
Siberia						
Altay Republic	0.353	0.298	0.309	0.412	0.319	0.353
Buriatiya Republic	0.348	0.337	0.328	0.409	0.374	0.362
Tuva Republic	0.385	0.361	0.386	0.452	0.392	0.422
Khakassiya Republic	0.287	0.331	0.313	0.346	0.382	0.367
Altay territory	0.308	0.335	0.295	0.362	0.365	0.362
Krasnoyarsk territory	0.345	0.330	0.324	0.403	0.382	0.409
of which Taimyr A.R.		0.386	0.359		0.411	0.406
of which Evenkiyskiy A.R.		0.365	0.357		0.386	0.389
Irkutsk oblast	0.342	0.315	0.345	0.406	0.358	0.396
of which Ust-Ordynskiy Buriatskiy A.R.		0.328	0.280		0.376	0.333
Kemerovo oblast	0.329	0.352	0.314	0.389	0.380	0.360
Novosibirsk oblast	0.324	0.311	0.307	0.367	0.339	0.340
Omsk oblast	0.341	0.343	0.375	0.400	0.363	0.434
Tomsk oblast	0.314	0.325	0.310	0.416	0.391	0.419
Chita oblast	0.376	0.314	0.333	0.431	0.344	0.383
of which Aginskiy Buriatskiy A.R.		0.362	0.309		0.406	0.381
Far East						
Sakha (Yakutia) Republic	0.383	0.344	0.361	0.444	0.415	0.421
Primorie territory	0.317	0.293	0.313	0.356	0.312	0.364
Khabarovsk territory	0.316	0.327	0.330	0.371	0.368	0.420
Amur oblast	0.317	0.335	0.295	0.410	0.366	0.357
Kamchatka oblast	0.310	0.329	0.297	0.429	0.409	0.366
Kariakskiy autonomous region		0.333	0.302		0.378	0.338
Magadan oblast	0.334	0.387	0.399	0.409	0.453	0.424
Sakhalin oblast	0.319	0.321	0.355	0.379	0.380	0.415
Evreiskaya autonomous oblast		0.394	0.288		0.500	0.372
Chukotka autonomous region		0.395	0.333		0.421	0.353
Maximum	0.430	0.395	0.399	0.454	0.521	0.465
Minimum	0.253	0.252	0.239	0.292	0.289	0.264

* Figure for Russian Federation is based on HBS data corrected for regional price differences using as spatial price deflators the experimental poverty line for consumption based measure and official 2002 poverty line with expert based deflated values for 1999 and 1997 for disposable resource measure.

** Official method for compiling national level inequality index does not take into account regional differences in the cost of living.

Source: Goskomsat and staff estimates based on HBS data for 1997-2002.

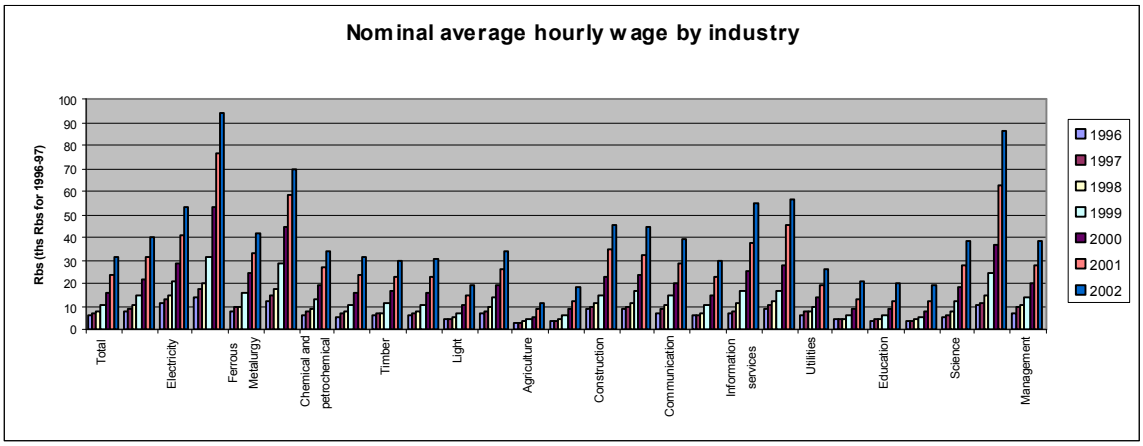
ANNEXES TO CHAPTER 5.

Table A5.1: Real Wage Trends by Industry, 1997-2002 (1997=100)

Year	1997	1998	1999	2000	2001	2002
Total	100	87	78	119	121	117
Industry	100	91	81	123	121	110
Agriculture	100	83	75	117	119	116
Forestry	100	84	84	116	117	126
Construction	100	85	74	126	123	109
Transport	100	87	82	122	109	115
Communications	100	86	77	113	118	118
Wholesale and retail sales, catering	100	88	77	109	119	114
Information services	100	89	79	139	100	129
Geology and geodesy	100	92	77	140	127	102
Utilities	100	85	68	117	117	114
Health, physical culture and social services	100	86	71	117	123	137
Education	100	84	71	117	121	139
Culture	100	88	70	120	128	130
Science	100	91	86	134	124	118
Credit and finance	100	98	90	128	141	116
Management	100	85	75	118	111	124

Source: calculations based on "Labor and Employment in Russia," Goskomstat (2003), pp. 372-373.

Figure A5.1: Nominal Average Hourly Wage by Industry, 1996-97



Source: "Labor and Employment in Russia", Goskomstat (2003), p.383

ANNEX TO CHAPTER 6

Poverty Growth Curve and Poverty Equivalent Growth Rates

This annex utilizes two additional concepts to illustrate the growth between 1997 and 2002 was pro-poor. The concepts are the "poverty growth curve" and the "poverty equivalent growth rates (PEGR)".

The Poverty Growth Curve:

Suppose μ is the mean welfare and L(p) is its Lorenz curve, then $\mu L(p)$ is called the generalized Lorenz curve. When the entire generalized Lorenz curve shifts upward, we can say that the new distribution has the second order dominance over the old distribution. In this respect, the generalized Lorenz curve may also be called as the second order dominance curve. Atkinson (1987) has provided a useful link between the second order dominance and changes in poverty. Using his theorem, we can show that when the entire generalized Lorenz curve shifts upward (downward), we can unambiguously say that poverty has decreased (increased). This result holds for a general class of additive decomposable poverty measures (except head count ratio) and all poverty lines.

The poverty growth curve is defined as the growth rate of the mean welfare of the bottom p percent population when the individuals are ranked by their per capita welfare. Denoting this curve by g(p), we can write

$$g(\mathrm{p}) = \Delta Ln(\mu_p) \qquad (1)$$

where μ_p is the mean income of the bottom p percent of population. Using the definition of the Lorenz curve, we obtain

$$g(p) = \Delta Ln(\mu\ L(p)) \qquad (2)$$

from which it follows that *g*(*p*) varies with *p* ranging from 0 to 100. From the Atkinson's theorem, we can say that if *g*(*p*) >0 (*g*(*p*) <0) for all *p*, then poverty has decreased (increased) unambiguously between two periods.

Equation (2) can also be written as

$$g(p) = g + \Delta Ln(L(p)) \qquad (3)$$

where $g = \Delta Ln(\mu)$ is the growth rate of the mean income of the whole society. Note that when p = 100, $g(\mathrm{p}) = g$ because $\Delta L(p) = 0$ at p = 100.

From equation (3), it follows that if $g(\mathrm{p}) > g$ for all p <100, then growth is pro-poor because the entire Lorenz curve shifts upward (L(p) >0 for all p). If $0 < g(\mathrm{p}) < g$ for all p <100, then growth reduces poverty but it is accompanied by an increase in inequality (L(p) <0 for all p). This situation may be characterized as trickle-down growth; growth reduces poverty but the poor receive proportionally less benefits than the non-poor. If g(p) <0 for all p <100 and g is positive, then we have an immiserizing growth when the positive growth increases poverty (Bhagwati 1988).

Poverty growth curve is depicted for different years in Figures A61.1- A6.6. If the entire curve lies in the positive (negative) quadrant, we can conclude that poverty has unambiguously decreased (increased). The ordinate of the curve when p=100 is equal to the growth of the mean welfare of the society. The growth will be unambiguously pro-poor (not pro-poor) if entire poverty curve lies above (below) the last point (when p=100).

Figure A6.1 shows that the entire curve falls in the negative quadrant, so we can conclude that poverty has increased during the 1998 crisis. Since the entire curve lies below the last point, we can conclude that Russia's crisis hurt the poor proportionally more than the non-poor. Figure A6.2 shows that the entire poverty growth curve also falls in the negative quadrant in 1999, so we conclude that poverty continued to increase in the post crisis period in 1999. An interesting change that has taken place is the fact that the entire curve is above the last point. This implies that the poor were hurt proportionally less than the non-poor. A decrease in unemployment rate helped the poor proportionally more than the non-poor, particularly when the economy was coming out of recession. During 1999, the unemployment dropped very sharply but the real wages still fell rather sharply. The falling real wages increased the poverty but a sharp increase in employment helped the poor proportionally more than the non-poor.

During 2000, the unemployment continued to decline and at the same time the real wage increased very sharply. Consequently, poverty declined sharply. This is evident from Figure A6.3, which shows that the entire poverty growth curve now falls in the positive quadrant. More importantly, the curve falls steeply, indicating that growth was highly pro-poor in 2000: the poor benefited proportionally more than the non-poor. During 2001, the real wage continued to increase sharply, but the rate of decline in unemployment slowed down. The real wage increased by about 19 percent but the unemployment declined from 9.3 percent in 2000 to 8.9 percent in 2001. Poverty again declined sharply but the poverty growth curve did not decline monotonically. The curve began to increase at the 90th percentile.

Although we cannot conclude that the growth is pro-poor for all poverty lines, we can still say that it is pro-poor until the percentage of poor is less than, or equal to 50 percent. A similar conclusion emerges from Figure A6.5. Figure B1.6 implies that poverty has indeed decreased between 1997 and 2002 despite the 1998 crisis.

Figure A6.1: Poverty Growth Curve 1997-98

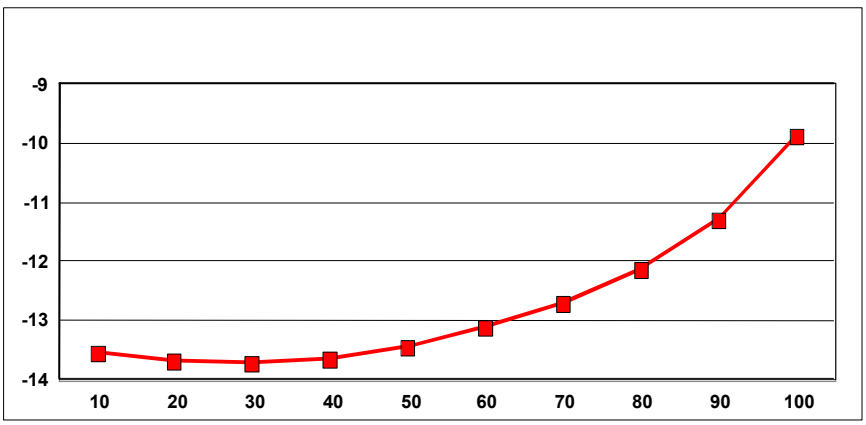


Figure A6.2: Poverty Growth Curve 1998-99

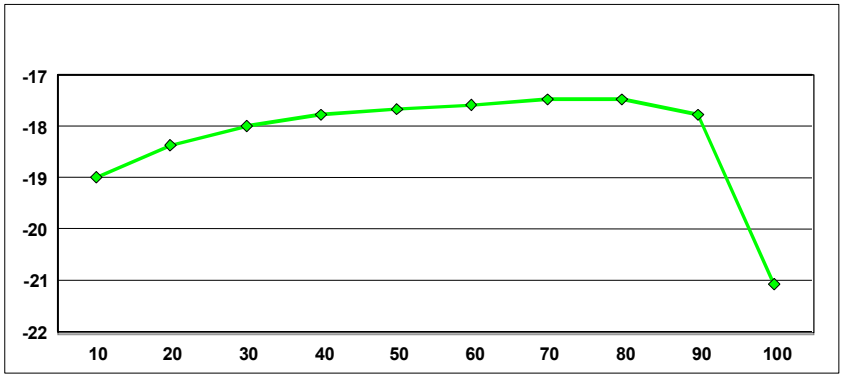


Figure A6.3: Poverty Growth Curve 1999-00

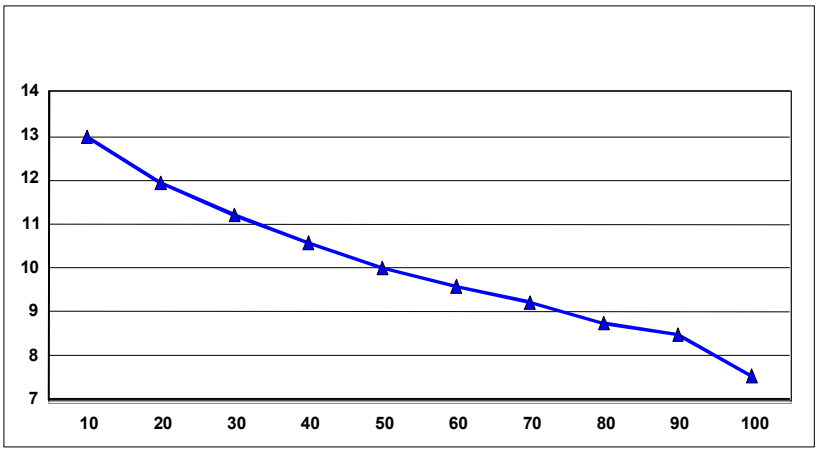


Figure A6.4: Poverty Growth Curve 2000-01

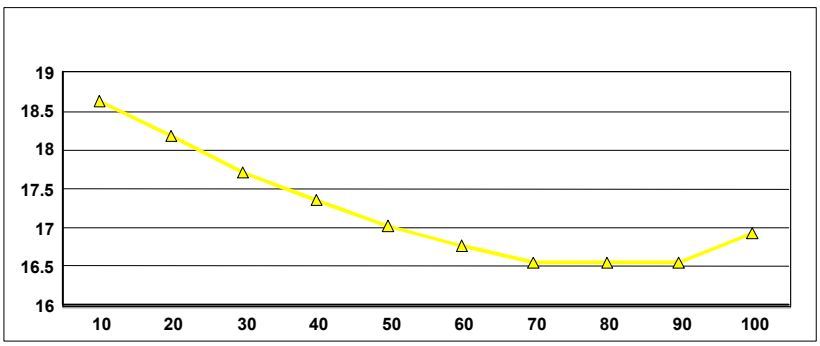


Figure A6.5: Poverty Growth Curve 2001-02

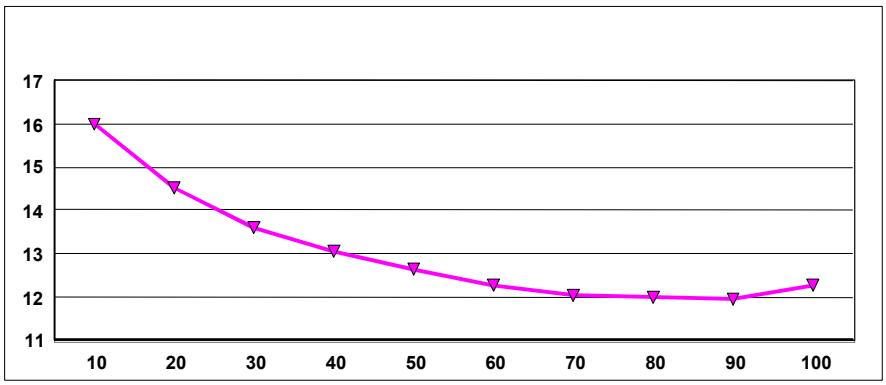
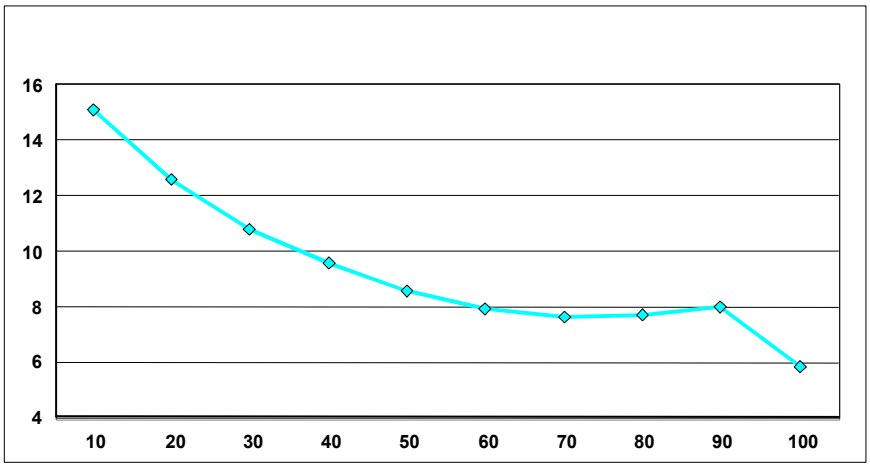


Figure A6.6: Poverty Growth Curve 1997-02



Poverty equivalent growth rate

The policy of maximizing growth alone will not necessarily lead to the maximum reduction in poverty. Poverty reduction depends on two factors. The first factor is the magnitude of economic growth rate: the larger the growth rate, the greater the poverty reduction. The second factor is the distribution of benefits of growth: if the benefits of growth go more to the poor than to the non-poor, then the poverty reduction will be larger. Kakwani and Son (2003) have developed a measure of pro-poor growth derived from the idea of "poverty equivalent growth rate" (PEGR), which takes into account not only the magnitude of growth but also how much benefits the poor receive from the growth. They demonstrated that the proportional reduction in poverty is a monotonically increasing function of the PEGR: the larger the PEGR, the greater the proportional reduction in poverty.[2] Thus, the maximization of PEGR will lead to the maximum reduction in poverty.

The PEGR that satisfies the monotonic relation with poverty reduction therefore is not only necessary but also sufficient for poverty reduction. The PEGR is derived for an entire class of additively decomposable poverty measures – including the Foster-Greer-Thorbecke (1984) poverty measure and the Watts (1967) poverty measure. These measures are the weighted average of the growth rates at

[2] Ravallion and Chen (2003) have also proposed a pro-poor growth index based on the Watts measure. Our pro-poor growth indices, namely, PEGR are more general covering the entire class of additive poverty measures, including headcount, poverty gap, severity of poverty and Watts index.

each percentile with weights varying with poverty measures (See Table A6.1 for PEGR for four measures of poverty: headcount ratio, poverty gap, severity of poverty).

The PEGR is basically the effective growth rate for poverty reduction. If PEGR is higher than the actual growth rate, then we can say that growth is favoring the poor proportionally more than the non-poor. During the period 1997-02, the actual average annual growth rate of consumption was 6 percent but the annual PEGR for the headcount ratio was 9.5 percent. The equivalent growth for poverty reduction was 3.5 p.p. higher than the actual growth rate because growth favored the poor. The gain in growth rate was 8.7 p.p. when we measured poverty by the severity index. This implies that growth was even more favorable to the ultra poor than to the poor.

Table A6.1: Poverty Equivalent Growth Rates

	Actual	Poverty equivalent growth rate		
	Growth rate	Headcount	gap ratio	Severity
		Lower poverty line		
1998	-9.4	-13.2	-13.1	-13.0
1999	-19.0	-15.7	-16.1	-16.4
2000	7.9	9.4	11.1	12.0
2001	18.5	18.4	19.2	19.7
2002	13.0	13.4	15.1	16.5
1997-02	6.0	9.5	12.6	14.7
		Higher poverty line		
1998	-9.3	-12.7	-13.0	-13.0
1999	-19.0	-15.7	-16.0	-16.3
2000	8.0	8.9	10.6	11.5
2001	18.3	17.8	18.7	19.3
2002	13.0	12.6	14.3	15.6
1997-02	6.0	7.5	11.0	13.2

ANNEX TO CHAPTER 8
Overview of Social Protection Programs in the Russian

Overview of Social Protection Programs in the Russian Federation	Eligibility	Benefit	Financing/Administration
Pension (labor)	Women 55+, men 60+, disabled and survivors	Monthly cash benefit	Contributory. Three pillars system (PAYG funded and voluntary); Financed by th social tax paid to the Social Insurance Fund Administered by the Pension Fund
Unemployment benefit	Officially registered unemployed	Monthly cash benefit for a maximum duration of 12 months; 75% of the previous wage fort he first 3 months of unemployment, 60% for the next 4 and 45% for the nest 5 months; minimum (20%MSL) and maximum thresholds	Non-contributory; general revenu financing. Administered by th Employment Services
Sick-leave compensation	Employed, temporary unable to work	Monthly cash benefit for limited period of time	Contributory. Funded by a tax paid to th Social Insurance Fund (SIF). Administere by enterprises
Maternity leave	Employed mothers before (70 days) and after delivery (70 days; 110 for more than one child)	Monthly cash payment	Contributory. Financed by a tax paid to th SIF. Administered by the enterprise.
Social pension	Women 60+, men 65+ and people with disabilities (including those disabled since childhood) ineligible for labor pension and with no other source of income	Monthly cash benefit	Non-contributory. General revenu financing by the federal budge Administered by the pension fund
Housing allowance	Income tested; based on share of family budget spent on HUS norms	Monthly housing subsidy	Non-contributory. Funded by federal an local budgets (federally mandated Administered by the local governments
Social assistance benefits	Income based	One-time or monthly benefit in cash or in kind	Regional and local budgets
Child allowance	Children from families with per capita income bellow regional subsistence minimum	Monthly cash benefit until the child reached 16 (18 if in school)	Non-contributory. Funded by the federa budget. Administered by the MLSP
Early pregnancy registration benefit	Pregnant women (up to 12 weeks of gestation) at registration for prenatal care	One-time cash payment	Non-contributory. Funded by the SIF fo the employed and the local governments fo the unemployed. Administered b enterprises and local social protectio administration
Birth grant	Newborn children	One-time cash benefit	Funded by the SIF for the employed an local governments for the unemployed Administered by enterprises and loca social protection administration
Child care allowance	Mothers (employed and unemployed) until a child is 18 months old	Monthly cash benefits	Non-contributory. Funded by the SIF fo the employed and the local governments fo the unemployed. Administered by th enterprise and local social protectio administration
Privileges and subsidies	Various categories of individuals and families; merit or needs based	Discounted or free of charge goods and services (food, transportation, housing and utilities, recreation and rehabilitation, health services, preschool, training, etc)	Non-contributory. Funded by federa regional and local budget and non budgetary funds and enterprises Administered by local governments an enterprises.
Social work and care services	Vulnerable children and youth and their families; adults and elderly	Counseling services, rehabilitation, day care, temporary shelters, psycho-social support	Non-contributory. Funded by regional an local governments. Administered by loca government administration
Residential care in institutions	Children deprived of parental care, poor children, children and adults with disabilities, frail elderly	Long term placement in residential care	Non-contributory. Funded by regional an local governments. Administered by loca government administration.

ANNEX TO CHPTER 9

Methodology for Constructing the Benchmark Scenario and Making Welfare Inferences

We distinguish 10 different possible components of the housing cost. They are listed in Table A9.A9.1 below, and the number in the first column of this table will, in case where needed, be used as a subscript for variables like prices, expenditures, etc. (e.g. e_i refers to recorded expenditures on the *i*-th component, p_i to the price per unit of the *i*th component, etc.).

Table A9.1: Different Components of the Housing Cost

Subscript	Description
1	maintenance
2	cold water
3	sewerage
4	hot water
5	central heating
6	gas
7	garbage collection
8	electricity
9	wood, fire cuts, peat, bituminous coal
10	other housing related expenditures

The housing costs for a household can arise both from the bill it receives from the companies that provide the services, from own expenditures on housing or utility related services outside this bill, or from a combination of both (which is mostly the case). Rules have been applied to determine which household gets a bill (or part of the bill) and which not. These rules are item dependent, as will be explained below in section 1.5.

The standard bill, denoted here as B , is calculated as follows:

$$\begin{aligned} B &= B(q_m, n, q_8, p_1, \ldots, p_8) \\ &= (p_1 + p_5)\, q_m + (p_2 + p_3 + p_4 + p_6 + p_7)\, n + p_8 q_8 \end{aligned} \tag{1}$$

where *B* refers to the bill, q_m to the surface of the dwelling in m², *n* to the number of persons living in the dwelling, and q_i to the quantity consumed of utility *i*. The most important feature of (1) is that the bill is only partially related to quantities consumed: for maintenance and heating the surface is taken into account, and electricity consumption (q_8) is metered. But for both cold and hot water, for sewerage and garbage collection, and for gas the bill is not related to consumption, but to the number of persons in the household.

To calculate the bill *B* in (1) the following pieces of information are needed: the 8 different prices, the surface of the dwelling (q_m), the number of persons in the household (*n*), and electricity consumption (q_8). The surface of the dwelling and the number of persons are easily obtained, since recorded in the

Goskomstat budget survey. For electricity, recorded expenditures (e_8) have been used as part of the bill. And finally, the price information has been collected at the regional level (88 regions.

No doubt it would be useful to introduce even some *intraregional* differentiation in the prices. There is evidence that utility prices also differ substantially between big cities, smaller towns, or rural areas. However, the information to determine whether a household of the budget survey lives in the capital or not, was not available. Hence, the analysis has been carried out with the prices of utilities (and also the cost coverage percentages) at the regional level.

The housing cost is the combination of components of bill *B*, and of additional expenditures (e.g. on coal and wood). We will denote the housing cost before deductions or allowances by C, and after deduction or allowances by *HC*.

The Goskomstat Budget Survey

The micro data used to calculate distributional effects of changes in the housing policy come from the fourth quarter of the 2000 Goskomstat budget survey. For 54744 households, spread over 88 regions, this survey contains very detailed expenditure information. This is shown in Table A9.2, where the expenditure items of the survey, related to the housing costs are listed.

The survey also contains information on the type of house a household lives in (e.g. a single unit apartment, or a stand alone house) and of which amenity the household disposes (central heating, hot and cold water, gas, etc.). As will be explained in section 1.5, the decision whether housing costs are calculated from expenditures or from a bill component is largely based on this information.

Table A 9.2: Variables in the Goskomstat Budget Survey Related to Housing Costs

Item	Name in this report	Name in the budget survey and description of the variable in the English version of the codifier list	Taken up in housing cost calculation?
1	Maintenance	471 rent for main housing	yes
2	cold water	531 cold running water	yes
3	Sewerage	521 servicing sewerage	yes
4	hot water	591 hot running water	yes
5	central heating	592 central heating	yes
6	Gas	561 gas	yes
7	garbage collection	511 garbage collection	yes
8	electricity	551 electric power	yes
9	coal	571 kerosene 572 other kinds of liquid fuel 581 firewood, cuts 582 bituminous and brown coal, coal briquettes 583 peat and other kinds of fuel	yes
10	other expenditures	541 other kinds of housing services	yes
11	rent for second housing	472 rent for second housing	no

Why Use Instead of Recorded Expenditures?

There are several reasons to assess the impact of reforms in the housing sector by means of a "benchmark situation" which is not (exclusively) based on the recorded expenditures in the budget survey.

Firstly, expenditures are assumed to be recorded after deductions, privileges, or allowances have been attributed. Since we want to study the effect of deductions and allowances across the income distribution, we need to start the analysis from "housing costs before deduction". The easiest and most consistent way to do this is simply to calculate the "gross" bill for all households that are judged to receive a bill.

A second reason has to do with the poor quality of the recorded expenditures in the survey. Table A9.3 shows the percentage of households that do not record expenditures on one of the items in the table, but do dispose of the amenity concerned. There might be several reasons for that. One reasons is bad recording as such of course. Another is also the fact that households might not decompose their bill in the different components, and record the whole bill under one and the same item (most probably variable 471 in the detailed classification of Goskomstat: "rent for main housing"). The two rightmost columns in Table seem to confirm this hypothesis. Those households that do dispose of the amenity but do not record expenditures have on average substantially larger expenditures on "rent for main housing" than the ones who recorded expenditures for the related item.

Table A9.3: Percentage of Households that do Not Record Expenditures while Disposing of the Amenity

Amenity	Percentage of households that dispose of the amenity but do not record expenditures	Average expenditures on variable 471 (Rent for main housing) in Ruble per month	
		Households with zero expenditures	Household with non zero expenditures
cold water	27.4	72	31
Sewerage	65.1	49	33
hot water	39.8	52	35
central heating	42.6	52	33
Gas	18.9	45	31

A third reason to construct a benchmark situation is that this allows a sounder comparison between the situation before and after the price change. We prefer to compare the situation after the price reform with a well-defined situation before the reform. Thus, it is better to work with imputed housing costs for all households. There is a difference: the average budget share of housing costs calculated on the recorded expenditures equals 5.2%, while that for the imputed housing cost (after deductions and allowances have been taken into account) equals 9.4%.

Criteria for the Assessment of the Impact of Reforms

The focus of this report is on distributional consequences of policy changes. Therefore we have to determine an ordering of households or individuals from poor to rich on the basis of some criterion. We will call this concept "living standard" for the sake of reference. Firstly, we work with expenditures instead of income.

Secondly we have followed standard practice by:

- taking out durable expenditures from total expenditures[42];
- adding home production and income in kind to the expenditures;

[42] First best would have been to estimate a user cost for ownership of durables, but this was not feasible within the time frame of this project. Moreover, recent experience of this user cost imputation on RLMS-data, shows that, compared to omitting durable expenditures altogether, the impact of it is limited (Decoster and Verbina , 2003).

- equivalizing by dividing by the number of persons living in the household;
- correcting for regional price differences by means of the poverty lines for 2000, constructed by Kakwani (Kakwani & Sajaia 2003).

We did however make one additional adjustment linked with the specific setting of this report. As we mentioned above, expenditures for housing are only to a small extent linked to quantities consumed. This make the usual practice of assessing the welfare impact of a price change by means of a price index used to deflate nominal expenditures less appropriate here. Indeed, this deflation procedure effectively transforms nominal expenditures into a quantity index, which can be interpreted as a welfare indicator. But it is built on the assumption that quantities do react in response to higher prices. This is not the case for most housing cost components, certainly not in the short run. Therefore we have opted for an alternative route to depict the welfare effect of changing prices. Our first premise is that we have to satisfy the budget constraint. Secondly, we assume that the change in prices of utilities, leading to a change in housing costs, is fully matched by a change in the non-housing expenditures. Hence an increase of the housing bill of, say, 200 Rubbles a month, has to be compensated by a decrease of non housing expenditures of the same 200 Rubbles a month. Therefore, the change in housing costs can itself be considered as a measurement of the welfare change.

In fact this amounts to the construction of the following welfare indicator for the household, denote by ls^h (for living standard):

$$ls^h = \frac{E^h - e^h_{durables} - e^h_{hous} + y_{kind}}{P^h \cdot n^h} \qquad (2)$$

where:

E^h: total expenditures of household *h* in the budget survey,

$e^h_{durables}$: expenditures of household *h* in the budget survey on durable items,

e^h_{hous}: expenditures of household *h* in the budget survey on housing costs,

y_{kind}: income in kind of household *h* in the budget survey[43],

P^h: a price index for the region where household *h* lives, calculated as the ratio between the poverty line for the region and the population weighted average poverty line for the whole Russian Federation,

n^h: the number of persons living in household *h*.

The ordering of individuals from poor to rich, poverty and distributional analysis is based. To calculate the incidence of poverty we have to adjust slightly the poverty lines, provided by Kakwani and Sajaia (2003), by taking out the housing expenditures. To do so, and in the same spirit of the mentioned authors who augmented a food poverty line with non food expenditures, we selected the subset of households "around" the poverty line (with living standard, including housing expenditures, between 10% below and 10% above the poverty line of Kakwani and Sajaia (2003). For this subset we calculated the average expenditures on housing, as recorded in the budget survey, and subtracted this from the poverty line, to obtain a "non housing" poverty line. This was done by region, in the Goskomstat broader region classification of 7 Federal Districts.

Assumptions used to construct a benchmark scenario

Not every household gets a bill. If they are not connected to the system, or live in a remote rural area in a stand-alone house, they will probably have no bill for gas, garbage collection, or even central

[43] This is a *net* concept, consisting of home production, the estimated value of benefits received in kind (the estimation being provided by Goskomstat), but with the food given away for free subtracted.

heating. Hence, it would be erroneous to simply impute housing costs on the basis of (1) for all households in the sample. Therefore we designed rules to decide when a household was liable for a bill, and for which part. Table A9.4 summarizes the criteria for the different items in the housing cost.

For "maintenance" and "garbage collection" the criterion is based on the type of house the household is living in. This variable is categorized into 7 classes in the budget survey. We take the households living in a single unit or communal apartment, in a hostel or a semi basement apartment, as the group which receives a bill for these two items. This group makes up 78% of the sample. For the other ones, living in stand alone houses (17.7%) or in part of a house (4.3%), we use their recorded expenditures. For cold and hot water, sewerage, central heating and gas the presence of the amenity is considered an indicator to determine whether to use expenditures or the bill component in the housing cost formula. Hence the figures in the respective rows in Table indicate the presence of these amenities in the Goskomstat budget survey. Finally, for electricity, coal, and other housing related expenditures (items 8, 9 and 10 in Table A9.), we always add expenditures, recorded in the survey, to the housing costs.

Table A9.4: Criteria to Determine Whether We Calculate the Housing Cost From the Bill Formula, or From Recorded Expenditures.

Item	Criterion used	Percentage of households for which we	
		calculate the bill	use recorded expenditures
maintenance	type of house	78.0	22.0
cold water	presence of amenity	84.7	15.3
sewerage	presence of amenity	81.2	18.8
Hot water	presence of amenity	80.1	19.9
central heating	presence of amenity	89.3	10.7
gas	presence of amenity	76.1	23.9
garbage coll.	type of house	78.0	22.0
electricity	always expenditures	0.0	100.0
coal	always expenditures	0.0	100.0
other	always expenditures	0.0	100.0

Note: For the presence of amenities, the missing values were interpreted as "absence of the amenity", except for central heating and hot water, where we interpreted it as "presence" to bring the percentages in the table as close as possible to external information

As far as heating is concerned, one final adjustment is introduced. For the 10.7% of the sample (or 7402 households) that does not dispose of central heating we do some additional checks on the energy related expenditures. In case this household does not dispose of a gas connection either, and has zero expenditure on coal or other fuels (2239 cases or 22.2% of the subsample), we decided to impute expenditures on coal. We therefore calculated the average coal expenditure by region and by square meter for the subsample of households without central heating or gas connection and positive coal expenditures.[44] This average is then used to impute coal expenditures for the households in the mentioned case, based on their region and squared meters. For those households that do dispose of a gas connection, we take their expenditures on gas into account if these gas expenditures exceed their gas bill (2462 cases, or 37.6% of the subsample). If their expenditures on gas are lower than the gas bill (2539 cases or 35.3% of the subsample), we inflate this amount with the ratio "expenditures on gas divided by the bill for gas" that we calculated for the previous group.

[44] We did not calculate this for the region disaggregation into 88 regions, but at the level of the Goskomstat grouping of 7 broader sets of regions.

All this leads to a "gross housing cost" calculation, denoted by *C*. The final step consists in the transition from gross to "net" housing costs, by applying deductions and/or allowances. We use the term "deductions" for the reduction in housing costs obtained by households that are "privileged. The term "allowance" refers to the reduction in housing costs obtained under the terms of the housing allowance program.

The housing allowance program provides a reduction in housing costs on the basis of a "maximum social rent" concept, which determines a housing cost on the basis of equation (1), with normatively determined surface in squared meters varying with the number of persons in the household, and a normatively determined electricity consumption. Formally:

$$\begin{aligned} MSR_{n=1} &= B(q_m = a_1, \quad n, \quad q_8 = a_4, \quad p_1,...,p_8) \\ MSR_{n=2} &= B(q_m = a_2, \quad n, \quad q_8 = a_4 \cdot n, \quad p_1,...,p_8) \\ MSR_{n\geq 3} &= B(q_m = a_3 \cdot n, \quad n, \quad q_8 = a_4 \cdot n, \quad p_1,...,p_8) \end{aligned} \tag{3}$$

where a_1 to a_4 are policy parameters with the following interpretation:

a_1: the normatively determined surface for singles;

a_2: the normatively determined surface for couples;

a_3: the normatively determined surface *per capita* for households with at least three persons;

a_4: the normatively determined consumption of electricity per capita in KwH, in the benchmark situation equal to 50.

The parameters a_1, a_2 and a_3 vary by region. We will describe the distribution in the next section. On average they are respectively 32, 42 and 19 m².

The *MSR* is allocated to the household, but is decreased with income, and cannot become negative:

$$A = \max(0, MSR - tY) \tag{4}$$

where *A* denotes the allowance, and:

Y: is total disposable income of the household;

t: the rate of decrease of the allowance with income, or the maximum allowable budget share for housing costs.

Households living in a dwelling that exactly corresponds to the one normatively determined (and hence with *C=HC*), will pay $t \cdot Y$ as net housing cost. It is important to note that *Y* is taken directly from the budget survey (variable *doxodsn*, or *households cash income* in the Goskomstat terminology), and hence not directly related to the expenditure based welfare concept. Yet, this concept probably comes closer to the one observed and used by the administration as the one to be inserted in equation (4). Obviously, also parameter *t* varies by region. The average in 2000 equals 0.1733.

The role of *MSR* is clear when the household lives in a dwelling that exceeds the normatively determined space parameters a_1, a_2, a_3. But if a household lives in an apartment that is less than the normatively determined space, and since the allowance is not paid as a cash benefit, but received as a reduction of the housing bill, these households do not fully exploit the potential benefit of the allowance program. Therefore, in the case where a household occupies less m² than the normatively determined one, some regions decide to replace the actual space with the normatively determined one

in the calculation of the bill, others to use the actual space. We have always used the actual surface to calculate the bill and the norms to calculate the *MSR*.[45]

As far as the privileges are concerned, the most common situation is a reduction of 50% of gross housing costs. Since we do not have enough detailed information in the survey to implement in detail other possible cases (e.g. a deduction of 100%), we simplified the system of privileges in the benchmark situation to this 50% reduction. We will denote the policy parameter for the deductions due to privileges as a_5. Hence we have that net housing costs, *HC*, are equal to:

$$HC = (1 - a_5)\, C\,, \tag{5}$$

where a_5 is set at 0.5 in the benchmark situation.

The two deductions (being privileged or receiving a housing allowance) cannot be combined in our simulations. The characteristic of "being privileged" is exogenously determined, whereas the allowance is endogenous, i.e. depends on the housing costs calculated in the model. But, unfortunately, we do not have clear and unambiguous information in the budget survey about whether there are privileged members in the household. We do however calculate the allowance. We have tried to make reasonable assumptions to discriminate between the two cases on the basis of the question in the budget survey whether the household received "discounts on housing costs" and our calculation of the allowance based on the household specific information. The rule followed to determine whether a household is privileged, receives an allowance, or none of both is spelt out in Table A9.5.

Table A9.5: Decision rule to determine whether a household is privileged or receives an allowance

Case	answer on the question whether the household receives "discounts on housing cost"	is the calculated allowance *A* strictly positive?	decision about the case which applies	percentage of the households in the benchmark situation
1	No	No	not privileged, and no allowance	54.8
2	Yes	No	at least one member in the household is privileged	17.0
3	No	Yes	the household is not privileged, is liable for an allowance, but did not use it	20.9
4	Yes	Yes	the household is not privileged, is liable for an allowance, and did effectively use it	7.3

Table shows that we identify four cases. If the calculated allowance is zero, and the household reports not to have received a discount on housing costs, we conclude that this household is not privileged. For these households the gross housing cost and the net housing costs are equal. Case 2 contains the subset of households which contain at least one member who is privileged. The allocation to this subset rests on the observation that the calculated allowance is zero, but the household still reports to have received discounts on housing costs. As the rightmost column of Table shows, this applies for 17% of the households. For these households we apply equation (5). Case 4 is the case where we

[45] There are indications that the allowance program would cost 15% less when allowances would be calculated on the actual space occupied instead of using the norms, when the actual space is less than the norm.

calculate a positive allowance for the household, and the household reports that it received discounts on housing costs. In this case we use the allowance to make the difference between gross and net housing costs. In the benchmark case, only 7.3% of the households are in this case, and hence "take up" the allowance. From the perspective of the simulations case 3 is an interesting one. It contains the households that are liable for an allowance, but report not to have benefited form a discount on housing costs. One of the reasons might be that they did not take up the allowance, because of information problems, because of stigma attached to it, or simply because the allowance is too low compared to the costs of applying for it[46]. In the benchmark case, we have treated these households as if they simply did not receive any discount on housing costs.

[46] Yet, the level of the allowance does not seem to differ much between groups 3 and 4. The average allowance per capita is 56.4 Rubles in group 3 and 53.3 Rubles in group 4.