

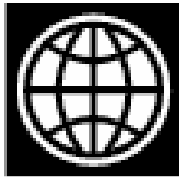
Report No. 27431-BY

**BELARUS: POVERTY ASSESSMENT
Can Poverty Reduction and Access to Services Be Sustained?**

Main Report

November 2004

Europe and Central Asia Region
Human Development Sector Unit



Document of the World Bank

Currency Exchange Rates

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Currency Unit: [Belarusian Ruble](#)

US\$ 1 = 2,162.5 BYR

Weight and Measures

Metric System

FISCAL YEAR

January 1 to December 31

ACRONYMS AND ABBREVIATIONS

ALMP	Active Labor Market Programs	IMF	International Monetary Fund
BSM	Budget of Subsistence Minimum	IMR	Infant Mortality Rate
BYR	Belarusian Ruble	IVD	Intravenous Drugs
CAE	Consumption per Adult Equivalent	LFPR	Labor Force Participation Rate
CBN	Cost of Basic Needs	MCB	Minimum Consumption Budget
CEE	Central and Eastern Europe	MDG	Millennium Development Goal
CHD	Cardiovascular Heart Disease	ME	Ministry of Economy
CIS	Commonwealth of Independent States	MLSP	Ministry of Labor and Social Protection
CPI	Consumer Price Index	MoSA	Ministry of Statistics and Analysis
CVD	Cardiovascular Diseases	NBB	National Bank of Belarus
EBRD	European Bank for Reconstruction and Development	NIS	New Independent States
ECA	Europe and Central Asia Region	OECD	Organization for Economic Cooperation and Development
FSU	Former Soviet Union	PAYG	Pay-as-you-go
GDP	Gross Domestic Product	SP	Social Protection
GIC	Growth Incidence Curves	TB	Tuberculosis
GMI	Guaranteed Minimum Income	TSA	Targeted Social Assistance
GOB	Government of Belarus	UNICEF	United Nation's Children Fund
HIES	Household Income and Expenditure Survey	WB	World Bank
ILO	International Labor Organization	WHO	World Health Organization

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Executive Summary

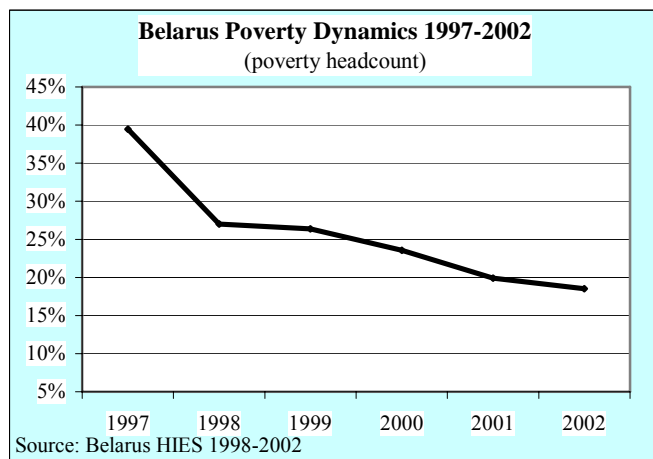
 Building on the strong poverty analysis conducted by the government for almost a decade, this Poverty Assessment offers a number of improvements to the methodology for measuring poverty and living conditions in Belarus and contributes an in-depth analysis of the multiple dimensions of poverty—particularly the non-income dimensions (education and health). The poverty assessment also indicates concrete options for the government to strengthen its poverty reduction strategy. The main findings can be summed up as follows:

- Poverty has declined over time and is low compared to other transition countries.
- The gains in poverty reduction are shallow and fragile. A key source of economic vulnerability is administratively-set real wage growth which has outstripped productivity growth, jeopardizing the sustainability of growth *and* poverty reduction. The reduction of Russian energy subsidies to Belarus further affects enterprises and their ability to invest while sustaining a social subsidy in the form of high wage levels. In a high cost, low flexibility business environment, the ability of the economy to create new jobs remains elusive. It is thus important for Belarus to take the opportunity to analyze the significant underlying risks the economy faces and the uncertainties it poses for poverty reduction and growth.
- Income inequality has remained relatively low but significant inequalities are emerging in the ability of different groups of households to access education and health services. The performance-enhancing reforms in education, health and social protection which Belarus has embarked on are in the right direction. These reforms need to be deepened, however, in order to generate the efficiency gains (savings) that can be redirected towards addressing equity concerns.
- Belarus' poverty monitoring and analysis system has potential to be a "good practice" model for the region.

I. Poverty Levels Have Declined Over Time

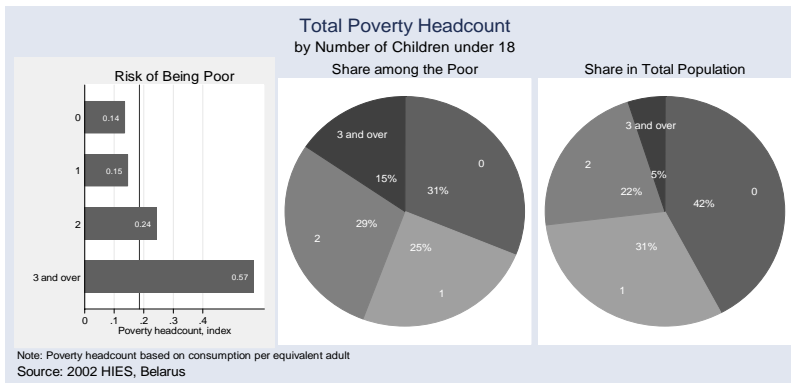
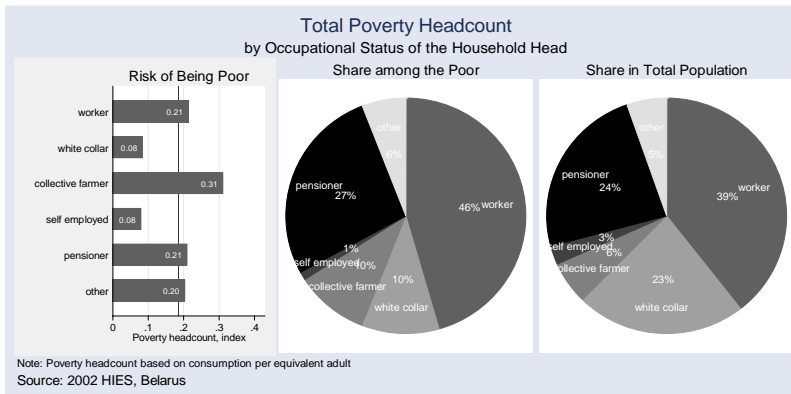
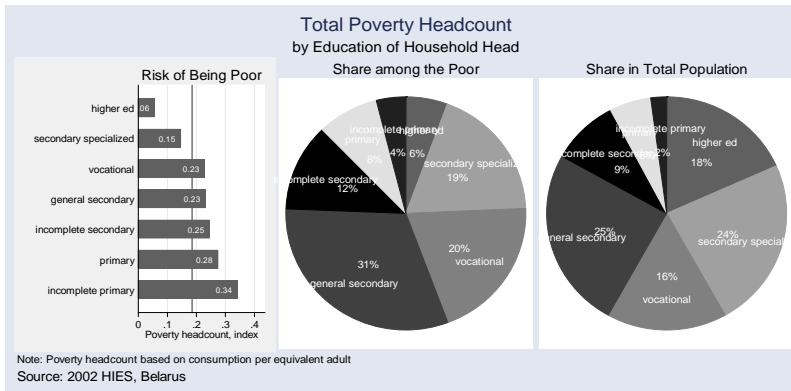
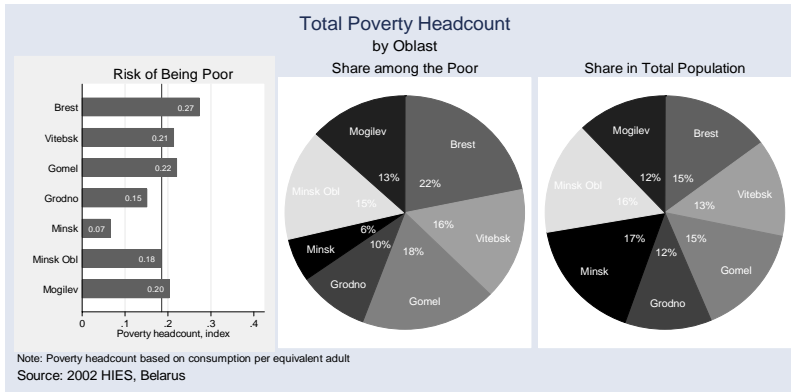
Over the last years (1997-2002), poverty has fallen substantially in Belarus. Poverty in Belarus is defined in this assessment as the proportion of the population whose consumption falls below a level sufficient to cover the cost of 2700 calories per adult per day (equivalent to 2400 calories per person per day), plus a significant allowance for non-food goods and services. Extreme poverty is defined at a lower level of consumption on the non-food dimension.

Figure I



- **Dynamics of poverty.** In 2002 the poverty headcount ratio was 18.5%, which is less than half of the 1997 level (Figure I). The dent in other measures of poverty was even greater: extreme poverty headcount fell to from 19% to 7% during the same period
- **Inequality.** Belarus also has relatively low consumption inequality within the region, although the Gini ratio has risen marginally during this period. The low inequality is linked to compressed wages; administered prices; and generous social transfers.

Figure II a–d: A Mini Profile of Poverty (2002)--Poverty Headcount by (a) Oblast (b) Education of Household Head (c) Occupation of Household Head and (d) Number of Children Aged Under 18



- **Regional comparison.** Compared to other transition economies, Belarus has one of the lowest poverty rates at the lower regional line of \$2.15 per capita per day (measured with purchasing power parity or PPP). In 2002, less than 1.6% of Belarus' population was living on less than PPP \$2.15 a day. At the upper regional line of PPP \$4.30 a day, slightly more than one quarter of the population is poor. At this higher poverty line, Belarus is in the middle of the regional distribution and worse off compared to Central or Eastern European economies, or the Baltics.

Some groups face a higher poverty risk than others.

- **Spatially.** In Minsk City, the risk of poverty is just a third of the national average (Figure IIa). Rural people face the highest poverty risk and represent the largest share of poor people (39% of the total number of poor people). Poverty (and extreme poverty) risk is higher in Brest, Gomel and Mogilev oblasts, where 53% of the poor live.

- **Education.** A strong finding is that the risk of being poor drops substantially with better education (Figure IIb). A deep poverty pocket is those households whose

heads have incomplete primary education (poverty risk of nearly 34%). While this group represents 4% of the total poor, the majority of poor people are in households whose heads finished at most middle or vocational schooling levels. Wage earners with higher education earn 58-66% more than those with basic education only, all other factors being equal.

- **Occupation.** The risk of poverty is higher for collective farmers, lower for those who are white-collar and self-employed workers (Figure IIc). Collective farmer and pensioner households face the highest risk of extreme poverty, while blue-collar workers and pensioners constitute over 70% of the extremely poor population.
- **Number of children.** The risk of being poor increases with the number of children, moderately up to 2 children but steeply thereafter (Figure II d). Even after accounting for the lower cost of children relative to adults, families with 3 or more children have 3 times the average risk of being poor. These households, however, form a fairly small share of the total number of poor (15%). Thus, they constitute a small but significant, deep pocket of poverty.
- **Gender.** Poverty in Belarus also has a strong gender aspect which accentuated from 1995 to 2002. In 2002, female-headed households consumed 10% less than similar households headed by men, up from -4.7% in 1995 and -4.5% in 1998. Average wages for females, despite their much higher educational attainment, are 81.5% of the average wages for males.

Perceptions of Poverty

The decline in overall poverty levels and the containment of consumption inequality does not tell a complete story of poverty and living conditions in Belarus. An informal qualitative survey conducted for this poverty assessment paints a picture of a population where significant numbers of people, old and young, employed and unemployed, rural and urban, face a great deal of economic strain. People observe that they have experienced a decline in the quality of life, as described by deteriorating affordability of health, education, leisure and other non-income dimensions of well-being. They also note a rise in inequality, reinforcing a sense of increased relative deprivation. There seems to be a greater reliance on coping strategies some of which may pose long-term risks, such as the reliance on cheaper sources of calories which can involve fatty foods which contribute to the rise of chronic diseases. Rural areas are seeing the out-migration of the younger working aged population, leaving many villages with only the elderly or incapacitated.

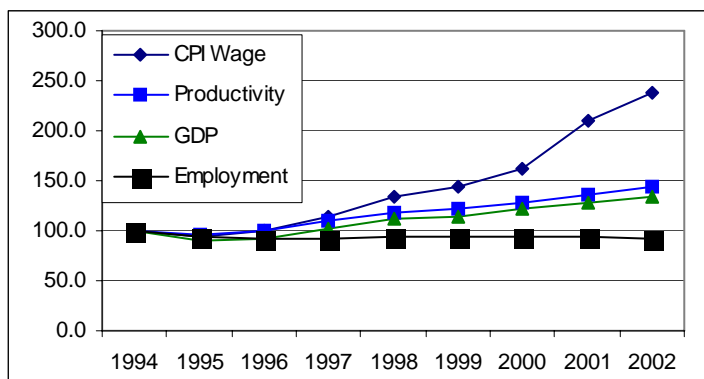
The qualitative information complements and in some way "ground-truths" the quantitative analysis. It is a small, informal survey, however, and Belarusian authorities may wish to consider a more *systematic participatory poverty analysis* to augment the data collected via the household survey.

II. Poverty Reduction Gains are "Shallow" and Fragile

A closer analysis of Belarus' achievements of the last decade indicates that the gains in household welfare are "shallow" and may be vulnerable to the regional economic changes which have recently gathered momentum.

- **"Clustering" of incomes.** A substantial share of the non-poor population have incomes that are just above the poverty line, while most poor people are clustered close to the poverty line. The former category faces a substantial risk of becoming poor. Economic shocks can push large number of individuals into poverty. A 5% reduction in real consumption will raise total poverty headcount from 18.5% to 21.9%, pushing about 340,000 people below the poverty line. A larger shock that reduces real consumption by 10% may increase total poverty headcount to 25.3%. On the other hand, growth may have a substantial poverty reduction impact: a 20% increase in real consumption across the population will halve total poverty.

Figure III Belarus: GDP, employment, productivity and CPI-deflated wages in 1994-2002, %



effect is found. For example, wage arrears are a symptom of strained enterprise finances and performance. This report documents the pervasive use of wage arrears and in-kind substitutes as a form of wage adjustment. In the last quarter of 2002, 52% of rural workers faced an average delay of 14 days in wage payments, while 35% of urban workers faced an average 12 day delay. Direct evidence of increasing strain on enterprises is also available: the number of loss making enterprises rose from 1737 in 1996 to 4082 in 2002.

- **Real wages and labor productivity.** Real wages more than doubled in the last 7 years, much exceeding the growth in labor productivity (Figure III). This trend is reported to have caused major disruptions in enterprise profitability, investment activities, and corporate finances. Under this burden, it is difficult to see how enterprises can maintain their profitability or competitiveness in international markets. Direct and indirect evidence to this effect is found. For example, wage arrears are a symptom of strained enterprise finances and performance. This report documents the pervasive use of wage arrears and in-kind substitutes as a form of wage adjustment. In the last quarter of 2002, 52% of rural workers faced an average delay of 14 days in wage payments, while 35% of urban workers faced an average 12 day delay. Direct evidence of increasing strain on enterprises is also available: the number of loss making enterprises rose from 1737 in 1996 to 4082 in 2002.
- **Russian subsidies.** Russia, the main trading partner for Belarus in both input and output markets, has typically provided implicit (via continuing to buy higher-priced, lower quality Belarusian goods) and explicit subsidies (especially in energy) to Belarus. In 2002/3, however, it started to reduce the subsidies it has been providing on utilities. The latest reports indicate that Russia's Gazprom supplied gas to Belarus at 660 Russian rubles for 1000 cubic meters between May 1 and July 1, 2002 and at 760 rubles since July 1. On January 1, 2003, it raised the price to 912 rubles (around \$30 at the official exchange rate at present). The government, which has typically subsidized utility prices for households and service institutions, has begun to reduce this generally untargeted subsidy and is passing through a higher share of the production cost of energy to consumers. The implications of this decline in energy subsidies is three fold. *First*, in the short-term, a negative impact on households, especially poor ones, can be expected via a higher cost-of-living. *Second*, among enterprises which use energy as input, profitability is likely to be further affected as costs rise but price, wage and employment parameters remain constrained by policy. *Third*, if the willingness of Russia to reduce this important subsidy is a harbinger of a deeper change in its political economy stance, then Belarus faces much broader uncertainty in its future growth prospects.
- **Job creation potential.** There are signs of growing strain on the labor market. While compared to other transition countries the overall unemployment rate in Belarus is modest, a disturbingly large number of younger people are unemployed, especially those with general education levels only. The registered unemployment rate has also tended to increase over the years. Moreover, very little of the high labor turn-over observed in Belarus has to do with hiring and placement in *new jobs*; mostly, turnover reflects inter-firm mobility of labor. Employment rates among poor males are almost 13% lower than among non-poor males. Minimum wage levels are also far below the subsistence minimum level. One of the consequences is that the number of working poor is relatively high. As a coping strategy, the poor and extreme poor tend to have much longer work hours than the non-poor, which was still not sufficient to offset differences in remuneration levels between the two groups.

- **Crowding out effect of wage bills.** Public service institutions also maintain higher than necessary employment levels, driven by social stability considerations rather than efficiency. For example, despite the demographics-driven decline in student body size at pre-school and general secondary levels, the number of teachers actually *rose* during the last few years. The large wage bills create additional strain on local authorities' resources, contributing to low remuneration levels, a crowding out of essential non-wage inputs to services, such as drugs, textbooks, facility maintenance, etc., and a decline in quality of services.

Cost-of-Living Deflator for Social Policies

Official price indexes, such as CPI, reflect the increase in cost of living for an average household. Social policies, however, are usually targeted to specific subpopulations like the pensioners or the poor. In a number of cases, the CPI and the cost of living of specific subpopulations are not the same. In the United States, for example, the Cost of Living Adjustment (COLA) used for pension indexation underestimates the actual cost of living of the elderly because of raising health care costs. In Poland, the cost of living for the poor did not follow the CPI because of different inflation rates for food products and their different relative weight in the consumption basket of the poor (World Bank, 2004). This study documents this pattern in Belarus and provides a cost of living estimator to be used for social transfers. The study constructed a cost-of-living index to render household consumption levels comparable across regions and over time. As in many other countries, it is found that differences between cost of living estimates based on household survey data and CPI are related to differences in consumption structure and source of price data. These differences are particularly apparent from 1999 onwards: starting with 1999 the survey-based cost-of-living increases faster than the food CPI. Since the CPI is used to index various transfer programs and wages, deviations of the CPI measure from actual cost-of-living trends in the country will have implications for the ability of wage earners and social transfer beneficiaries to maintain their living standards at adequate levels. This suggests a need to establish a price index for social transfers that incorporates differences due to price collection practices, which may need to include a larger share of transactions from unofficial marketing channels.

III. Emerging Inequalities in Ability to Access Education and Health Services

Belarus has some of the best education and health indicators in the region and an extensive coverage of basic services that are mostly subsidized. Despite such achievements, however, service quality is under strain and disparities in access are emerging in both education and health care systems. From 1995 to 2002, moreover, regional disparities in household consumption levels widened gradually, both between the capital city and the rest of the regions, and between the regions themselves, contributing to increasing disparities in households' ability to afford services. In the context of the next phase of the assessment of poverty in Belarus, these distributional issues in household living conditions need to be analyzed further. For now, as we consider ways to address these disparities, it is worth bearing in mind that equity and efficiency objectives are not necessarily in conflict. There is an opportunity to achieve greater efficiency *and* greater equity if reforms are designed appropriately, since savings from efficiency gains can be re-invested to address the needs of poorer household groups and essential expenditures.

Disparities in education. There is a need to ensure that the emerging pattern of the rural and poorer segments of society being left behind in access to good quality education is reversed.

- The analysis undertaken shows a clear relationship between the education level of an individual, access to economic opportunities, and their poverty status. The higher the economic status of the household, the higher is the share of the population with higher and specialized secondary education. The poorest groups tend to have larger shares of population with only a basic education or less.

- New types of schools, such as lyceums, where a more modern, higher quality general secondary education is offered, are being utilized largely by the better off urban households. Qualitative evidence also suggests that poorer households are increasingly unable to afford the higher quality higher education options that exist.
- Amongst 17-22-year-olds, individuals in the poorest quintile (poorest 20% of the population) are half as likely to receive a merit-based scholarship as individuals in the richest quintile, and grant amounts received are roughly 60% of those received by the richest.
- While local government budgets—which provide about 80% of public education financing—do not demonstrate much variation across oblasts in per capita recurrent expenditures for education, they do show variation in per capita *capital* expenditures. Oblasts with higher per capita capital expenditures have a lower rate of schools needing repairs and lower poverty.
- We also find that at all levels of education; there are now sizeable *private* expenditures on education. At the preschool and basic education levels, these constitute a heavier burden on the poorer segments of society, while at the post-basic level, the burden is heavier for the richer segments which may be seen as evidence of the ability of richer households to purchase better quality education.

Disparities in health. The poverty assessment finds a significant level of child malnutrition: 13% of under-5 children are stunted, a condition which is typically associated with long-term deprivation. It also finds significant socioeconomic differences in health status indicators.

- The prevalence of stunting among the poor (17%) is twice that among the better off, and even worse in rural areas (22%).

Lifestyle Risks, Chronic Disease and Poverty

Poverty related patterns are also evident in morbidity and risk factors associated with chronic diseases. Some lifestyle risks, such as smoking, are closely associated with low-income status, especially for males. Others, like alcohol consumption and fat intake, are spread across all socioeconomic groups and even higher for the better off. The levels of alcohol and fat intake among the poor—while lower than that of the rich—do represent an important lifestyle risk factor for those in poverty, and it is particularly high in rural areas. Household outlays on alcohol and tobacco represent more than 3% of a poor household's total consumption. Shifting expenditures from those items to welfare improving consumption goods and services would reduce poverty prevalence by 8%. It would also generate savings for the health care system by reducing the number of cases of chronic diseases. These savings can be channeled towards improving services in poorer areas or for poorer segments of the population.

- Despite overall good health service coverage, geographic inequalities are observed. Allocation of budgets and medical resources across regions is quite uniform due to the normative system of budgeting. The small variation that remains suggests that regions with more need (e.g. higher stunting rates) or with less ability to pay (higher poverty prevalence) *do not* have higher levels of medical personnel.

- This poverty assessment also analyzed which socio-economic groups benefit more from public expenditures on health. Belarus has a distinctive pattern of public health expenditures compared to other transition countries in the region. *First*, overall health expenditures are progressive, in the sense that the poor benefit relatively more than the better off. Individuals in the poorest quintile (20% of the population) capture almost 23% of government expenditures, compared to only 18% for those in the richest quintile. A *second* important

aspect is that between primary and hospital care, it is hospital care that is the more progressive intervention. This latter finding reflects the curative nature of the system where primary care is less utilized (and in fact is less effective), the free delivery of services (except drugs), and the role of social patients among the poor, whereby particularly the elderly poor tend to use hospitals as a place to be cared for generally, rather than as a place for treating serious health conditions. If the primary health care system improves its effectiveness with the expansion of the Vitebsk pilot health reforms, we should expect to see greater utilization of primary services by the poor. As hospital care becomes more fee-based, however, the use of these facilities by the elderly poor as a safety net can be expected to decline.

- Household expenditures on health care are relatively low. In fact, average households spent less on health care than on alcohol. These low expenditures, however, have important effects on poverty. Out-of-pocket payments for health care, when shifting resources from consumption, increase the poverty rate by 1.6 percentage points. Moreover, we observe in the health systems of other transition economies which are relying increasingly on patients' contributions to finance their activities, that household economic conditions, and poverty in particular, have a direct impact on the ability to seek care. It is clear from some of the more poignant accounts in our informal qualitative survey, that the potential costs (informal and formal) of health care are already preventing some of the poorest households from accessing health care.

IV. Towards an Effective and Sustainable Poverty Reduction Strategy

The poverty reduction and inequality performance of Belarus is impressive but vulnerable, both to economy-wide and household-level shocks. Broad-based growth that translates into *new* jobs and higher incomes is a critical element of Belarus' poverty reduction strategy. In order to achieve this on a sustained basis, Belarus will need to address the issue of enterprise productivity and profitability. The Belarus strategy to fight poverty would also need to ensure that the poor are able to build their human capital to take advantage of new employment and income opportunities. Belarus has already embarked on a number of reforms to support these objectives, especially in the last 2-3 years and especially in terms of institutional reforms to its education, health and social protection service delivery and financing systems, and the reduction in the generalized, untargeted utility subsidy for households. These reforms are serious and commendable. A deepening of these measures will strengthen Belarus' poverty reduction strategy and render less vulnerable the gains in poverty reduction it has already made.

Economic opportunities. The key arena where low-income households will find greater economic opportunities is likely to be in a dynamic labor market.

- *Regional development policies.* Even after controlling for other household characteristics, location remains powerful in explaining poverty. This means that households with the same characteristics are more likely to be poor if located in a peripheral area than in the capital city. In other words, poverty in poor areas is not only due to an agglomeration of low-endowed households (with characteristics that are related to poverty: large size family, lower education, etc.), but directly linked to the low average income of the area. This finding points toward the importance of regional development policies in oblasts where poverty is highest, e.g. Brest, Gomel, and Mogilev.
- *Stimulating creation of new jobs.* Continued increases in youth (and other) unemployment rates indicate the need for the economy to generate *new* jobs. There are at least two options for doing so. The *first* option is to restructure existing enterprises to improve their

productivity, thereby improving their ability to compete and widen their markets. The analysis indicates that this would require a gradual reduction in the government's reliance on administered wage and employment policies. To improve competitive performance, in the short term enterprises, whether state-owned or in the private-sector, may need to shed labor to re-align wage rates, the wage bill and labor productivity, with associated social costs. Yet increased profitability in the medium-term would be beneficial for the increased competitiveness of these firms, with better prospects for the generation of new jobs.

- A *second* option to create new jobs, which can be pursued in parallel to the first, is to remove the apparent barriers to growth of the SME sector. Compared to other transition countries, employment in the SME sector and self-employment in Belarus is insignificant. This may be explained by the fact that Belarus has one of the most expensive private business registration processes in the region. Streamlining of the start-up process and taxation policies vis-à-vis SMEs will be important to stimulate investments and introduce greater dynamism into labor market opportunities.

Education system efficiency and equity. Belarus devotes large resources to the education sector (6.8% of GDP and 19.0% of total public expenditures in 2001). Alongside equity considerations, efficiency remains a challenge in Belarus. The dimensions of efficiency and equity in education outcomes and spending are closely linked, since public savings gained from efficiency improvements are necessary to create the fiscal space for pro-poor measures (also true for the health care system) which can improve education outcomes for low-income households. Belarus has begun a restructuring process that needs to be assessed and deepened if it is to improve the effectiveness *and* equity of its education system.

- *Re-sizing the teaching force.* A key option for general secondary, given shrinking student body size, very low student-teacher ratios (even compared to the OECD), and low teacher pay, is that of resizing the teaching force combined with increases in compensation. This could be accomplished through the use of multigrade teaching in the smaller schools, cross-training teachers in related subjects, and increasing teaching loads in exchange for better pay.
- *Freeing-up needed resources.* After wages, the next two largest categories of public spending are *school meals*, which are not well-targeted to the needy, and *utilities*, where prices are increasing. These expenditures arguably crowd out important items such as materials and maintenance of facilities, thereby diminishing important pedagogical inputs that contribute to the quality of education outcomes. Two options may be considered. *First*, regarding school meals, Belarus could consider moving away from universal subsidies of meals at the basic education level to means-tested provision only for the needy. *Second*, regarding utilities, options include better insulation of schools, use of more energy-efficient equipment, and a reduced school week from six to five days—this last reform already introduced during the preparation of the report.
- *Improving equity.* Several measures may be taken in order to address the disparities in access to various education benefits. *First*, given the individual (private) nature of benefits accruing from specialized secondary and higher education, there is a case for reducing merit-based scholarships and instead striving for more pro-poor targeting through need-based scholarships. *Second*, the new, more dynamic institutions appear to be benefiting children from wealthier urban households. One of the reasons for this could be that entry into such schools is on a competitive basis, thereby excluding children from relatively disadvantaged backgrounds. In order to remove the bias against children from poorer backgrounds, entry to the new types of schools could be provided on a non-competitive basis. During the

preparation of this report the Government expanded these new type of schools to achieve national coverage and, thus, is expected that these equally benefit the poor and rural children. *Third*, there is need to evaluate the ongoing policy of school closures in remote rural areas given the risk it entails of further reducing enrollment and attendance rates in these areas. *Fourth*, the Republican government may also consider a redistributive intervention to the more needy oblasts to counter the observed pro-rich variation in capital spending across oblasts.

Health system efficiency and equity. Similar to the education system, Belarus will be better placed to address emerging inequalities in access and utilization of services and health outcomes, if it improves the efficiency of service delivery and harnesses the savings for pro-poor purposes. A pro-poor health policy thus requires not only interventions targeted to the poor, but overall improvements in the effectiveness of the health care delivery system.

- *Life-style risks.* In this light, addressing life style risk factors, which in the case of alcohol and fat consumption affect the rich more than the poor, become a pertinent issue for a poverty reduction strategy. Evidence from several countries suggests that preventive activities that improve lifestyle patterns can both reduce specific morbidities and their associated health care costs. To address lifestyle risks, besides information and education campaigns, instruments that affect the incentives for behavior change can also be adopted. Price and tax policies regarding alcohol and tobacco could also be explored further.
- *Protection against catastrophic costs.* As the health care system increases its reliance on households contributions for services, mechanisms to financially protect the poor from chronic and catastrophic health expenditures need to be in place to ensure that such expenses do not push people into poverty and destitution. An option is to introduce a means-tested catastrophic health assistance program to prevent destitution effects of health conditions.

Social protection system efficiency and equity. More than 14% of GDP or 30% of the consolidated budget in 2002 was channeled to social assistance and insurance. Quasi-fiscal social transfers by enterprises according to explicit or implicit government mandates were, moreover, estimated at about 2-3% of GDP in 2002. The social protection system is almost universal, covering about 4 in 5 persons. Without direct social protection transfers, poverty would have been higher. Due to the large coverage, however, most social protection benefits (with the exception of pensions) are small compared to household consumption needs. We found that even programs that have explicit poverty reduction goals inadequately cover the poor, while entailing substantial leakage to the non poor. To generate a larger reduction in poverty within the same resource envelope, there is scope for rationalization of privileges, consolidation, and improvements in social assistance program design.

- *Expanding the TSA program.* The innovations in means testing, targeting and one-stop action initiated under the Targeted Social Assistance (TSA) program are in the right direction. The plan to phase-out untargeted privileges is also praiseworthy: these funds could instead be channeled to expand targeted programs such as the TSA.
- *Child allowances and pensions.* Families with children under age 16 are numerous, they are nurturing the future of the country, and their ability to engage in the labor market is constrained. Yet child allowance, which is one of the best performing social programs, still covers less than 30% of the poor and provides far less adequacy of benefits than pensions. Thus, efforts to improve the pro-poor coverage and adequacy of the child allowance may be considered a high priority. Regarding the pension fund, freeing it from the obligation of

financing non-pension benefits (e.g. child allowances, maternity/birth benefits) will restore the financial equilibrium and incentives for workers and corporate tax payers to contribute.

- *Using means-testing.* Despite difficulties of measuring non-formal incomes, means testing is still likely to be a better option for Belarus than categorical or geographical targeting of social protection transfers to poor people. Geographic targeting or targeting using household or individual characteristics will entail substantial inclusion and exclusion errors. This is because groups with the highest risk of poverty represent a small share of the total poor, while the largest share of the poor is found among large socio-economic groups such as workers or pensioners, who also include households that are not necessarily poor.

Local level accountability mechanisms. A key question for Belarus is whether there are strong incentives for local-level policy makers and service providers to respond to the demands of their poorer constituents. In the informal qualitative survey there are multiple instances where people seem to convey a lack of trust and powerlessness vis-à-vis their local authorities and service providers: for example, “...in hospital, even if you are dying, a nurse will not come to you unless you give her a chocolate bar or any other gift...” and “...the procedure is humiliating both physically and morally. I felt miserable and humble because I could not resist humiliation to which my son was subjected...I think that our poverty helps officials responsible for enforcement of laws to pretend that there’s no relevant law...”. This type of experience can only reduce the effectiveness of Belarus’ development policies. Further investigation of this phenomenon would be important for government to build stronger local level accountability mechanisms.

V. Poverty Monitoring and Analysis System: A Promising Model

Belarus has a system of quantitative household data collection, timely production of basic statistics, regular poverty profile analyses and qualified staff managing the system. The basic architecture exists for a world-class poverty monitoring and analysis system which can assist policymakers in multiple sectors evaluate the poverty impact of policy reforms, assess policy trade-offs, and formulate pro-poor public actions.

- *Measurement of household welfare.* The methodology for measuring household consumption—hence poverty levels—used in Belarus is adequate, but has not always led to results consistent with GDP or wage trends. MOSA and the poverty assessment team have worked closely in developing some modifications to adult equivalency scales, spatial and inter-temporal cost-of-living deflators, etc. which can improve the reliability of the analysis. Highly productive discussions were held between the two teams and the government’s Working Group was very responsive to suggestions for improvements. We hope that these ideas will be considered for incorporation into Belarus’ ongoing monitoring of poverty.
- *Coverage of non-income dimensions.* Belarus’ regular household survey, while highly detailed in collection of income and consumption data, is somewhat weak in coverage of non-income dimensions. Yet with a few modifications of the regular survey—as was attempted with the special module for this poverty assessment—the analysis of education, health, and social protection dimensions could be immensely improved. Given the distributional issues which have been identified, these dimensions are likely to acquire greater importance.
- *Qualitative information.* The poverty analysis conducted in Belarus—including this assessment—relies heavily on quantitative data. In order to validate the quantitative results, and to answer the “why” question behind some of the findings, a regular qualitative or participatory poverty analysis could be introduced in an appropriate institution.

- *Panel data.* The analysis of some key poverty dynamics—such as poverty traps—was not possible given the absence of panel data, that is, data collected on the same households every year. Belarus could designate, say, 10% of the HIES sample to be tracked over time.
- *Analytical outreach to encourage data use.* While the data collection and production system is strong, there is scope to improve the dissemination of the data and to increase its use in policy analysis. A two-pronged strategy has been shown to be effective in other countries: outreach and capacity-building of line agencies, academies and universities in poverty analysis; and the establishment of an ongoing Study Fund that promotes the use of poverty data to analyze poverty impact of policies.

Preface. The Context for This Poverty Assessment

One of the more affluent republics of the former Soviet Union, Belarus recovered GDP growth relatively rapidly after the initial economic shock associated with independence, reduced poverty levels significantly, maintained wide coverage of basic education and health services, and achieved this without gross exacerbation of inequality. The policy framework in place has been successful in maintaining living standards and reducing poverty better than in several transition economies. Yet the economy's ability to create new jobs is not strong and youth unemployment is high. The achievements are also increasingly under strain as Russia reduces its energy subsidies to Belarus and local enterprises cope with multiple rounds of administered wage increases. A central question before this poverty assessment, thus, is whether Belarus is adequately pursuing the institutional and policy reforms which can help it to manage its sources of vulnerability and sustain its performance into the future.

Objectives and scope. This poverty assessment analyzes the evolution of poverty and living standards in Belarus during 1997-2002. It updates the understanding of poverty, inequality, and economic opportunities in Belarus during this period; analyzes the non-income dimensions of poverty more thoroughly than has been possible to date; and assesses the distributional impact of various public subsidies. It probes the distributional impact and sustainability of service delivery reforms which have been initiated in recent years in several sectors. It also aims to build local capacity to improve the measurement and analysis of poverty, and encourage use of distributional analysis in policy formulation. This poverty assessment thus strives both to strengthen local capacity *and* the conversation around future policy options.

Process and audience. This is not the first use of the Household Income and Expenditure Survey (HIES) data to inform public policy about the scope and causes of poverty in Belarus. In 1995 the Government of Belarus and World Bank produced a poverty assessment, and since then the Ministry of Statistics and Analysis (MOSA) has done annual and quarterly analyses. This Poverty Assessment starts from this fertile analytical basis.

The Ministry of Labor and Social Protection (MOLSP) chaired a multi-agency committee to guide this assessment. The MOSA carried out much of the preliminary data preparation as well as contributing to key decisions shaping the methodology to measure poverty. Line agencies and the Bank team jointly reviewed the different stages of the analysis and discussed preliminary findings at multiple forums within government (Republican and one local), civic groups, and donors. The main audiences for this poverty assessment are policymakers—both senior and at the technical level—and civic groups in Belarus who wish to engage with the government in shaping the development and reform program.

This report represents a synthesis of the analytical findings, contained in the detailed technical background papers targeted to technical level counterparts. The report provides policy recommendations likely to have a high impact in improving poverty reduction prospects, and is offered for the consideration of policymakers.

Future follow-up. Given Belarus' strong tradition of poverty analysis and the dynamic exchanges on poverty measurement and analysis that took place in the course of this poverty assessment, further collaboration on this front is likely to be very productive. Government may wish to take into account these fruitful exchanges as it considers whether to initiate a next phase of analytical collaboration with other development partners in the areas of poverty monitoring, analysis, dissemination and capacity-building.

Chapter I. Profile and Dynamics of Poverty and Living Standards*



This chapter constructs a profile of poverty in Belarus and hence is the bed-rock on which the rest of this poverty assessment is based. The information refers to 2002, the most recent year for which such information was available. The dynamics of poverty and inequality are analyzed over the period 1997 to 2002.

The MOSA and the poverty assessment team developed and applied certain modifications to the poverty measurement methodology, which permits greater confidence in the comparability of household welfare across different types of households, in different parts of the country, and across the last few years. We find that compared to other transition countries in the region, Belarus has one of the lowest rates of poverty (18.5% in 2002). Poverty has declined significantly over time, while income inequality has increased only marginally. Location appears to be one of the most important factors associated with the poverty status of the household. The analysis finds that rural people face the highest poverty risk and represent the largest share of poor people (39% of the total poor). Poverty (and extreme poverty) risk is highest in Brest, Gomel and Mogilev oblasts, and lowest in Minsk City. Another key factor is the level of education of the household head—higher education levels have a strong correlation with higher household incomes. Households headed by collective farmers, pensioners and blue-collar workers are the largest groups in poverty. Despite these findings of poverty differentials, targeting of social protection transfers using geographical or household criteria will entail substantial inclusion and exclusion errors. This is because groups with the highest risk of poverty represent a small share of the total poor, while the largest share of the poor is found among large groups such as workers or pensioners, which include households that are not necessarily poor.

1.1 Measuring Poverty in Belarus

Belarus has a long tradition of collecting household consumption data and monitoring living standards. After independence, the country used a household budget survey primarily to estimate the weights for the CPI index, and produce a limited analysis of the distribution of income and consumption. The data collection process improved considerably after 1995, when the household budget survey was redesigned as a nationally representative multi-topic household survey: the Household Income and Expenditure Survey (HIES). The survey has been implemented continuously since 1995, thus building a comparable database for monitoring living standards and poverty. Eight rounds of annual cross-section surveys are now available to measure poverty, to analyze changes in living standard over time and to assess the distributional impact of various programs and policies over the period 1995-2002. This report is focused on the period 1997-2002.

Inconsistencies between GDP vs. poverty measures. In 1995 the Government and World Bank produced a first poverty assessment, and since then, the MOSA has conducted annual and quarterly assessments. However, the poverty trends reported in these assessments are inconsistent with the dynamics of GDP and inequality, and with the trends in private consumption as reported in the System of National Accounts. Despite a cumulative growth of 22% between 1995 and 1998, for example, the official poverty headcount ratio was reported to have fallen only marginally, from 38% to 33%. Furthermore, poverty was reported to have increased substantially in 1999 (to 47%), despite a 3.8% per capita GDP growth and unchanged inequality, partly due to a methodological change in the definition of the poverty line. The largest reported decline in poverty reported in 2001, from 42% in 2000 to 29%, occurs on the background of a rather modest

* This chapter is based on the findings reported in Tesliuc (2003).

growth performance (4.7% per annum). The current poverty assessment recommends a methodology that corrects previous inconsistencies (Box 1).

Box 1: Developing a Methodology to Measure Poverty

The inconsistencies between poverty and macro (GDP) trends reported in Belarus are thought to be due to a combination of factors: (i) the poverty line has changed over time due to normative considerations; (ii) intra-annual inflation was not properly accounted for; and (iii) the composition of the income aggregate used to track poverty over time - "total disposable resources" - was not constant over time.

Methodology. This assessment recommends a poverty measurement methodology that introduces advances consistent with international good practice and constructs a household welfare aggregate which is strictly comparable over the years and across different regions within Belarus. This welfare measure is (i) based on household consumption, (ii) deflated to account for differences in purchasing power over time, areas of residence, and regions, and (iii) adjusted per adult equivalence (AE) to account for the differences in needs among households of different size and demographic composition. Sensitivity analysis was conducted to ensure that the specific choice of AE scale did not influence the results. Further details on the methodology used to measure poverty in this assessment are presented in the technical background paper on the topic.

Data utilized. (i) The main source of data for the poverty analysis is the Household Income and Consumption Survey (HIES) conducted by the Ministry of Statistics and Analysis on a quarterly basis. The 6 years of HIES survey data (1997-2002) were made comparable using the methods described above. (ii) Given the limitations of the HIES in terms of the coverage of non-income dimensions of poverty, a special survey module on education, health and social protection was fielded by the MOSA (and financed by the UNDP) for the poverty assessment in early 2003, linked to the 2002 survey. (iii) The Ministry of Finance also provided customized, detailed information on public expenditures (local and Republican) on different levels of education and health services. (iv) In order to validate and supplement the quantitative data, an informal qualitative exercise was also fielded in June 2003 to record people's perceptions on poverty and living conditions in Belarus in 5 regions. (v) Finally, institutional data was combined with household and public spending data to analyze socio-economic differences in service coverage and utilization.

Two poverty lines are used to distinguish the poor and the extremely poor from the rest of the population.¹ In this report, a poor person is defined as an individual living in a household with a per adult equivalent consumption less than BYR 59,792 per month at national fourth quarter 2001 prices². The *poverty line* is determined by the cost of a minimum food basket that guarantees the consumption of 2,700 calories per equivalent adult (with a cost of 36,402 BYR) and an allowance for non-food expenditure of 39% of the total consumption. An *extreme poverty line* (of BYR 47,100 per month) that incorporates a smaller allowance of non food expenditure (23% of total consumption) plus full allowance for the cost of the required caloric content per adult equivalent, is used to sharpen the profile of the poorest strata of the population.

1.2 Poverty and Inequality Levels in 2002

In 2002 almost 1.8 million people—about one fifth of the population of Belarus—lived in poverty. These people failed to earn enough to cover the costs of at least 2,700 calories per adult per day plus an additional amount to cover other non-food needs. Furthermore, about 700,000 persons or 7% of the total population lived in extreme poverty (Table 1).

¹ The construction of the poverty lines follows the methodological recommendations from Ravallion (1994, 1998) and Deaton and Zaidi (1999).

² This amount is equivalent to \$38 per month.

Table 1. Poverty Headcount and Poverty Gap in Belarus, 2002

	Poverty using consumption per equivalent adult		Poverty using consumption per capita	
	Extreme Poor	Total Poor	Extreme Poor	Total Poor
Number of poor	697,063	1,836,178	1,214,316	2,510,872
Poverty headcount, %	7.0%	18.5%	12.3%	25.4%
Poverty gap as:				
Percentage of poverty line, %	17%	20%	19%	23%
Average Consumption Deficit of the Poor, Rubels per month	8,088	11,786	8,413	12,485
Aggregate Poverty Gap as Share of GDP, %	0.34%	1.30%	0.61%	1.89%
Aggregate Poverty Gap, billion of Rubels (June 2002)	87	332	157	481
Memo:				
Poverty line, Rubels (IV Q-2001 Prices)	47,100	59,792	43,727	55,390
GDP, billions of Rubels (2002 average)	25,518	25,518	25,518	25,518
Population, '000s (2002)	9,899	9,899	9,899	9,899

Source: Belarus HIES, 2002

Table 2. Poverty Rates in Transition Economies

	Survey year	Poverty Headcount	
		\$PPP 2.15/day	\$PPP 4.30/day
Belarus (income)	1999	1.0	10.4
(consumption)	2002	1.6	26.6
Russian Federation	1998	18.8	50.3
Ukraine	1999	3.0	29.4
Lithuania	1999	3.1	22.5
Estonia	1998	2.1	19.3
Latvia	1998	6.6	34.8
Moldova	1999	55.4	84.6
Bulgaria	1995	3.1	18.2
Romania	1998	6.8	44.5
Hungary	1997	1.3	15.4
Poland	1998	1.2	18.4
Azerbaijan	1999	23.5	64.2
Armenia	1999	43.5	86.2
Georgia	1999	18.9	54.2
Tajikistan	1999	68.3	95.8
Kyrgyz Rep.	1998	49.1	84.1
Turkmenistan	1998	7.0	34.4
Kazakhstan	1996	5.7	30.9

Source and notes: Making Transition Work for Everyone, World Bank (2000) and WB staff estimations for Belarus 2002.

Notes: The \$PPP is expressed in US 1996 prices. The results presented here should be interpreted with caution, as many indicators refer to different time periods, or may be affected by methodological differences in the welfare measure used to measure poverty, in the survey design, or in the conversion factor used to estimate the international line.

Compared to other transition economies, Belarus has one of the lowest poverty rates (Table 2). A compressed income distribution succeeds in bringing almost all the Belarusian population above the lower regional poverty line: in 2002 less than 1.6% of the population was living on less than \$2.15 a day on a purchasing power parity basis (PPP). These results are due, among other factors, to the low level of inequality in Belarus compared to other transition economies. At the upper regional line of PPP \$4.30 a day, slightly more than one quarter of the population is poor. This places Belarus towards the middle of the distribution, where it fares less well than Central and Eastern Europe and the Baltics.

The poverty gap is relatively small but... On average the consumption of the poor household is 20% lower than the poverty line. Given average consumption of the poor, it is estimated that the minimum annual cost of eradicating poverty represents about BYR 262 billion or 1.3% of GDP.

This amount is low enough to fall within the realm of possibility. It should be borne in mind,

however, that this estimate assumes perfect targeting or, in other words, excludes administrative costs or leakage to the non-poor. Should the administrative costs and leakage be included, the total cost of these redistributive measures can be three times as high as the cost under a perfect targeting assumption.

...Poverty gains are “shallow” and hence fragile. Relatively small losses or gains in average incomes can lead to large shifts up or down in poverty levels. Most poor people have incomes which are clustered close to the poverty line; moreover, a substantial share of the non-poor are clustered just above the poverty line. The latter category faces a substantial risk of becoming poor. Economic shocks can push a large number of individuals into poverty. A 5% reduction in real consumption, for example, will raise total poverty levels from 18.5% to 21.9%, pushing about 340,000 people below the poverty line. A larger shock that reduces consumption by 10% may increase total poverty headcount to 25.3%. On the other hand, even modest growth may have a substantial poverty reduction impact. A 20% increase in consumption will *halve* poverty.

Inequality is low in Belarus. In 2002 the Gini index of consumption per adult equivalent was only 0.228. During the six years covered in the analysis, the level of consumption inequality was stable, ranging from a low of 0.225 in 1997-98 to a high of 0.236 in 2001. In other Central and

Eastern European transition countries, consumption inequality as measured by the Gini ratio range from 0.3 to 0.4, with a tendency to increase from the low level inherited at the beginning of the transition from socialism. Although the most recent data suggests that inequality in Belarus has declined after a slight increase, public perception of whether inequality has been rising or not is more mixed (Box 2).

Box 2: Inequality Low but On the Rise

And it seems to me that in the last ten years life has improved on the whole. There have appeared really rich people. Though there are examples of quite the opposite.

I think that life in our town has changed: there have appeared very rich and very poor people. The gap between the rich and the poor is increasing. I can see it when communicating with the town people in my office and in the streets.

Source: Interviews (Minsk Oblast), June 2003

The sources of consumption inequality were explored and were found to be most strongly related to: (i) the education of the household head (12% of total inequality of per adult equivalent consumption); (ii) area of residence; (iii) region; (iv) occupation of the household head; (v) household size; (v) number of children under 18 years old; and (vii) ownership of a telephone. Surprisingly, the number of earners per household and the gender of the household head have low explanatory power, as well as ownership of land, livestock or house.

Substantial inequality exists within groups that share a characteristic. This is true, for example, among households with the same level of education of the household head. This “within-group” inequality also suggests that targeting based on categorical characteristics will be inefficient and have large inclusion and exclusion errors.

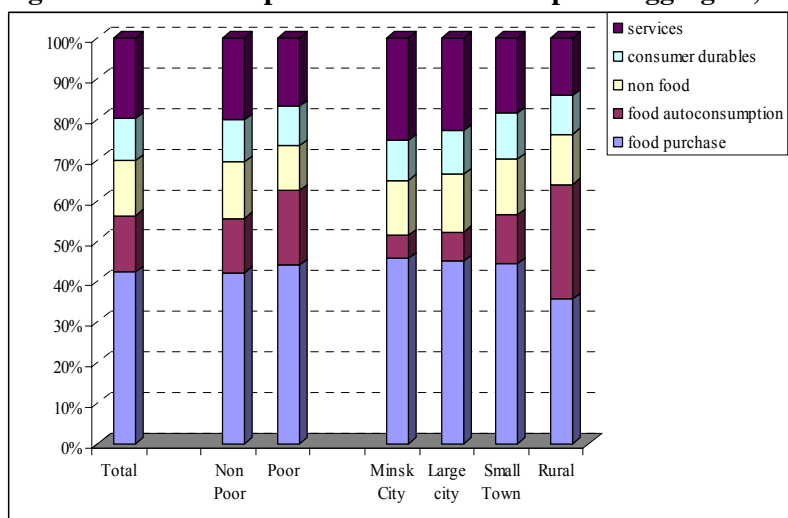
1.3 Sources of Income and Patterns of Consumption

There are important differences between poor and non-poor people in the structure of income sources. Poor households have a smaller share of wage income (44% compared to 54% for the non-poor) and rely more on social protection transfers (child allowances, other social assistance and privileges). Pensions constitute an important source of income for poor and non-poor alike, but particularly for poor people. Poor people also depend more on subsistence

agriculture for their livelihoods, and less on sales of agricultural products. The rural population depends more on agriculture, but do have a substantial share of wage incomes (from collective farms). Compared to other countries from Central and Eastern Europe, rural livelihoods in Belarus are less dependent on self-employment income from farming, either from sales or home produced/consumed goods, a reflection of the preservation of large cooperative farms using salaried labor.

Poor people devote a larger share of their consumption budget to food (especially home produced) than do non-poor people. As we would expect, the share of food items in total consumption tends to be more important for rural households and for the poor. Households residing in Minsk city have the lowest share of food in total consumption, while rural households and extremely poor households dedicate almost three quarters of their consumption to food. The relative importance of purchased and home produced food items in the food-consumption sub-aggregate also varies considerably between different groups. The share of home-production in food consumption tends to be higher in rural area where relatively fewer transactions take place through the market place and households rely heavily on their plot. For extremely poor households, home produced food constitutes more than 30% of food consumption, while for the non poor it comprises less than 23%.

Figure 1. Main Components of the Consumption Aggregate, 2001



Note: services include - heating, rent and utilities, health care, education, public transport, maintenance of vehicles, culture, recreation, sport, communication and personal care.

stable over 1997-2002, will start to change in the future showing a high burden of services. This may not necessarily reflect an increase in physical consumption but an increase in their relative prices. For example, it is clear that health services in the public health facilities are becoming increasingly subject to co-payment, official and under-the-table.

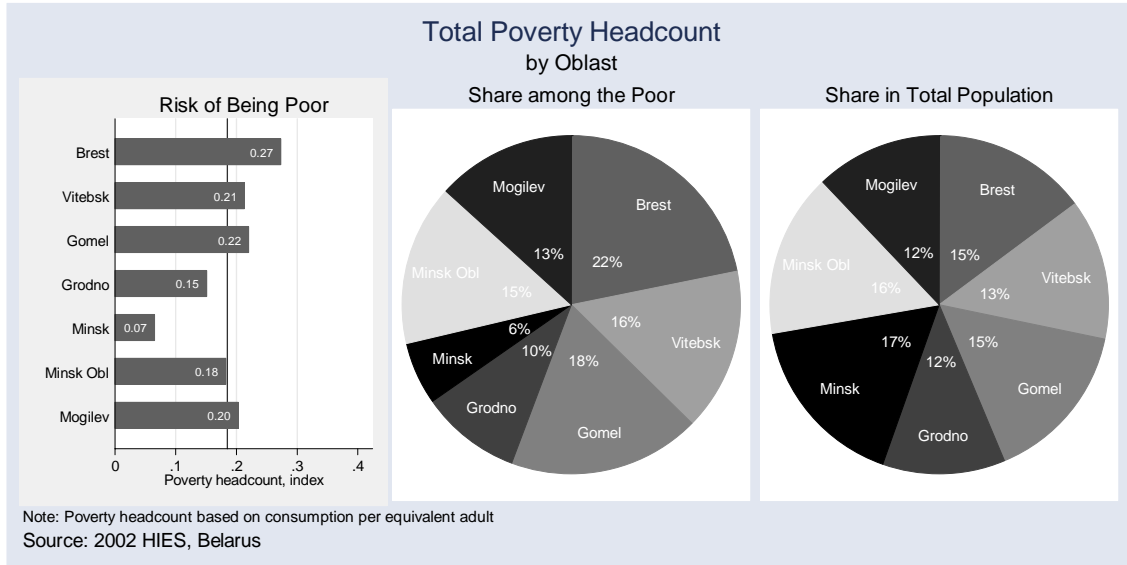
1.4 Who Are the Poor?

The incidence of poverty in Belarus varies little across the country, with the exception of the capital city. This pattern is similar to that of other Central and Eastern European countries. In Minsk city the risk of poverty is just one third of the national average. In the rest of the country, rural inhabitants face the highest poverty risk (23% of them are poor), and represent the largest

The share of consumption devoted to services (Figure 1) is low in general and especially for poor people, despite the multitude of items lumped together under this class: health, education, utilities, public transport, communication, recreation and sport. This finding may increasingly reflect issues of affordability, as we shall examine in subsequent parts of this poverty assessment. It is also very likely that household consumption composition, relatively

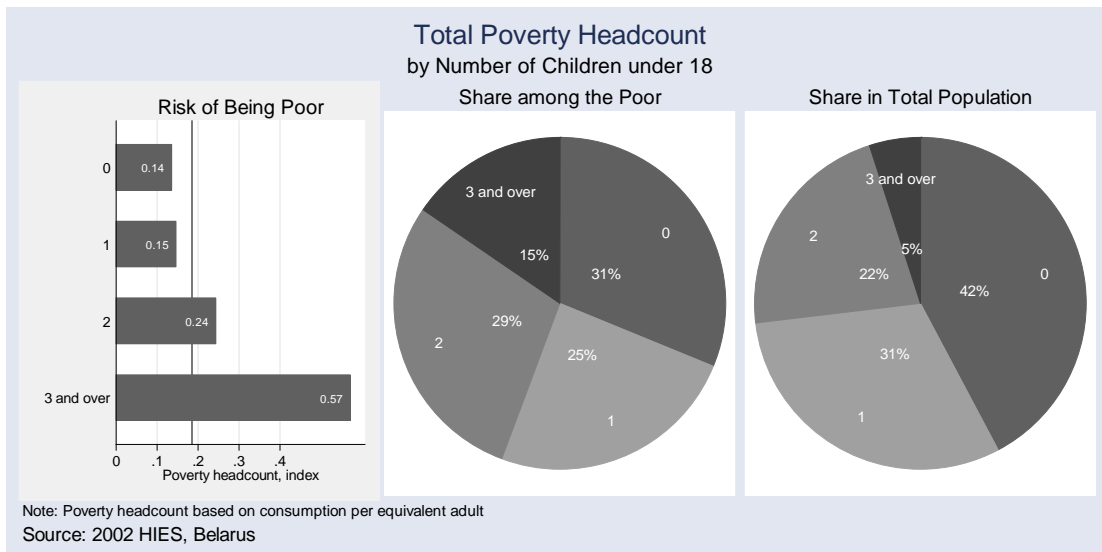
pool of poverty (39% of the total number of poor people). Only 2% of the people in Minsk city face extreme poverty, compared to 7-9% in the other cities or the rural areas. Poverty and extreme poverty risk is higher in Brest, Gomel, and Mogilev oblast, where 53% of the poor live (Figure 2). Brest and Gomel regions are confronted with the highest risk of extreme poverty, and have the largest number of poor people. Minsk City has the lowest poverty rate (7%).

Figure 2. Regional Differences in Poverty Rates



Larger households have a higher poverty risk. This is true even after accounting for economies of scale in consumption and the differential cost of children compared to adults. This relationship is highly robust to the choice of poverty line (holds for any poverty line) and year. We do not find statistically significant differences in the risk of being poor for families of one, two or three persons. Four-person families have the same poverty risk as the nationwide average (19%). For larger families of 5 people or more, poverty risk doubles (38%). They also represent the group with the largest contribution to total poverty, together with households with 4 members.

Figure 3. Deep Poverty Pocket: Households with 3 or More Children



Risk of poverty is very high for families with 3 or more children, but they represent a small share of the total number of people living in poverty. About 58% of the households in Belarus have children. The risk of being poor increases with the number of children, moderately up to two children but steeply thereafter (Figure 3). This difference is observed even after accounting for the lower cost of children compared to adults. Although families with 3 or more children do not represent a large fraction of the population (only 9% of the population), they are a deep pocket of poverty: this group accounts for 15% of the total number of poor, but faces a risk of poverty that is three times higher than the average. For families with two or three children, the risk of poverty is further associated with single-parenting. Single-parent families face significantly higher poverty risk than families with two parents if they have two or more children. These mono-parental families are a deep pocket of poverty. They are only 4% of the total number of poor (or extreme poor), but face 55-60% higher risk of poverty than other households.

Old age is associated with a higher risk of poverty, but the relationship is not straightforward. Households headed by elderly account for 1/3rd of all Belarus households. The risk of poverty between families with and without elderly is similar. This finding may not be so surprising when taking into consideration two sets of factors. *First*, both the pensions system, whose grid is automatically indexed to the average wage, and a large number of privileges, are targeted towards the elderly. *Second*, families which contain elderly members—compared to

families headed by elderly people—may also contain working age members who contribute incomes. Nonetheless we also find (see below, Figure 5) that pensioner-headed households have a higher than average risk of being poor in Belarus; that this risk has worsened over the last few years; and that pensioner-headed households constitute a large share of the population in poverty and extreme poverty. These latter findings are consistent with widely held perceptions that the living conditions of the elderly are particularly meager (Box 3).

Box 3: Old Age and Poverty

At our trading center I have witnessed many of such elderly women who have to live on bread, milk and porridge alone for weeks. (Minsk Oblast)

The village life has worsened in the last ten years, especially for elderly people. The amount of the pension is not enough to pay even for utilities and food. An individual plot is of great support and we have to keep it. Young people go to cities as there are more opportunities there to earn some money. (Gomel)

I think that elderly people are poor because they get small pensions while younger people live in poverty because they cannot find a well-paid job. I have a young great-great-granddaughter, she has just graduated from the institute, she is married and has a baby. She is poorer than me, all the time I want to help her and give her something to eat. (Gomel)

Source: Interviews, June 2003.

The relationship between age and poverty is thus U-shaped, with higher risk of poverty associated with both the life-cycle stage when people have young children *and* when people are elderly heads of households. This life-cycle pattern of poverty—and the differing factors that contribute to old age poverty and poverty in young families—is also captured in public perception (e.g. see last quote in Box above).

Female-headed households face higher risk of poverty compared to male-headed households. This is due to the higher share of single parent households and old widows living on low survivorship pensions that are found in this category. Male-headed households still constitute the larger share of the poor population, however (56%).

The risk of poverty drops substantially with better education, for any poverty line. Figure 4 above illustrates this relationship for the year 2002, for total poverty. A deep poverty pocket (poverty risk near 34%) is represented by households whose head has incomplete primary

education. This group represents 4% of the total poor. The majority of the poor, however, are to be found in households whose head finished at most middle or vocational schooling.

Figure 4. Better Education is Key to Poverty Reduction

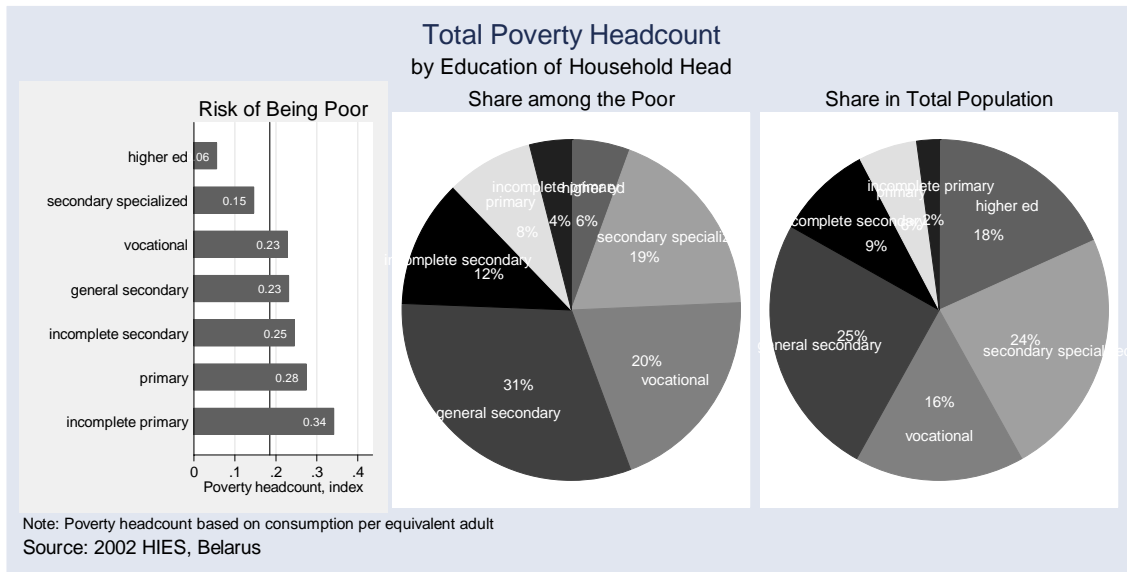
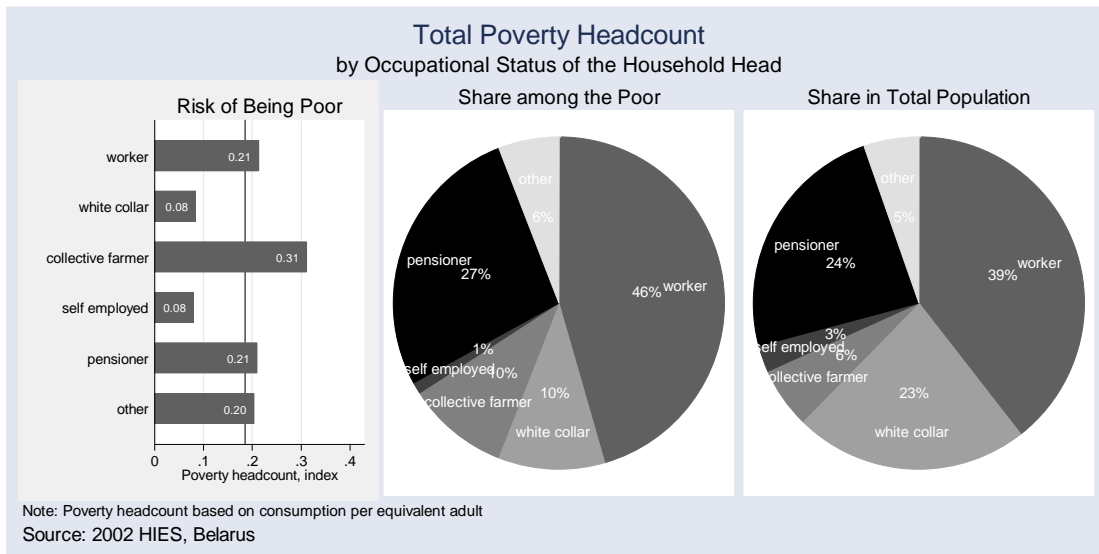


Figure 5. Poverty is higher among Collective Farmers



Poverty is significantly higher for households headed by collective farmers and lower for those headed by white collar workers and the self-employed (Figure 5). Collective farmers face the highest risk of poverty/extreme poverty while blue-collar workers and pensioners contribute over 70% to the extreme poor population.

This pattern is also confirmed by the analysis across individuals who are active on the labor market. The risk of poverty is similar across economic sectors, with two notable exceptions. People living in households where the head is in public administration (6% of the population) are considerably better off: their risk of poverty is one third the national average. At the other

extreme are those living in households where the breadwinner has an agricultural job (30% of the population), for whom the poverty risk is 54% higher than the national average.

Despite the ability of rural households to produce some of their own food on their individual land plot (*dacha*)—which may keep many households out of extreme poverty—conditions in rural areas remain difficult. Households tend to have low cash liquidity and, with few opportunities to obtain credit, these households are unable to cultivate more profitable crops because they cannot afford equipment, fertilizer, pesticides, seeds or irrigation, and often are elderly households lacking able-bodied adults (Box 4).

Box 4: Collective Farmers' Poverty

Village people try to survive using all possible means. And the government? The government pays 15 - 20 USD for heavy agricultural work. Wages are delayed for 3-4 months. In the meantime we are given "in-kind" wage i.e. food products, hygienic goods. By the time you are finally supposed to receive your money, it turns out that there's nothing to receive or you even owe the collective farm because you have eaten "too much". Because of such "government care" people leave villages, many of them go abroad to earn some money because they have families to support. There are only closed houses and old people in the villages who have nowhere to go.

The land, tractors, agricultural machines are the property of collective farms. If you openly say what you think, or if you make a decent proposal, you become out of favor immediately and you will get no machines, no crops, no additional land plots. Think and make a choice.

There's a saying: "Cultivating land you will not become rich, but you will not die of hunger either".

The collective farm charges for a horse or a tractor to cultivate land (the price for an individual, who is not a member of the collective farm, is 220000 BYR for 1 ha). This includes transportation of dung, plowing and planting. One needs to pay in cash. The price for the members of the collective farm is lower, but they need to find and pay cash, anyway wages and child allowances are delayed for 3-4 months.

Source: Interviews (Grodno), June 2003

Who is employed? The household survey data further reveals major differences in employment rates among the poor and the non-poor. Employment rates among poor males are almost 13% lower than among non-poor males. In the third and fourth quarter of 2002, however, the employment rate among the extreme poor was *higher* than among the poor. This indicates that households in extreme poverty agreed to accept any job, even seasonal and low paid as a coping strategy, but this was not sufficient to escape scarcity of means for living.

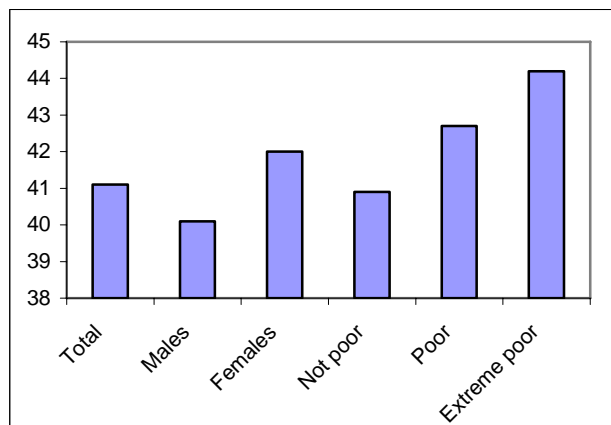
Box 5: Women in the Labor Force

A numerical gender equality in labor force participation was reached in Belarus by the high share of females especially in public services. Women participate mostly in medical occupations, teaching and administrative service jobs. For example, 90.1% of medical personnel, including 71.7% of doctors; 84.1% of pedagogical staff and 77.0% of employees engaged in culture which usually require high education attainment, are females (2001). On the other hand, these are among the lowest paid sectors in the economy (see below). This may explain the high poverty rates among female headed households. Furthermore, even though educational attainment of females is much higher than for males, they are less represented among the top managers. For example in 2001, among managers of organizations or their deputies, 40.7% were females (42.5% in 1995). This is still a very high indicator of female representation among the top layer of management, compared to most other countries in the world.

The 1999 population census data also confirms that there is a close correlation between the level of education, and the level of employment. For example, the employment rate of individuals with

higher education level is 14 percentage points higher (88%) than the average of 74%, and 19 percentage points higher than for graduates of secondary education establishments (69%).

Figure 6. Number of Hours Worked Per Week in the Main Job, 2002



Poorer workers tend to work longer hours. Work hours were surveyed in the 2002 household survey (Figure 6). As a coping strategy, the poor and extreme poor in most cases tend to have much longer work hours which was still not sufficient to offset the differences in remuneration between different categories of workers. Especially high working hours were experienced by workers and employees in extreme poverty in joint and foreign companies, but also in state enterprises and organizations, and in collective farms. Females also tend to have 2 hours longer work week than males.

1.5 What Factors Contribute *Most* to Poverty?

The picture of poverty presented by the poverty profile in the previous section is that poverty is higher in rural area, varies across regions, and is related to education, life-cycle factors, dependency, gender of the household head, and occupation. However, many of these characteristics are interrelated. This section analyses *the relationship between each of these characteristics and consumption, taking the effect of other characteristics into account*. The analysis is useful to verify the *relative role* of various factors in determining the level of consumption, and also to assess the potential impact on poverty of policy changes in these factors, holding other factors constant. In summary, the factors most strongly associated with poverty are location, the occupation and education level of the household head, the household size, dependency ratio and gender of the household head .

- **Even after controlling for other household characteristics, location remains powerful in explaining poverty.** This means that households with the same characteristics are more likely to be poor if located in a peripheral area than in the capital city. In other words, poverty in poor areas is not only due to an agglomeration of low-endowed households (with characteristics that are related to poverty: large size family, lower education, etc.), but directly linked to the low average income of the area. This finding points toward the importance of regional development policies. In 2002, the consumption of households living in rural and urban areas other than the capital city is 25% less than in Minsk City. The gap in economic opportunities between Minsk and the rest of the country has a push-pull effect, leading to the younger, most skilled and entrepreneurial residents migrating to the capital city or to Russia. Improving opportunities in rural areas is contingent on the continuation of the reform in the agricultural sector. From 1997 to 2002, regional disparities widened gradually, both between the capital city and the rest of the regions, and between the regions themselves.
- **Human capital appears to be a key lever for poverty reduction.** The higher the educational attainment of the household head, the higher the household consumption, and hence lower the chances a household lives in poverty. In 2002, having someone in the

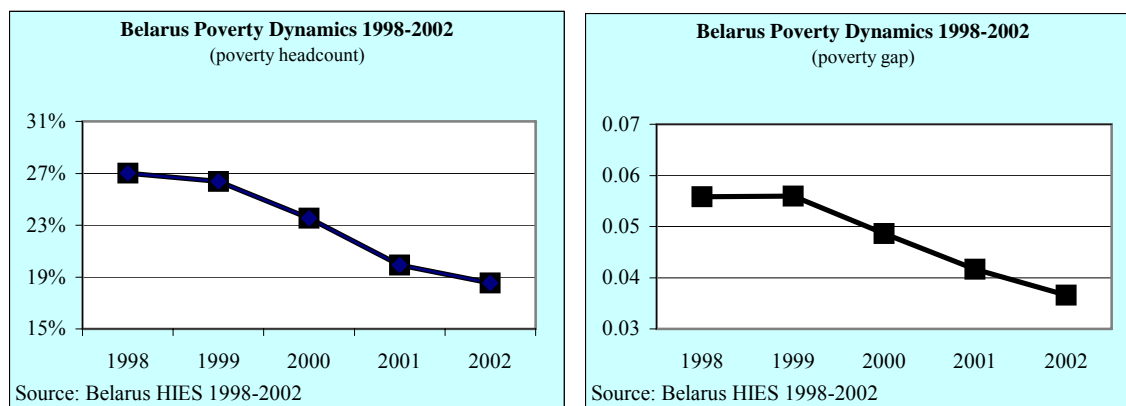
household who has completed secondary or vocational schooling raises consumption by about 8-11% compared with similar households with primary education. The premium for technical education is 17%, and for higher education (completed university studies) is 30%.

- **Only households headed by self-employed or white-collar workers enjoy occupational premiums, while pensioner-headed households are facing increased hardship.** *Private entrepreneurs* enjoy the largest returns to occupation. Their consumption is, on average, 23% higher than of a similar household headed by a blue-collar worker. Both the average level and the spread of these returns are falling in 2002 compared to earlier years. The situation of *pensioner-headed households* deteriorated continuously. While in 1997 the consumption of a pensioner-headed household would have been 6% lower than that of a similar household headed by a blue-collar worker, in 2002 their consumption was 10% lower.
- **Household size is strongly correlated with household consumption.** An increase in the household size by one member is associated, on average in 2002, with a 10% decrease in consumption. Furthermore, an increase in the number of children, controlling for household size, human capital and location, would further lower consumption by 6% in 2002, by worsening the household dependency ratio. However, the disadvantage faced by single parent households decreased over time from -5% in 1998 to -4% in 2002 (also losing its statistical significance). This positive outcome can be associated with the improvement of single-parent policies.
- **Belarus poverty has a strong gender dimension which accentuated from 1998 to 2002.** In 2002, female-headed households consume 10% less than similar households headed by men, up from -4.5% in 1998.
- Despite its strong policy to integrate and protect the living standards for **disabled** individuals and their households, households with disabled individuals tend to consume 7-8% less than similar households without disabled. This gap is both significant and stubbornly open at this level from 1998 to 2002.

1.6 Poverty Dynamics, 1997-2002

Over the last five years, poverty has fallen substantially in Belarus. In 2002, the poverty headcount was only 47% of the 1997 level, while the poverty gap and severity have fallen even more, representing 34% and 38% of their respective levels in 1997. The dent in extreme poverty was even greater: extreme poverty headcount fell to 37% of level in 1997, while extreme poverty gap and severity have fallen by about two thirds.

Despite continuous progress in alleviating poverty, the reduction in poverty was uneven. The largest dent in poverty was achieved during 1997-98, triggered by high growth rates (real GDP grew by 11% in 1997, followed by another 8% in 1998). Unlike the other countries in the region, Belarus succeeded in maintaining a small positive growth during the Russian crisis in 1999 (3% in real terms), which preserved poverty reduction gains during that difficult year. Again, during 1998-2000, changes in poverty levels are small and statistically insignificant. Efforts to stimulate demand in the economy, mainly through wage and pension increases before the 2001 elections, secured a continued but modest poverty reduction during 2000-2002 (Figure 7).

Figure 7. Poverty Headcount and Poverty Gap, 1998-2002³

These results are consistent with what would be expected given i) seven years of positive growth and relatively low inequality; ii) administrative wage increases, iii) availability of cheap sources of calories and, iv) high redistribution efforts (see later chapters).

- During 1996-2002 the GDP rose on average by 5% every year, after a sharp decline in the early 1990s. The new economic strategy launched in 1994 by the government of newly elected President Lukashenka focused on the administrative mobilization of resources to restore linkages in production and enforce greater discipline, while keeping the vast majority of the economy under state control.
- Real wages increased by 61% during 2000-2002 as a result of a controlled income policy, contrasting with only 16% growth in real output. Most of the increase in wages were promised before the presidential elections, and were legislated in December 2001 (31% real increase in wages only in 2001, to fulfill a pledge of \$100 average wage). As pensions were to be indexed anytime the average wage in the economy rose by 10% or more, the administrative increase in wages spilled over into pensions. As wages and pensions account for three quarters of total incomes in Belarus, such policies resulted in a high increase in the living standard of the population in 2001 and 2002.
- The Belarusian diet derives a large share (over 60%) of calories from rye-bread, cereals, fresh milk, dairy products, eggs and fat, which are also the cheapest source of calories. The consumption of the *poorest three deciles* of households depends heavily on cheap sources of calories: about 50% of their required nutritional intake is derived from bread, potatoes, sugar and sunflower oil. The relatively low incidence of extreme poverty suggests that the population is able to use cheap calories to satisfy a minimum caloric requirement.
- The low levels of poverty are also the results of substantial redistribution, through the state budget as well as through state-owned enterprises. Overall, budgeted social protection transfers represented about 14% of GDP in 2002. Quasi-fiscal transfers are also important in Belarus. Industrial and agriculture state companies continue to finance a large share of social assets (housing, utilities, schools), a policy inherited from the Soviet period. The value of the various social expenditures carried out by enterprises according to explicit or implicit Government mandates is estimated at about 2-3% of GDP in 2002 (World Bank 2003).

³ The trend in poverty reduction observed during 1998-2002 is robust to the choice of poverty line. In other words, the same storyline emerges, irrespective of the poverty line to be chosen.

1.7 Are These Findings Consistent With Public Perception?

As a way of validating the preceding results, this poverty assessment also explored whether this picture of declining poverty as a result of public efforts to generate growth and redistribution is reflected in public perception. Based on the findings of an informal participatory survey conducted in June 2003, this does not appear to be the case (Box 6). While the qualitative exercise cannot be considered representative and should be followed up by a more systematic participatory poverty assessment, the consistency found in the observations of deteriorating poverty and living conditions cannot be dismissed.

Box 6: Perceptions of Poverty and Inequality

You can conceal anything but poverty. It peeps out of all holes in the public and private aspects of life. Today it is definitely seen in the streets and in the shops. I give out clothing to many people from our Orthodox church community. People immediately take whatever I bring - old clothes of my family members and relatives. What would you say if you put out a box with shoes which you had been wearing for 15 years and all of it disappeared within one hour. Everywhere you can see signs of poverty and worsening of the living standards. (Minsk Oblast)

Both my life and the life of many people has changed for the worse in the last ten years. Prices have gone up, food is less affordable...Redundancy is a common thing everywhere. (Gomel)

I consider myself poor. Being poor means for me when my children work six days a week in our vegetable garden during the summer holidays. I cannot allow them to have two days off because summer and spring are the seasons when we make the most profit. Poverty means not being able to go for at least a week's holiday once a year. It is expensive. The maximum that we can afford is to send our children to spend their time with the granny. Poverty means that being the only woman in the family I try to give the best pieces of the chicken to my husband and the growing boys and myself have to eat the remains off the bones. (Minsk Oblast)

Good food is out of the question, we cannot afford to buy fruits or juices. (Grodno)

Yes, I am poor. Poverty, however, is a relative concept, it depends on how you make a comparison. If I lived without a granddaughter, I would manage, but it is very difficult for two people to live on one pension though we have a subsidiary plot. (Minsk oblast)

Only my sister and myself are still alive. My sister lives in Tatarstan. I cannot afford to call her for two years already. One minute of a distance call costs 2000 BYR. Sending a parcel to her (8 kg) would cost me 53 000 BYR while my pension is 70 000 BYR. (Gomel)

Source: Interviews, June 2003

The preceding analysis already provides some clues as to what might be the basis for this gap in findings.

- *First*, there have indeed been large consumption shocks in Belarus, especially in the initial years after independence.
- *Second*, the household survey data itself indicates that improvements in poverty have been uneven across different regions and groups, and that even the average improvement observed has slowed in recent years. The data confirm that some groups are worse-off today than they were in the mid-1990s despite public efforts to protect them, e.g. pensioner-headed households. The limited enterprise restructuring that has taken place also means that unemployment levels are higher than in the past.
- *Third*, income inequality (albeit starting and staying in a relatively low range) has increased in the 1990s, likely reinforcing a sense of *relative* deprivation or poverty.

- *Fourth*, as the household data analysis also suggests, one way that many households have managed to stay above the poverty line is through the adoption of coping strategies that are less preferred or “inferior”, for example, reliance on cheaper sources of calories, foregoing consumption of leisure (vacations), relying heavily on own-production of food on *dacha*-plots, and so on.
- *Fifth*, while the quantitative measures of poverty above record incomes and consumption levels during the year—which may place the household above the poverty line—they do not capture the strain and vulnerability created by *arrears in payment* of those incomes, which many households suffer. This issue is taken up in the next chapter.
- *Sixth*, the data also suggests that many households have income levels that may be above—but very close to—the poverty lines used here. These households have similar characteristics to households “formally” considered poor, and indeed, with a small income or consumption shock they may easily fall below the poverty line, swelling the ranks of the poor.
- Furthermore, people describe their poverty not only in terms of incomes but also their access to services—such as education, health, heating—as well as quality of these services and value for money. In the following chapters we demonstrate that services are under increasing strain in Belarus and that there are significant shares of the population who face difficulty in affording services, and even greater difficulty in being able to afford *good quality* services.

Actual cost-of-living for the poor may be increasing faster than average inflation. One other reason why people’s perceptions of well-being are less buoyant than the quantitative trends in poverty would suggest, may be related to the measurement of inflation via the CPI, which affects the real value of transfers and wages. In constructing a cost-of-living index to make household consumption levels comparable across regions and over time, this poverty assessment finds significant differences between the official food consumer price index (food CPI) and the cost-of-living deflator developed for this assessment using detailed household consumption data collected by the household survey. Significant differences are registered for the 1997-2001 period, with a systematic bias from 1999 onwards: starting with 1999 the official food CPI seems to underestimate cost-of-living increases compared to the survey-based price indices, by 20% each year. In other countries a similar pattern was found. In the United States, for example, the Cost of Living Adjustment (COLA) used for pension indexation systematically underestimates the actual cost of living of the elderly because of raising health care costs. In Poland, the cost of living for the poor did not follow the CPI because of different inflation rates for food products and their different relative weight in the consumption basket of the poor (World Bank, 2004). This suggests a need to establish a price index for social transfers that incorporates differences due to price collection practices, which may need to include a larger share of transactions from unofficial marketing channels. Since the CPI is used to index various transfer programs and wages, a significant deviation of the CPI measure from actual cost-of-living trends in the country will have implications for the ability of wage earners and social transfer beneficiaries to maintain their living standards at adequate levels.

1.8 Policy Recommendations

Belarus has made tremendous achievements in reducing national poverty without triggering sharp increases in income inequality. This achievement, however, has been uneven over time and for different groups of people despite large redistributive transfers and a strong incomes policy. There are a few policy issues that emerge as a result of the analysis presented in this chapter:

- Given the importance of location in determining poverty status of households, the role of regional or area-based development policies may be examined further, particularly in Brest, Gomel and Mogilev oblasts where poverty is found to be the highest.
- Real wage growth has played a central role in reducing poverty in Belarus. A key policy area for further analysis is to ascertain the medium-to-long term sustainability of the real wage growth and redistributive social transfers which appear to constitute the central pillars of government's strategy to uphold the living standards of the Belarusian population.
- Given the huge GDP share being redistributed via multiple programs, moreover, the government needs to ensure their administrative efficiency and targeting.
- All of the analysis indicates that human capital is a key asset that prevents people from falling into poverty and in ensuring labor market mobility. What else needs to be done to further ensure that families in rural areas and the poorest strata of the population anywhere have equal access to good quality education and health?
- Education is not sufficient to prevent deprivation, unless employment opportunities are available in the economy. Barriers to growth of employment opportunities in the economy, particularly outside Minsk City, need to be identified and addressed.
- The CPI is an important factor determining the value of both wages and social transfers. Further analysis is warranted as to whether the basket of goods and price collection methods used to measure inflation, adequately capture current household behavior – particularly among the poor-- and emerging non-formal marketing structures.

This chapter sets the stage for a fuller discussion of the distributional dimensions of Belarus' policies and programs, undertaken in the subsequent chapters of this poverty assessment.

Chapter II. Economic Opportunities and Poverty*



This chapter assesses the relationship between growth, economic opportunities, and poverty reduction in Belarus and the prospects for the future. Almost all poverty reduction in the last few years is found to be due to growth, shared proportionally across most households. Thus Belarus' ability to improve living standards for its population is linked closely to its ability to generate economic growth that is both broad-based and sustainable. The Belarusian economy is characterized by several sources of vulnerability, however, raising concerns about the fragility of its sources of growth.

- First, while labor markets in Belarus have been restructuring gradually, there is an ongoing tension with the policy of administratively set wage increases to fulfill social objectives. As a result, real wage growth has outstripped productivity growth in recent years. While contributing to the pro-poor nature of growth in Belarus in the short-term, this trend aggravates the weak financial position of state-owned enterprises or SOEs (World Bank 2003), a weakness evidenced by, among other things, widespread wage arrears in rural and urban areas. This enterprise weakness imposes limitations on the ability of the economy to invest, modernize, maintain a competitive footing, and thereby to sustain growth.
- Second, Belarus' dependence on Russia as its key international trading partner both underpins the viability of the Belarusian economy, as well as constitute a source of vulnerability and uncertainty for the future. Russia has already significantly reduced its energy subsidies and is expected to continue doing so. The growth and poverty impact of this change is expected to be far-reaching.
- Third, the labor market is already showing evidence of strain, with increasing levels of open and hidden unemployment—especially among youth—as well as a slow pace of creation of *new* jobs. The growth of Small and Medium Enterprises (SMEs), which could absorb labor and play an important poverty reduction role, has been hampered by one of the most expensive and burdensome registration processes in the region. At the same time, minimum wages appear to be unusually low relative to the average wage, especially when compared to other transition economies. This has resulted in a significant number of working poor in Belarus.

The analysis of this chapter thus demonstrates that there is scope and need for selective reform of wage policy, SME licensing policy, active employment programs, and basic labor market data collection to generate greater labor market dynamism and expand economic opportunities for the majority of households in Belarus. There is also need for further analysis to assess the overall prospects for growth under the "Belarusian model". This analysis is not within the scope of the poverty assessment *per se* and will be addressed in the context of the Country Economic Memorandum being prepared by the World Bank and the government.

2.1 Macroeconomic Background

At the time of its independence in 1991, Belarus inherited from the former USSR a developed industrial sector and educated labor force. On average, the Belarusian population enjoyed higher living standards than those in most other regions of the former Soviet Union (FSU), which was partially due to a rate of growth during 1985-1989 above the USSR average. Belarus' primary role in the FSU as a producer of complex finished industrial goods, however, made it highly dependent upon imports of energy and raw materials (especially from Russia) and highly vulnerable to terms of trade shocks. The absence of independent institutions and the need to cope with the consequences of the Chernobyl nuclear accident further complicated the country's initial conditions.

* This chapter is based on the findings reported in Bakanova (2003) and Kuddo (2003).

Similar to other transition economies, initial reforms in Belarus were accompanied by a severe output contraction and pick-up in inflation. Despite this economic instability in the first three years of independence, new market institutions started to emerge. Stabilization was far from being reached, but inflation was reduced from a four- to a three-digit level in 1995. By mid-1995 most prices were liberalized and significant progress was being made in small-scale privatization, while limited advancement was achieved in large-scale privatization.

Gradualist approach to reforming. From the end of 1995 onwards a move towards the “socially-oriented market economy” became an officially adopted target, implying slowing down and in some cases even reversing market reforms. Though positive economic growth has resumed, postponed structural reforms and an unfavorable business environment continue to lead to concerns over the sustainability and quality of the economic growth.

Table 3. Belarus Selected Macroeconomic Indicators, 1992-2002

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
%changes over the previous year											
GDP	-9.6	-7.6	-12.6	-10.4	2.8	11.4	8.4	3.4	5.8	4.1	4.7
Industrial Output	-9	-10	-19	-10	5	18	10	10	8	6	4.3
Agricultural Output	-9	4	-14	-5	2	-5	-0.7	-8	9	2	1.5
Consumer Prices	971	1190	2221	709	53	64	73	294	169	61	42.6
Real Wages	-12	-6	-31	-5	5	14	18	7	12	30	8
Unemployment rate,%	0.5	1.4	2.1	2.9	4	2.8	2.3	2.1	2.1	2.3	3.0
General Government Balance,%GDP	-1.9	-5.5	-3.5	-2.7	-1.9	-2.2	-1.4	-2.9	-0.6	-1.6	-0.2
Population, m	10.24	10.24	10.21	10.18	10.14	10.09	10.05	10.0	9.99	9.95	9.90

Source: Ministry of Statistics and Analysis of the Republic of Belarus.

Although there have been some positive developments from end-2000 onwards, the major problems are still in place.

- Thus, in spite of tightening of monetary policy and the reduction in quasi-fiscal activities, inflation in Belarus remained the highest in the CIS, and central bank credits remained the major source of budget deficit financing (including that for housing construction). The exchange rate was unified in September 2000, and from 2001 a crawling band regime was adopted with the Belarusian Ruble (BYR) pegged to the Russian one, but a continuous real appreciation of the BYR vis-à-vis other currencies is creating destabilizing expectations of devaluation in currency markets. The fiscal burden remains high, while the relatively low fiscal deficit figures do not adequately reflect the fiscal stance given the persistence of off-budget funds and the scope of the Government’s contingent liabilities.
- Although many state companies have been transformed, for example, corporatized, the controlling stake is still with the state. According to official statistics, these companies and employees on the payroll are considered as non-state. As the recent World Bank review of public expenditures (2003) indicated, however, the Government retains pervasive control throughout all sectors of the economy, be it through ownership or direct regulation. Ministries exercise control and oversight of enterprises and ministerial decisions can affect decisions on output, investment, location and provision of social assistance programs at the enterprise level. These controls can even seek to cover private enterprise. Local governments also keep an eye on the production and behavior of enterprises under their jurisdiction, since their performance will affect tax revenues and hence their own budgetary resources.

- Administrative wage increases, including the implementation of an across-the-board average monthly wage of USD 100 level at the end of 2001—one of the promises of the Presidential election campaign that year—without any reference to productivity growth, has contributed to macro instability, increase in budget arrears, loss of profitability and competitiveness, and a fall in investment. This has also, however, been a key contributor to the continued decline in poverty.

2.2 Economic Growth and Poverty

The previous chapter documented that sustained growth, coupled with a relatively stable income distribution, succeeded in reducing absolute poverty headcount from 39.4% in 1997 to 18.5% in 2002. This section investigates the proximate factors associated with this impressive reduction in poverty: growth, redistribution, and changes in the occupational or sectoral structure in Belarus.⁴

Data limitations do not permit analysis of chronic vs. transient poverty. In the absence of panel data—which track the welfare of the *same* households over time—the analysis can only shed light on factors associated with *net* changes in poverty over time, and does not capture economic mobility. It is thus not possible to distinguish between those households who are able to take advantage of economic opportunities and improve their position (in relative or absolute terms) within the income distribution; those who are stuck in poverty and deprivation at the bottom of the income distribution; and those who are able to maintain their (relative or absolute) position over time. Thus we cannot assess which households suffer from long-term vs. short-term poverty.

Growth vs. redistribution: growth effects dominate. Poverty changes are due to two proximate causes: changes in mean consumption (growth) and its distribution. Our analysis covers a period of 1998-2002. Almost all poverty reduction was found to be due to growth, shared proportionally across most groups of households. It was analogous to a tide lifting all boats at the same time. At the same time that growth had a large impact on the net reduction in poverty, the moderate increase in inequality noted earlier, had a modest opposite effect.

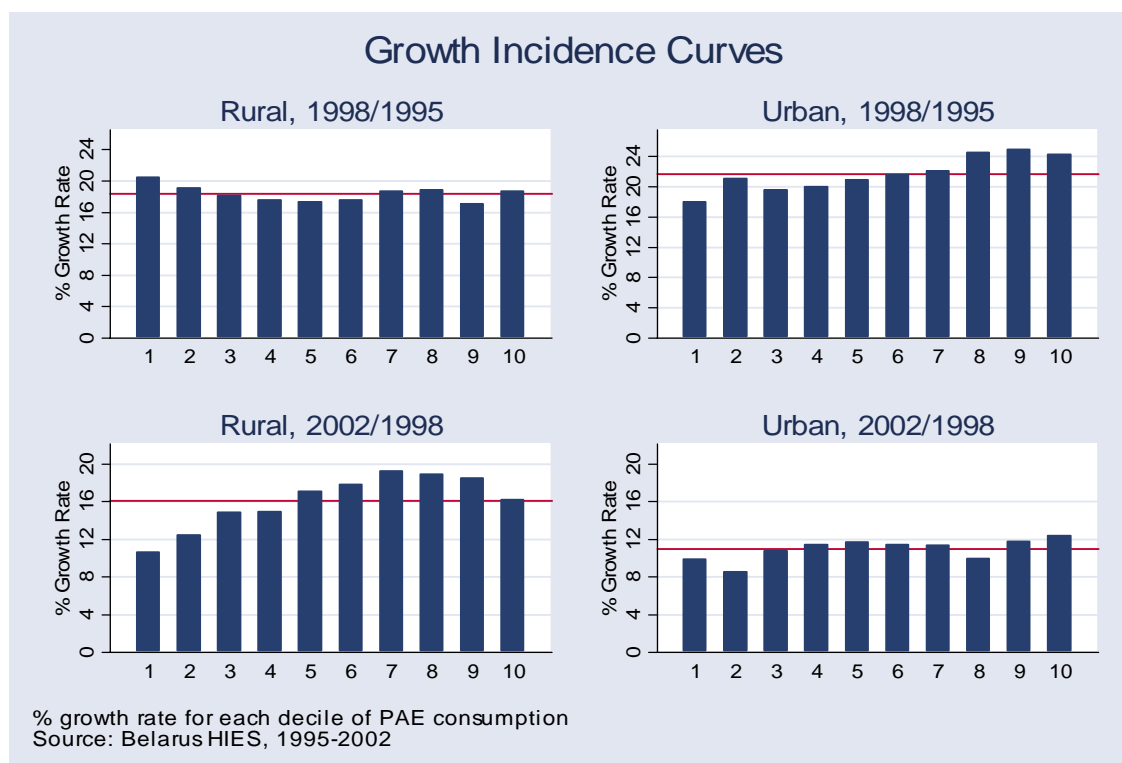
Are poverty changes due to shifts within or between groups with different economic opportunities? According to a decomposition analysis of changes in household consumption levels, more than 95% of the reduction in poverty recorded during 1998-2002 is attributable to *intra-sectoral effects* rather than movements of population from a low-performing to better performing sectors. While the poverty headcount changed from one year to the next in line with the overall macroeconomic performance, the relative risk of poverty for different groups remains largely unchanged throughout the period. *Collective farmers and the unemployed are the only notable exceptions; their relative risk of poverty increased.*

Who captured most of the gains from growth? Given the substantial poverty reduction impact of economic growth over the last eight years, is it safe to say that the growth was pro-poor? “Pro-poor growth” indicates a pattern of growth that brings proportionally greater benefits for the poor than for the “middle-income” or rich households. The extent to which growth is pro-poor can be illustrated through “growth incidence curves”. Figure 8 reports growth incidence curves by area

⁴The analysis focuses on the role that economic growth has played in poverty reduction. A full analysis of the sources of growth and the prospects for growth in Belarus is not within the scope of the poverty assessment per se. It will be the central topic addressed by the Country Economic Memorandum currently under preparation by the World Bank and the government.

of residence. The vertical axis measures cumulative growth (or decline) in consumption for the whole period for each decile of population from poorest to richest groups; the horizontal axis shows the population deciles (poorest to richest). The pattern of growth in urban areas was slightly pro-poor, while in rural areas the rich deciles benefited more. From 1998 to 2002, the agricultural sector recorded a modest growth rather than a decline. The higher growth in rural areas was accompanied by widening inequalities (within the rural areas), with the consumption levels of the poorest two deciles growing only 10 to 12% compared to 16% on average.⁵ This underscores the need to address pockets of poverty in rural areas. In urban areas, the pattern of growth was more or less similar across the deciles.

Figure 8. Growth incidence curves, by Area of Residence, 1995-98 and 1998-2002



What are the country's prospects for growth, inequality and poverty over the next five years? Growing imbalances and other worrisome trends in public finances pose serious threats to macroeconomic stability and the future growth of the Belarus economy and private consumption. In the last years, growth decelerated substantially in Belarus. Moreover, the country competitiveness is rapidly losing ground, while the main trading partner—Russia—is reducing its preferential access policy towards Belarus. Given this background, most analysts have revised downward Belarus' growth prognosis.

For illustrative purposes, we estimated the impact of alternative medium-term (for 2002-2007) growth scenarios on poverty in Belarus, making additional assumptions on likely changes in inequality. Three growth scenarios are considered: *modest* (annual per capita consumption growth

⁵ In contrast to the earlier experience where lower income households in rural areas benefited slightly more than other rural households.

at 1.5% per annum), *moderate*: 2.5% per annum, *optimistic*: 3.5% per annum; together with three inequality scenarios: *constant consumption inequality* (Gini index stays at 0.228); *modest increase* in inequality (Gini index increases to 0.270); and *moderate increase* in inequality (Gini index increases to 0.300).

Even a small increase in inequality, coupled with modest or moderate growth, will likely bring poverty numbers up in Belarus (results summarized in Table 4). The cases where 2007 poverty rate would be higher than in 2002 are presented in **bold**. In the future, a relaxation of the incomes policy, a friendlier business climate, and growth in private sector enterprises, may indeed result in higher inequality *and* higher growth. These simulations imply an **elasticity of poverty to economic growth between -2.5 and -2.8** for the (total) poverty headcount, and from -3.0 to -4.1 for extreme poverty headcount. In other words, a 1% change in growth would lead to a reduction in poverty by 2.5-2.8%. The resulting elasticity of poverty to growth is much higher than in Latin America and the Caribbean (an average of -1.3) or Sub-Saharan Africa (-0.9 to -1.4), for instance, regions where inequality is relatively higher, but is similar to what was found in other low-inequality settings, or in South-Asia.

Table 4. Changes in Poverty Headcount, 2007 vs. 2002

Reduction in .. Poverty, %	Extreme	Total
Growth @:		
<i>Slow: 1.5% p.a.</i>		
ineq const	-32%	-22%
ineq small increase	17%	-3%
ineq moderate increase	37%	10%
<i>Moderate: 2.5% p.a.</i>		
ineq const	-45%	-35%
ineq small increase	7%	-19%
ineq moderate increase	31%	-2%
<i>High: 3.5% p.a.</i>		
ineq const	-57%	-47%
ineq small increase	-4%	-38%
ineq moderate increase	25%	-16%

Thus, all indications are that the distributional pattern of growth in Belarus is such that growth benefits the poor disproportionately more than the rich. In the following section we explore the extent to which this pattern and level of growth can be sustained.

2.3 Economic Trends and the Labor Market

The poor tend to participate in economic growth via their participation in the labor market. For this reason, this section provides a brief overview of the salient macro-economic trends from a labor market perspective.

Labor market participation rates have declined. In 1989, Belarus had one of the highest employment rates of working age population (16-54/59) in the USSR at 87.0% (including 0.3% engaged in subsidiary household plots). Since then the employment rates have declined to 73.9% (working age population) as per the 1999 population census. Compared to other FSU states, the decline in aggregate employment by 12.8% in a decade is more gradual than those realized in other FSU and CEE countries, but is significant nonetheless.

For the age group 15 years and over, the labor force participation rate (LFPR) in Belarus was 58.7 percent. By international standards, this can be considered a low LFPR. In the USA, Australia, Canada, Japan, Netherlands, UK and Sweden, the labor force participation rate in 2000 (1999 in some countries) equaled between 62% and 67%. Among the most developed countries, the LFPR was lower only in France (56%), in Germany (55%), and in Italy (47%). Lower LFPRs in Belarus are due to low retirement age of the population—especially females drop out from the labor force at a relatively early age—despite the fact that life expectancy at that age is similar to that in industrial countries.

To what extent have labor markets been restructured in the 1990s? Popular opinion suggests that labor markets have restructured very little over the past decade. The evidence marshaled here, however, supports a view whereby labor markets have restructured, but where further shifts are warranted.

- *Sectoral employment changes.* In most CIS states, there has been a major shift of employment from the secondary to the tertiary sector. In Belarus in 2001, the share of the service sector in total employment reached the level of 51.8%, and increased by 12% compared to 1991. As in other transition economies, job opportunities in Belarus emerge mainly in the services sector, including in public services, while many jobs in the manufacturing sector and in agriculture are at risk. This change in the structure of output entails a fall in demand for blue collar workers and physical labor and the rise in demand for white collar workers with skills required in the service sector.
- Employment in industry has declined from 30.9% in 1990 to 27.4% in 2001 and even to 26.7 in 2003, and in still heavily subsidized construction, from 11.1% to 7.4% respectively. The share of employment in agriculture has declined from 19.1% in 1990 to 13.3% in 2001 (and 11.3 in 2003). From the point of view of inter-industry shifts, therefore, the evidence does not support the claim that restructuring has been particularly sluggish in Belarus.
- *Job creation and destruction.* To better understand if restructuring has been taking place it would be important to evaluate job flows, or job creation and destruction rates in Belarus. High job turnover (with high job creation and destruction rates) is associated with productivity gains and higher efficiency because the process allows the destruction of less productive jobs and the creation of more productive ones. In certain sectors of the economy job destruction has been significant. For example, between 1990-2001, the shedding of excess labor was the highest in agriculture, which has lost more than 40% of jobs, and in construction, where 44% of jobs were lost.
- A legitimate question arises: if there has been this much job destruction, where have all these workers gone? A part of these people have gone to the service sector but it is likely that most of them have fallen into inactivity, that is, there are almost one million more inactive able bodied people today than a decade or more ago. As mentioned above, the employment rate of working age population has declined from 87.0% in 1989 to 73.9% in 1999. In absolute terms it means that employment has declined by 693,000 people of working age compared to 1989. In total 1.210 million people of working age bracket are inactive, including 689,900 pupils and students. Moreover, an employment rate of population above working age has declined from 18.9% in 1989 to 9.1% in 1999. In absolute terms it means that 177,000 fewer retirees are working today than in 1989.

Box 7: "Over-employment" in Education and Health...?

In the last decade in several budget financed public sectors, the number of employees has significantly increased, such as in health and social protection, by 22%, and in state administration, by 86%. Over-employment in these sectors is overwhelming. For example, the basic health system is extensive. Some health system indicators, such as the number of physicians per thousand population, much exceeds the average level in OECD countries (2.5 physicians per 1000 population). In 2000, Belarus employed 4.6 doctors and other medical professionals for every 1,000 people - compared with 1.6 doctors in the UK, 2.1 in Canada or 2.5 in Netherlands. A second example of a sector where labor restructuring has yet to be done, is in education. In 2000 alone, the number of students in general schools dropped by almost 50,000 due to declines long-standing fertility declines in Belarus. However, in 1995-2001 the number of people employed in the education sector has increased by 13%, but has decreased in 2002 and 2003. One of the qualitative indicators that can be used for comparison is student/teacher ratio. In 1999 in Belarus, the ratio equaled 10.5 students per one teacher which is almost two times lower than in many OECD countries.

- At the same time, among key sectors of the economy, more than 51% of new jobs were added in trade and catering, and 48% in housing and communal services sector. In some key sectors, however, the need for labor restructuring is apparently delayed (Box 7).
- *Small businesses and self-employment.* Other important factors that contribute to the stability of employment dynamics in transition countries are the rapid development of SMEs, the informal sector and household businesses. Unfortunately especially the SME sector is underdeveloped in Belarus. In 2001, SMEs only provided 8.6% of total employment. The household survey data confirms that only around 3% of the population aged 16 years and over consider themselves private farmers or entrepreneurs. Belarus has the smallest number of SMEs per 1,000 population in comparison with its neighbors, less than 3 as compared to 6 in Russia, 4 in Ukraine and 35 in Poland. Moreover, it is the only transitional economy in which the number of private SMEs decreased between 2000 and 2002.
- In most countries private self employment is a very important category of employment, both in the sense that displaced workers from old enterprises may find livelihoods working independently and because it may represent the beginnings of entrepreneurship. By the official statistics, Belarus has the lowest ratio of self-employment in total employment, while in Armenia, Kazakhstan, Moldova and Tajikistan, self-employment exceeds 40% of total employment, and in Kyrgyzstan even 60%.

Box 8: Small Business Environment—Some Perceptions

Small and micro business is supported only verbally. An unemployed person finds it more and more difficult to start business. There are too many limitations in terms of starting and doing small business while the chances to maintain it for at least a couple of years are shrinking. Private retail trade at the markets tends to decline every year. (Grodno)

I tried to do some business, but I don't have time to follow changes in taxation rules, it was my luck that I was allowed not to pay a fine, they spared me. (Grodno)

If earlier (at the beginning and in mid-1990s) there was a tendency of opening a business by many representatives of various authorities and these people tended to leave the government sector for market economy, today the trend is quite the opposite. If there's a chance to get a position in the government system, many former officials, who have tried to work in the private sector, prefer to give up business without any regrets. (Grodno)

Source: Interviews, June 2003.

- One of the reasons for the slow growth in numbers of SMEs, low employment in the SME sector, and low self-employment might be the fact that, as the recent evaluation by the World Bank showed, Belarus has one of the most prohibitive and expensive private business registration procedures. It involves on average 26 steps and requires an equivalent of 0.41% of GDP per capita in fees (see also Box 8 above).
- *Labor hoarding.* Labor hoarding can be measured by comparing the dynamics of output and employment. Belarus seems to have a relatively modest labor hoarding index (the difference between the overall drop in GDP and decrease in employment), compared to most other CIS states. The highest labor hoarding index appeared to be in the mid-1990s, while by 2001, the index was close to zero. Nevertheless, over-staffing in enterprises is significant witnessed by overall low productivity. This is additional evidence that central and local pressure is commonly applied through ‘discussion’ with enterprise managers that encourages them to slow down the pace of layoffs and engage in job preservation programs.
- *Labor turnover.* The number of staff reductions has also tended to decline in the second half of the 1990s: in 1995, 83,400 of workers and employees were laid-off due to staff reduction, but in 2000, the number equaled 12,900 and 22,600 in 2001. In 2003, the level of hired workers almost fully compensated the attrition levels: hiring represented 95.1 percent of attrition workers, compared to only 84.4 percent in 2002. Although labor turnover and hiring rates are high in Belarus, in fact only a few new jobs are created. In particular, in 2001, 796,500 workers and employees were hired but only 46,300 workers, or 5.8% of those hired were placed in new jobs. The rest was inter-firm mobility of labor. Slow restructuring of the economy is also confirmed by the fact that a vast majority of separations (80% in 2001) are on a voluntary basis.
- The *Labor Code* gives employers flexibility to adjust to changing market conditions. However, by some anecdotal evidence, employer reluctance to lay off workers comes from administrative pressure. Poor incentives to restructure are compounded by soft budget constraints, or ability of loss making enterprises to obtain tax concessions or non-cash settlement for utility payments. All these factors work together to dampen incentives for enterprises to restructure their labor force. Recent evidence for 2002 and 2003 indicates a reduction in forced part-time jobs and those on involuntary or unpaid leave suggesting improvements in the use of working time. A detail analysis of labor markets is needed to better understand the precise impact of regulations on labor market arrangements.

Overall, the evidence on labor market dynamics in Belarus suggests that restructuring has been underway, but may have slowed down. State control and persuasion to maintain employment rates in enterprises continues and appears to have had some unintended effects: the rate of creation of new opportunities—new jobs—appears to be very low.

2.4 Open and Unregistered (“Hidden”) Unemployment

Among the most vulnerable groups in Belarus are the able-bodied population who are temporarily not working. Poverty among the unemployed is the highest and the unemployed may quickly be “trapped” in poverty. Unemployment is an urgent issue for policy in all transition countries.

Unemployment rates are modest but increasing. Based on the 1999 population census data, the unemployment rate of working age population in Belarus, by ILO definition, is quite modest by regional standards and equaled 6.3% (population aged 15 years and over) and 5.8% while excluding students and pensioners. Open (registered) unemployment has also been very low and

in December 2002 was 3.0% of the economically active population, but has been steadily increasing (in December 2001 was 2.3%). However, the number of registered unemployed is steadily increasing and by the end of 2002 reached 130,500 individuals (a year ago, 102,900 people). In 2003 the unemployment rate marginally increase to 3.1% suggesting a slowdown in the increase of unemployed individuals compared to previous years (about 136,100 individuals). Compared to other CIS states, Belarus has a relatively high share of registered unemployed out of the total, around 44% in early 1999 when the population census was conducted. In many other CIS states, including in Russia, the ratio of registered unemployed out of the total, by the labor force survey or population census data, is around 10-15%.

Which groups comprise the majority of the unemployed? Based on the 1999 population census data and ILO definitions, the unemployment rate was slightly higher for males, 6.6% versus 6.1% for females. The share of young people looking for jobs is relatively high but a large part of them are recent graduates of different types of schools. This reflects the mismatch between the skills and knowledge of job seekers, and labor demand, which has altered in the transition years. Unemployment was highest among youth aged 16-19 years, 20.7%, and aged 20-24 years, 10.5%. Regional variation in unemployment is almost non-existent in the Census data: the highest rates was registered in one of the key industrial regions of Gomel oblast – 6.9 percent, and the lowest in Mogilev oblast, 5.7 percent. Both are Chernobyl-affected regions. Recent data, however, suggests significant variations in the distribution of unemployment among regions: 4% in the Vitebsk oblast; 2.9% in the Minsk oblast and 1.6% in Minsk.

As in the case of employment, there is a clear correlation between the level of education and unemployment rate. The unemployment rate for people with secondary general education was more than two times higher than for job seekers with higher education, 7.8% and 3.5% respectively.

Box 9: Average Duration of Unemployment is Low and Stable

One of the peculiarities of Belarus is that the average duration of registered unemployment has not changed much during the transition years. In 1996, the level was 6.7 months on average, and in 2001, it has actually declined to 6.4 months (the highest average duration of unemployment was registered in 1997, 8.4 months). In 2001, "only" 11.9% of registered unemployed were out of a job for more than one year. Absence of considerable long term unemployment is one of the peculiarities of the Belarus labor markets. For comparison, by the EUROSTAT survey conducted in 11 EU Candidate Countries in the spring of 2001, the highest rate of long term unemployment was registered in Slovenia, 63.3%, followed by Bulgaria, 63.1%, and the lowest rate among transition countries was in Hungary, 44.8% (in EU-15 countries, 44.0% on average).

High participation rates in active labor market programs (ALMPs). Compared to other CIS countries, Belarus probably has the highest participation rates of registered unemployed in active labor market programs, training programs and public works. For example, in 2002, around 8% of registered unemployed completed training courses, and 23% participated in public works programs. There might be several reasons for this: the open and hidden unemployment is relatively modest, and employment funds are still capable of providing quite efficient employment services with high placement rates. However, the net impact of ALMPs has never been assessed, and so we do not know the cost effectiveness of proposed measures.

Unemployment benefits do not have disincentive effects on job-seeking, but also do not provide much protection. In Belarus the early Law on Employment approved in 1991 established rather generous replacement levels for the wage-related unemployment benefit. According to amendments to the law approved in 1999, the replacement level was reduced to

70% for the first 13 weeks of payments, and to 50% during the next 13 weeks. Necessary work record in the last 12 months was reduced to 12 weeks. However, a major restriction was imposed that the benefit could not be lower than the basic amount and not higher than two times the basic amount.⁶ Since the level of basic amount in the country is very low (see below), the

Table 5: International Assessment of Unemployment Benefit Programs

Scheme	Financing	Strengths and Weaknesses
Unemployment Insurance	Payroll Tax	Allows risk pooling; and provides consumption smoothing. Performs well where labor market institutions encourage flexibility; informal sector is small; there is strong administrative capacity to monitor program and control incentives. Benefits/taxes must be kept low to avoid adverse incentive effects
Unemployment Assistance	General Revenues	<i>Means tested Benefits:</i> Is very progressive; but may have disincentive effects similar to UI if benefits are too high; where means tested requires strong administrative and monitoring capacity; and low informal sector. <i>Flat Benefit:</i> Regressive: potential to work well in countries where administrative capacity is weak and informal sector activity is high. Duration of benefit and replacement rate should be set low to avoid adverse incentive effects.
Individual Savings Accounts	Worker Contributions	Works well in low or middle income countries; Avoids disincentives to work; good self-monitoring features; but does not cover poorer and/or informal sector workers; largely untested
Severance Payments	Financed by Firm	Unfavorable option; strong negative efficiency effects—limit hires; limited risk pooling; politically contentious.
Public Works	General Revenues	Can reach informal sector workers and poor for income support where administrative capacity is weak; entails large non-labor costs; is often temporary in nature; does not help increase wage or employment prospects (see ALMP section below).

Source: Betcherman 2000

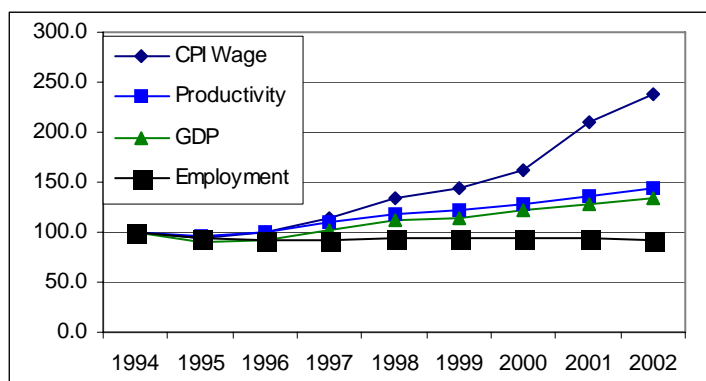
unemployment beneficiaries receive very low compensation from the SES. In 2002, the average unemployment benefit equaled BYR. 18,900, or only 9.9% of the average wage in 2002 of BYR. 191,600 (contractual wage level). Therefore, in Belarus the level of benefit for those who receive it is low relative to international norms. In a situation of low unemployment rates, existing unemployment compensation really acts as an incentive to re-integrate quickly in the labor market, or for job seekers with low job motivation, not to register at all. However, such a low level of benefit is a serious problem for households in depressed regions, or for those families relying on such benefits to maintain their living standard.

⁶ During the preparation of this report the Government of Belarus introduced the concept of *basic amount* to eliminate the linkage between social transfers (based on the basic amount) and the minimum wage that is the anchor for wage policies (Decree of the President, No. 3, February 2002).

2.5 Wage Policies

Wage statistics in Belarus, as in other transition countries, should be treated with caution. In some

Figure 9. Belarus: GDP, employment, productivity and CPI-deflated wages in 1994-2002, %



cases, officially reported wages may overstate actually received wages, due to wage arrears and forced in-kind substitutes. Specifically, wage data represents wages due rather than paid, as wage arrears are not taken into account.

Real wage growth has outstripped real GDP and productivity growth. In the early 1990s the level of real wages declined rapidly. By official statistics, during 1991-1994 nominal wages increased

by around 3700 times while CPI increased by 6400 times. Since 1996, however, the Government is pursuing a policy of accelerated and administratively determined real wage growth. The average wage levels are targeted to wage benchmarks in hard currency. In particular, the Government's Program on the Socio Economic Development in Belarus for 2001- 2005 calls for an increase in wages from an average of US\$ 100 per month in mid-2001 to US\$ 250 per month by end 2005. In December 2002, the average wage stood at US\$ 113 (or BYR 220,900) per month.

Moreover, despite the impressive performance by Belarus in terms of recovery of GDP growth after the initial years of transition, the dynamics of GDP, employment, productivity and CPI-deflated wages create a cause for concern (Figure 9). These data confirm that trends in major socio-economic indicators are out of proportion. By 2002 Belarus had almost reached pre-transition output levels: GDP in 2002 equaled 97.8% of the level in 1991. This is the second highest GDP recovery level after Uzbekistan. *However, while GDP increased cumulatively by 33.4% in 2002 compared to 1994, CPI wages have increased by 138.7%, or more than doubled, and labor productivity has increased "only" by 44.4%.* Especially rapid increase in real wages took place in 2001: real wages increased by 29.6%, while labor productivity increased by 5.2%. This trend has slowed down since real wage increases went from 7.9 in 2002 to 3.2 in 2003.

Partially the rapid growth of real wages in the second half of the 1990s "compensates" for a sharp decline in wage levels in the early transition years. Such policies have, however, had major implications on the macroeconomic balance, enterprise performance, and social policies. The ratio of wages in GDP has increased from 43.8% in 1999 to 48.3% in 2001 and 46.7% in 2002. Wage costs in total expenditures have also increased: in the economic sector the share of wages increased from 11.8% in 1999 to 14.2% in 2001. In construction, a labor intensive sector, the share of wages in total expenditures increased from 20.8% in 1999 to 24.6% in 2001.

Appreciation of the Belarusian ruble and the administrative wage policy leave little room for profits and job creation... The large administrative wage increases in 2001 and 2002 – combined with a substantial real appreciation of the Belarusian ruble – adversely affected corporate finances and profitability, while inventories of unsold goods and domestic payments arrears increased. The overall level of profitability of products (goods and services) declined

from 15.2% in 1999 to 8.2% in 2001, and the ratio of loss making enterprises has gone up from 16.9% to 34.2% respectively (even 44.1% in the first quarter of 2002) (see also Table 6). Enterprises lack funds for investments and the depreciation of capital reached over 60%. The financial burden of wages and social contributions amongst enterprises result even in higher inter-enterprise arrears. These factors have major implications for the ability of enterprises to create new jobs.

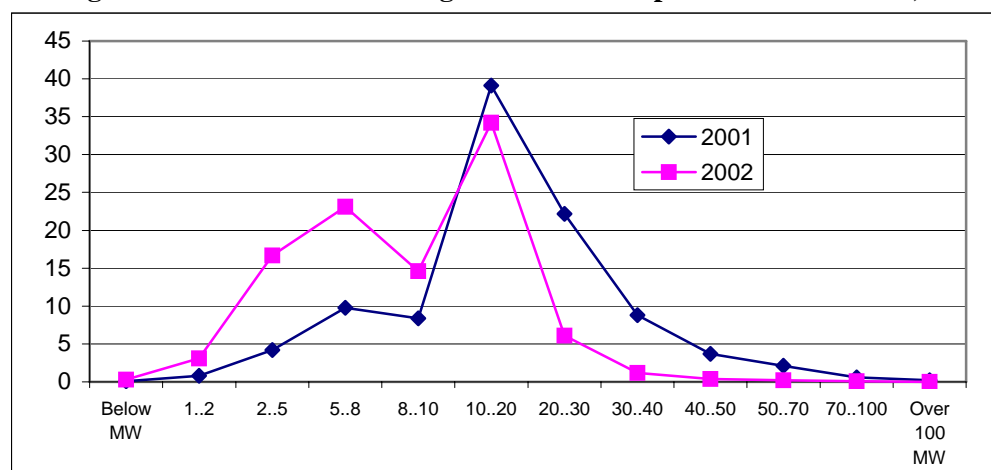
Table 6. Number of Loss Making Enterprises in Belarus, 1996-2002

Year	Number of Loss-Making Enterprises (LMEs)	Losses of LMEs as % of GDP
1996	1737	1.5
1997	1351	0.7
1998	1815	2.7
1999	1935	1.4
2000	2613	1.7
2001	4002	2.2
2002	4082	2.0

Source: National statistics; World Bank staff calculations

Compared to other transition countries, wages in Belarus are more compressed. While increased dispersion of wages is an inevitable process of the transition to market, the level of wage inequality in Belarus is not very high by FSU and CEE standards. Based on the data of wage surveys, almost one third of workers and employees receive wages between 10 and 20 times the minimum wage (Figure 10). Agriculture especially is characterized by low wages and a high incidence of wage arrears, making it the lowest paid sector of the economy. In agriculture, average (contractual) wages equal 64% of the national average, while average wages in the financial sector are 83% higher than the national average. In most other sectors, wages are close to the average in the country. This factor, in addition to high participation rates, also contributes to the fact that income inequality in the country is relatively modest.

Figure 10. Distribution of Wage Levels in Comparison to Minimum, %



Note: Based on the data of wage surveys conducted annually in May. In May 2001, the minimum wage equaled BYR 5,700; in May 2002, BYR 17,000.

Source: Ministry of Statistics and Analysis (2002). *Trud i zanyatost' v Respublike Belarus*. Minsk.

Minimum wage level is very low. The role of minimum wages is controversial. The underlying idea is simply to set a floor on what employers can pay in order to ensure that employees receive a “fair, living wage” and thus to support the incomes of low-wage workers and their families. While minimum wages can boost the earnings of low-income employees, they can also lead to

unemployment where the minimum wage is above the market-clearing level and where it is actually binding. In Belarus, due to high inflation rates, the level of minimum wages has been adjusted regularly but still the level relative to average wages is among the lowest in CIS states (Table 7). In January 1, 2003, the level of a minimum wage was raised to BYR. 40,670, which equaled 18.4% of the average wage in the country in December 2002 (BYR. 220,900).⁷

The level of minimum wages in Belarus is still too low to be binding (i.e., to affect wage and employment decisions). On the other hand, workers with earnings close to a minimum wage (especially in agriculture) are likely to fall into poverty.

Table 7: Ratio of the Official Minimum Wage to An Average Wage in CIS (2002), %

	January	June
Armenia	21.2	19.1
Azerbaijan	9.2	8.8
Belarus	6.3	8.7
Georgia
Kazakhstan	23.1	19.9
Kyrgyzstan	7.0*	...
Moldova	17.5	15.2
Russia	8.0	10.0
Tajikistan	15.1	11.9
Turkmenistan
Ukraine	43.6	37.1
Uzbekistan

* - Average in the first quarter of 2002

Source: CIS STAT (2002). Statistical Bulletin No 15 (294). Moscow.

Wage arrears are pervasive, especially for rural workers.⁸ A key feature of the labor market transition in Belarus, is the use of wage arrears and sometimes forced in-kind substitutes. Delaying wage payments may be a particularly effective cost-reduction mechanism for firms under the high inflation environment in Belarus. Unfortunately, the real cost of adjustment is borne by the worker.

In 2002 (January-November), the level of wage arrears (as a ratio of unpaid wages to average monthly wage fund) has fluctuated significantly from 6.8% in January to a particularly sharp jump of 19.2% in September. The latest available data for November 2002 indicates that wage arrears equaled 12.1% of the average monthly wage fund. There were almost no wage arrears in Minsk (0.4% of the total wage fund in November) but in Gomel oblast, arrears have reached the level of 23.0% of the wage fund, and in Mogilev oblast, 19.2%.

Variation across industries is also large. By far the biggest arrears are in agriculture where by November 30, 2002, the level equaled 76.8% of the monthly wage fund in October, followed by manufacture, 8.4% and housing and communal services, 8.1% of the monthly wage fund.

Wage arrears were also reviewed using the additional module of the household survey conducted in the fourth quarter of 2002 (Table 8). The household survey confirmed that in the fourth quarter of 2002, more than one third of the working population had wage arrears, with an average of 12

⁷ Recent evidence suggest that the picture may be transforming rapidly: between January and April 2004 the ratio of the minimum wage to the average wage was already 27.6%.

⁸ Wage arrears reduced substantially in 2003-2004 and stopped being such an acute problem as at the time of analysis.

days delay in payment. The highest level of arrears was among the rural population: more than half of them reported having wages in arrears, on average for 14 days. By regions, wage arrears are quite equally spread.

Table 8. Wage arrears in the 4th quarter of 2002, HIES special module

	Total	By types of settlements				Rural
		Urban	Including:			
			Minsk	Big cities	Small cities	
Share of working population with wage arrears,%	35.1	29.0	12.9	32.3	37.3	52.0
Delays in wage payments, days	12	11	9	11	11	14

2.6 Changing Regional Economic Policies

A fundamental factor of Belarus' economic development is its relations with the Russian Federation. Unlike for other CIS countries, the importance of Russia as a main trading partner for Belarus has been increasing. Thus, between 1995 and 2000 the share of Russia in Belarus' exports increased from 45% to 51% of total exports, and for imports the share increased from 53% to 65% of total imports. Integration with Russia provided for a privileged access to Russian markets for Belarusian goods. Even more important were the implicit subsidy via supply of energy resources at below-market prices. In year 1999 only the size of the implicit gas subsidy was estimated to be in the range of about 5% of Belarus' GDP. If Belarus were to pay the same price for gas as Ukraine, i.e., if world prices were paid, gas imports would be equivalent to 16% of Belarus' GDP.

As of 2002/3 Belarus' vulnerability in this area increased greatly as Russia started to reduce the subsidies it has been providing on utilities. The latest reports indicate that Russia's Gazprom supplied gas to Belarus at 660 Russian rubles for 1000 cubic meters between May 1 and July 1, 2002 and at 760 rubles since July 1. On January 1, 2003, it raised the price to 912 rubles (around \$30 at the official exchange rate at present). Utilities constitute a significant share of expenditures by both households and service institutions.

The Belarus government, which has typically subsidized utility prices for households and service institutions, has begun to reduce this generally untargeted subsidy and is passing through a higher share of the production cost of energy to consumers. This development is beneficial for the viability of enterprises which cross-subsidize household utility consumption, but low-income households will face a significant additional economic burden. If enterprises are able to become more profitable and hence able to expand investments and/or employment, in the medium term the poverty reduction impact of the decline in cross-subsidies may be positive. In the short-term, however, a negative impact via a higher cost-of-living may occur.

The above discussion illustrates the fundamental importance of Russia's economic policies and political economy stance towards Belarus in determining whether or not the "Belarus model" of economic growth will be sustainable or not (see also Table 9).

Table 9: Belarus' Reliance on Russia As Major Economic Partner: Benefits and Risks

Short-Run Impact on Growth	Problems So Far	Medium and Long-Term Impact on Growth
<ul style="list-style-type: none"> ▪ Subsidies in the form of gas supply at below-market prices ▪ Barter trade and barter payments for energy resources ▪ Production on a "give-and-take" basis ▪ Privileged access to the Russian market for Belarusian goods (due to the Customs Union) 	<ul style="list-style-type: none"> ▪ Low incentives to changes in technology ▪ Fears of cuts in supply of gas and oil due to the arrears ▪ Barter deals are not always in terms favorable for Belarus ▪ High sensitivity to changes in the economic situation in Russia (example, Russian crises) ▪ Unification of tariffs with Russia led to the increase in tariffs for some categories that is not in the best industrial interests of Belarus 	<ul style="list-style-type: none"> ▪ Commercialization of Russian energy sector is already imposing constraints and will impose it further by reducing supply to Belarus at lower than the world gas prices, and also through lower acceptance by Russia of goods for payment arrears. This will reduce the demand for some Belarusian goods and will also increase substantially costs of production and reduce the competitiveness of Belarusian goods in the absence of restructuring ▪ Reluctance with redirection of Belarus' trade is dangerous as the Russian crisis of 1998 demonstrated; although recovery in Russia is beneficial for Belarus' trade and growth, the situation in the aftermath of the crisis is different from that in 1996. The post-1998 Russian recovery was partially based on a real devaluation with expenditure switching effects, leading Belarus to lose price competitiveness in Russian markets compared to domestic Russian producers ▪ Trade diversion effect from economic integration with Russia might be significant for Belarus and this also can effect the competitiveness of Belarusian goods

Source: World Bank staff analysis.

2.7 Policy Recommendations

Based on the analysis, key questions remain. Structural changes have occurred in the Belarusian economy and labor market, but it is not clear to what extent, or in which direction, this restructuring process will be carried forward. Incentives for growth of the SME sector and more productivity-based performance of the state enterprise sector are essential to stimulate investments and for job-creation. In terms of policy and monitoring, options include:

- *Wage policies.* The practice of setting large wage increases based on a dollar wage target has clearly had a beneficial impact in terms of poverty reduction in Belarus. Yet this same wage policy is probably a major constraint to the viability of existing enterprises and the emergence of more productive ones. In order to determine the most appropriate wage policy for Belarus' future, it would be highly beneficial if a thorough analysis is undertaken of both the *static and the dynamic benefits and costs* of the. Such a study should cover fiscal and dynamic dis/incentive effects of the wage policy. A wider study is also called for focusing on the incentive effects of very low minimum wages and the overall compressed wage spectrum identified in this assessment.
- *Incentives for SME growth.* Belarus could benefit in terms of both growth and poverty reduction by facilitating the expansion of SMEs. This would require a review of the existing procedures for licensing of new enterprises, legal and administrative framework, tax regime, and so on with a view to reducing the barriers to entry.
- *Energy price shock.* As noted, a major source of vulnerability to growth prospects is the reduction by Russia of its energy subsidies. The growth and poverty impact of this change and Belarus' policy options in this context constitute an important area for policy analysis.
- *Evaluation of ALMPs.* Although in Belarus active labor market programs have been successful in placing job seekers in jobs, impact evaluations of all the ALMPs is important. A number of dimensions need to be assessed: to define whether the resources spent are being efficiently utilized, whether programs are having the intended impact on poverty alleviation and unemployment reduction, and on the basis of this analysis to formulate judgments as to whether each program should be expanded, scaled down, targeted or even shut down in some cases. Moreover, it is not clear how effective these programs can be in the case of large-scale layoffs in major enterprises and firms, and by regions. An evaluation could assess the gains in terms of employment and wages of program participants relative to a control group of non-participants with roughly the same characteristics. Evaluation of the net impact of ALMPs in some of the transition countries, such as Hungary, the Czech Republic and Poland, showed mixed results.
- Furthermore, the potential design for a labor redeployment program could also be explored to help redundant workers to cope with their new status and reintegrate into the labor market by providing income support, information, counseling and self-employment assistance, thereby reducing the short-term negative impact of labor restructuring on affected workers and communities. The structure of the program should be adopted to the profile of the workers expected to be laid-off, and also to the economic conditions of the communities where the lay-offs take place. It would need to address pre-lay-off services, post-lay-off services, grants for local economic development planning, social monitoring and evaluation.
- *Labor market analysis.* In order to move from a supply-driven to a demand driven employment policies, the overall state of the labor market should be thoroughly analyzed including new forms of employment, underemployment and unemployment, components of labor force growth, age structure, industry and occupation structure; labor market segregation (for example, by age or gender), regional imbalances, and so on. These allow not only to identify the general trends in the labor market but to make projections on labor supply and demand. In particular, the current information basis does not allow to monitor the training system, the labor market and the link between them, to forecast skills requirements of labor market and, therefore, training needs. Belarus lacks instruments to assist in the identification

of present and future skills requirements by the local economy during a period of economic transformation and uncertainty.

- Most transition countries have already launched regular labor force surveys and started collecting comprehensive and internationally comparable employment and unemployment statistics, to help address the data needs for policy formulation. A regular Labor Force Survey is long overdue in Belarus.

Chapter III. Education and Poverty*



The preceding analysis has shown the clear relationship between the education level of an individual, access to economic opportunities, and their poverty status. It is thus particularly important for poverty reduction prospects that Belarus ensures access to appropriate education to all segments of society. Belarus is attempting to do this while facing both declining school-age populations due to falls in fertility and increasing costs of inputs (e.g. utilities). During the preparation of this report the Government introduced several changes reflecting its focus on equal access to quality education.

The analysis using data from 2002 shows that while education enrollment rates are still very high on average, children from poorer households have lower enrollment rates and higher drop-out and repetition rates than children from richer households. Particularly in rural areas, poorer children are less able to access the new types of secondary schools and specialized classes.

The education authorities have embarked on a wide-ranging set of reforms to improve the effectiveness of its considerable public resources while maintaining universal coverage of services. The analysis of a special module of the HIES (2002) commissioned on education, health and social protection finds a higher burden of private expenditures on poorer versus richer households. These disparities may have been reduced later due to the national expansion of school improvement interventions.

The restructuring that has started needs to deepen and be continually assessed if Belarus is to improve the effectiveness and equity of its education system. The dimensions of system efficiency and equity in education outcomes are closely linked, since public savings gained from efficiency improvements are necessary to create the fiscal space for pro-poor measures (also true for the health care system) which can improve education outcomes for low-income households. For example, even though student-teacher ratios are very—maybe even too—low, the number of teachers has actually increased in the last few years. Resizing the teaching force may enable Belarus to address the low pay and morale of teachers and/or obtain savings on the wage bill which can be redistributed to poorer schools to defray operating and maintenance costs.

3.1 Overall Performance

The main components of the Belarusian education system are: preschool education; primary education followed by lower secondary, which together constitute the basic or compulsory cycle; upper secondary education, which may be academic, vocational or specialized (also known as technical or professional) education; and higher education. Educational alternatives for children with disabilities are also offered at all levels of education. Throughout this report, “general secondary education” refers to the combination of basic education with academic upper secondary education.

The education sector in Belarus in the 1990s shows relatively stable and high gross enrollment rates (GER) at the preschool and basic education levels. The preschool 2000 GER of 65.6% is slightly higher than Russia’s and Latvia’s; higher than Poland’s, Ukraine’s, and Lithuania’s; but lower than Estonia’s. For basic education, the 2000 GER of 95.4% implies near

* This chapter is based on the findings reported in Abu-Ghaida (2003).

universal enrollment in the compulsory basic cycle and is above the 2000 rates in Russia and Ukraine although it remains below the rate for 5-14 year-olds in OECD countries (97.9%).⁹

The total upper secondary enrollment rate, on the other hand, declines in the early 1990s, and although it rises again in the second half of the decade, in 2000 it remains below its 1990 level. This is the result of precipitous declines until 1996 in the enrollment rate in vocational and specialized secondary education. The academic upper secondary track (general secondary) begins exhibiting an increased enrollment rate in 1994, while the enrollment rate in higher education mounts dramatically at the same time, resulting in a 2000 GER of 31.7% that is almost 1.5 times the 1990 GER. Still the higher education enrollment rate lags behind the Russian and Ukrainian rates of 36.2% and 32.6% respectively. Overall, recent trends indicate a movement away from the vocational and specialized secondary tracks and into general secondary followed by higher education.

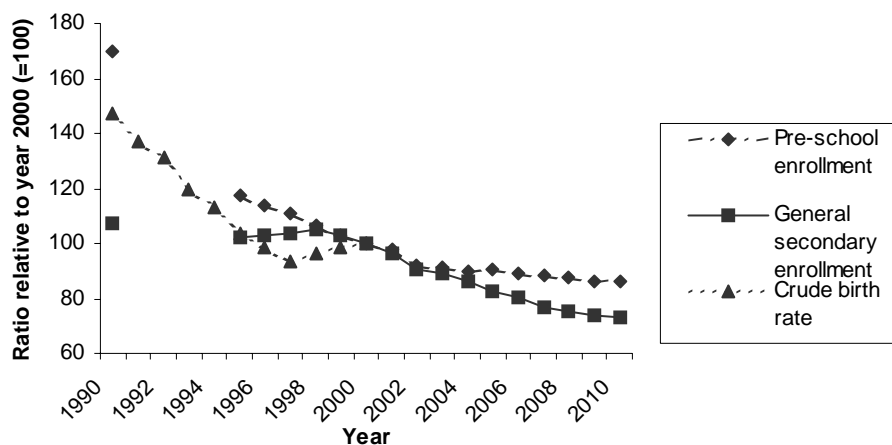
Stable enrollment rates but shrinking size of student body. Despite relatively constant enrollment rates, the absolute number of preschool establishments and students exhibits a secular decline throughout the 1990s, resulting in a student body in 2000 that is less than two-thirds the size it was in 1990. The number of general secondary establishments also goes down throughout this period, and while the number of students only begins to shrink in 1999, by 2001 the number of general secondary students is smaller than it was in 1990. In 2000 alone, the number of students in general schools dropped by almost 50,000, compared to 1999. Constant enrollment rates in the face of shrinking student bodies is reconcilable given population trends in Belarus, where the annual population growth rate turned negative in 1994 and the crude birth rate declined continuously during 1987 to 1998 (Box 10). The number of students at pre-school and general secondary levels of education is projected to continue its decline, with important implications for reform of education service delivery.

Box 10: Declining Number of Students

In the last part of the '90s, the opportunity cost of raising children rose, as the cost of child-care increased while the supply of such services fell. A larger number of adults, especially mothers, are dropping out of the labor force to raise children. The increase in the relative cost of raising children and the increased economic insecurity contributed to the sharp decline in fertility. The numerous policies intended to support fertility, such as generous medical leave for mothers, birth grants and child allowances, were not enough to stop its decline, a trend observed in many other transition economies.

The figure below depicts the past trend in the crude birth rate as well as past and projected enrollments in preschool and general secondary education.

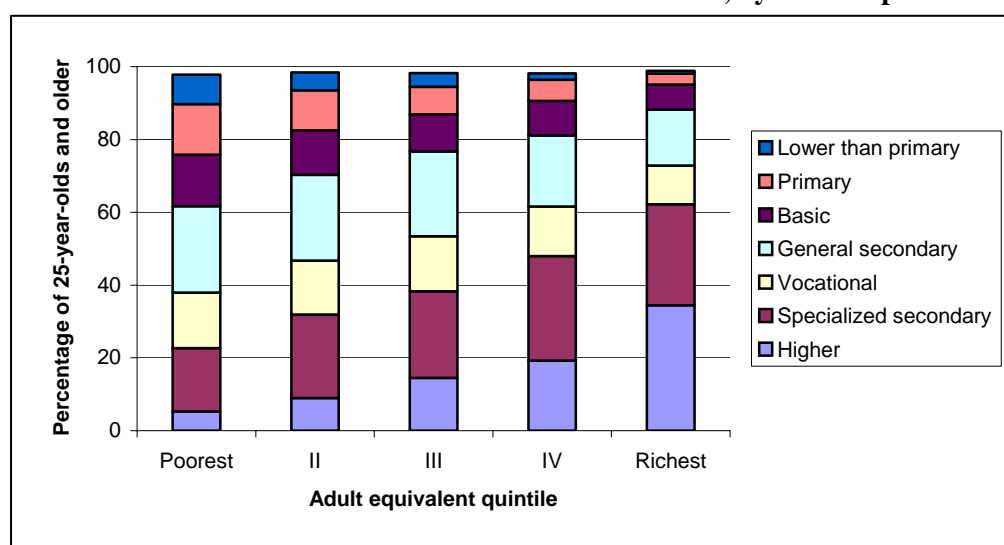
Figure B1: Demographic and Student-Body Size Trends, 1990-2010



Despite high overall coverage, some disparities in educational attainment are apparent. Belarus exhibits clear differences in educational attainment across regions, poorer and richer households, and gender. These emerging disparities are signals of a system needs to ensure uniform opportunities and quality of service to the population.

- *Geographical differences.* In rural areas it is noteworthy that fully 40% of the population aged 25 years and older (i.e., those who can be expected to have completed their education) has an educational attainment of basic schooling or *less*. This is largely due to the high proportion of elderly people in rural areas, an age cohort who have lower educational attainment levels than younger age groups. The share of the population with higher education in Minsk city is roughly three times that in rural areas. Those with specialized secondary education constitute the largest share in cities (other than the capital), while the share of general secondary and vocational attainment is approximately the same across all areas.

Figure 11. Educational Attainment of 25-Year-Olds and Older, by Consumption Groups



Categories do not add up to 100% since non-respondents and those with an educational attainment of "incomplete higher education" are excluded.

Source: HIES 2001

- *Poorer versus richer households.* A clear correlation exists between an individual's level of education attained and the consumption quintile in which their household is placed (quintile 1 being the poorest 20% of the population). Figure 11 shows that the higher the economic status of the household, the higher is the share of the population with higher or specialized secondary education. The poorest groups tend to have larger shares of population with only a basic education or less. These variations simply reflect the links between education, income opportunities and household welfare, which have already emerged from the poverty profile.
- *Pre-school.* Our analysis shows that there is no clear pattern of gender disparities in enrolment at this level (2-5 year olds). The only clear *regional disparity* indicates that children in rural areas are less likely to be enrolled in preschool than in urban areas (whether Minsk City, large, or small cities). Disparities by welfare of the household are apparent when considering enrollment of 2-year-olds specifically, where the enrollment rate increases with welfare status of the household, and when considering the non-poor compared to the (extreme) poor. Non-poor enrollment rates are higher than that of poor children.
- *Basic cycle.* Enrolments are near-universal across the board for 7-13 year-olds – it is only at the end of the relevant age group that disparities are apparent. For 15-year-olds, enrollment

rates are highest for the richest quintile and lowest for the extreme poor; indeed, for 14-year-olds already, the average enrollment rate is approximately 10 percentage points lower for the extreme poor than for the non-poor. At age 15 males exhibit higher enrollment rates than females; after Minsk city, enrollment rates decline for large cities, followed by small cities, and finally rural areas; and enrollment rates are highest for households whose heads have higher education. The analysis also indicates differential drop-out rates across these groups.

- While overall repetition rates in basic education are at 1.3%, they are highest in rural areas at 2.2% (interestingly followed by Minsk city at 1.6%) and highest for the poorest quintile at 3.6% (compared with 0.7% for the non-poor).¹⁰ In analyzing physical access (distance) to schools, we find that the percentage of basic education students with their school within 1 kilometer of their residence is lowest for students in rural areas, as would be expected. In terms of oblasts, this percentage is lowest for students in the Minsk oblast, indicating that many students there probably travel to Minsk city to attend school. Interestingly, the richest quintile have the lowest rate of schools within 1 kilometer of residence, which probably means that students from this socioeconomic group travel to better schools rather than attending the closest public school.
- *Upper secondary and higher education.* Enrollment rates amongst 17-22-year-olds also vary by welfare of the household, where individuals in the richest quintile are almost 1.5 times more likely to be students as are individuals in the poorest quintile, and the enrollment rate amongst the poor is three-quarters the rate amongst the non-poor. The educational attainment of the household head is also correlated with enrollment of 17-22-year-olds in the household, so that enrollments are at 53% in households with a head with higher education and decline progressively for households with heads with a specialized secondary or vocational education, reaching 35% for heads with general secondary education.
- *Quality of education.* The question of the quality of education, i.e. education outcomes and how much and what students actually learn, is a difficult one to address in Belarus given the lack of internationally standardized tests of educational achievements. Anecdotal evidence suggests that there are differences in quality of education between urban and rural areas. Moreover, the need, for example, to supplement the entrance examination scores of rural university applicants in 2002 also suggests lower quality in rural areas relative to urban.

3.2 Improving the Efficiency of the Education System

Box 11: Is Sector Reform Really A Poverty Issue?

The trends in student body size noted above highlight the importance for Belarus of assessing and improving the efficiency of the resources (both capital and labor) used to achieve education outcomes. But is the objective of improving overall sector performance really a poverty-related issue? In our view it is for three reasons. *First*, it is children from the poorest households who are least able to compensate for any gaps or deterioration in the quality of education services. *Second*, inefficiently allocated resources can further compound the constraints on service performance created by overall lack of resources in poorer areas. Performance and access issues can thus be better redressed by generating efficiency-induced savings. *Third*, the education sector is undergoing important changes and our concern is about seeing what initial impacts these changes seem to have and continuing to monitor and reassess them to make sure that they don't adversely impact the poor. Given these factors, the poverty assessment reviews the effects of education service delivery reforms as well as the pattern and trends in public expenditures on education, to assess whether or not these resources are allocated efficiently and distributed equitably.

Service delivery reforms are underway. The education system of Belarus has undergone several changes since the early nineties (Box 12). These changes aimed to address the issues of declining student population, outdated curricula content, changed structure of labor demand, and strained public resources for services.

Class sizes remain at too low a level. Given declining school-aged populations, class sizes and student-teacher ratios are unusually low in Belarus. Average *class size* in the rural areas of Belarus is half that of the urban areas, and it is only the urban class size of 24 that is comparable to the overall OECD average of 22 for primary and 24 for lower secondary education. While some argue for smaller class size emphasizing the greater amount of attention students are likely to receive from teachers, it is perhaps more important to focus on *student-teacher ratios* in this regard (Table 8). At 10.2 students per teacher in 2000, Belarus' student-teacher ratio is even low compared to OECD countries, which had a ratio of 17.7 and 14.3 for primary and secondary education levels respectively. The Belarusian student-teacher ratio is also lower than the 2000 ratio in basic education in Poland (15.1) and Russia (10.8), the latter already considered low by international standards. Indeed, as Table 10 shows, Belarus' student-teacher ratios have declined consistently since 1990, reaching a remarkable low of 6.6 in rural areas in 2001.

Box 12: Main Elements of Belarus' Education Reform Program

Traditionally, education at all levels was free; today, while general secondary and vocational education remains free, a proportion of higher education students pay tuition. School meals continue to be subsidized across the board for all preschoolers and primary school students and for certain groups of students in lower and upper secondary school. Textbooks, traditionally provided free of charge, are now rented at 50 percent of their cost.

In addition, Belarus formally launched a multi-pronged reform of its education system in 1998 (completion planned for 2010). One element of the reform impacts schooling duration by reducing the school entrance age from 7 to 6 years, extending the compulsory cycle from 9 to 10 years (i.e. 6 years of lower secondary schooling), and replacing the 6-day with a 5-day school week. In terms of curriculum content, the reform seeks to promote foreign language instruction in general secondary education, in particular English, French, German, and Spanish (Russian and Belarusian are the standard languages of instruction in the country). Increased availability of computers in schools to provide students with hands-on learning in their computer studies classes is a further component of the reform. Finally, the reform encourages the establishment of new educational establishments at the general secondary level, known as lyceums and gymnasiums, which are to model the above-mentioned reform elements as well as specializing in mathematics and the sciences (physics, chemistry, and biology).

Table 10: Trends in School Size and Student-Teacher Ratio in Urban and Rural Areas

Year	School size			Student-teacher ratio		
	Total	Urban	Rural	Total	Urban	Rural
1990	278	927	96	12.2	15.9	7.4
1995	316	900	113	11.5	14.0	7.5
1996	321	896	116	11.1	13.5	7.4
1997	326	895	118	11.0	13.2	7.3
1998	333	907	119	10.8	12.9	7.2
1999	330	884	119	10.4	12.4	7.0
2000	324	853	117	10.2	12.1	6.9
2001	316	820	114	9.8	11.6	6.6

Source: Statistics Yearbook 2002.

OECD (2001) findings indicate, however, that student-teacher ratios below 10 are associated with negative effects on student performance, precisely because they tend to occur in small rural schools. At the same time, differences in student-teacher ratios ranging from 10 to 25 are

associated with relatively small effects on learning outcomes, and it is only when ratios rise above 25 that a decline in performance is detected.

Several rural schools were closed, yet the number of teachers rose. The government of Belarus reacted to these apparent inefficiencies in remote rural areas by implementing a policy of school closures combined with busing of students to nearby schools. Table 11 shows the number of closed rural schools for 1998-2001 by oblast and the resulting reduction in total number of schools in the oblast. It also shows, however, that the number of teachers continued to increase, with the result that the overall student-teacher ratio *declined* by 10.7% in the 1998-2001 period. During the last two years, however, the trend has stopped since the teaching force decreased by more than 6 thousand teachers. School size also declined in this period, despite the closures, due to a smaller student body, but by a smaller percentage than the student-teacher ratio (3.2%).

Table 11: Changes in Labor and Capital Use in General Secondary Schools, 1998-2001

Region	No. of closed rural schools	Change in total no. of schools	Change in total no. of teachers	% change school size	% change in student-teacher ratio
Brest	34	-32	700	-2.1	-8.7
Vitebsk	21	-17	800	-5.4	-10.8
Gomel	48	-48	700	0.0	-9.0
Grodno	34	-29	700	-1.0	-8.6
Minsk	63	-60	700	-2.5	-11.3
Mogilev	28	-26	600	-3.0	-10.0
Minsk city	Na	12	1700	-12.9	-16.1
Belarus	228	-212	4200	-3.2	-10.7

Source: Ministry of Statistics and Analysis (2002b).

The policy of school closures as implemented at present may not be adequately addressing either efficiency or equity issues. *First*, while it is clear that rural areas exhibit inefficiencies that need to be corrected, they are also the areas with the lowest enrollment rates, highest repetition rates and higher poverty levels in the country. Thus, given that communities must fund the busing of students themselves as well as the severe winters in Belarus, there is a risk of further losses in attendance if schools are closed and busing is not regularly available. *Second*, the closure of schools was not accompanied by reductions in the teaching force. The value of the policy with respect to correcting inefficiencies is therefore questionable, in particular given the continuing dominance of the wage bill in the financing of education (see below). *Third*, not only did the size of the teaching force increase, the weekly work norm in Belarus for teachers remains at a low level. The normative of 18 hours per week is very low even by the standards common in FSU and CEE countries.¹¹ Typically the weekly work norm in other countries is 24 hours although it might be as low as 12 hours in Azerbaijan.

Based on our analysis, new types of schools are being used by children from better-off areas. The introduction of new specialized types of general secondary schools, called lyceums, gymnasias, or colleges, has been mentioned. These schools are being accessed mostly by the urban and better-off households. These new schools remain tuition-free, but entry into them is on a competitive basis. They enroll a small share, approximately 6%, of basic education students.

¹¹ In September 2003 the Government revised the average weekly norm of hours of teaching setting an upper limit of 36 hours per week.

However, this share is as high as 12% for residents of Minsk City, compared to being almost negligible (0.3%) in rural areas, indicating that the reform has barely reached these areas. In addition, roughly 6 times as many students from the richest 20% of the population attend these schools than do students from the poorest quintile (and attendance being almost negligible for the extreme poor).

The education sector in Belarus is overwhelmingly state-financed.¹² **The state dedicates substantial resources to the education sector.** Despite a decline in total public expenditures as a percentage of GDP over the period 1999-2001 (Table 12), the share of education expenditures relative to GDP increased from 6.4 to 6.8% with a concomitant increase in education's share of total public expenditures from 16.9 to 19.0%. By comparison, in 1999, OECD countries spent (on average) 5.2% of GDP and 12.7% of total public expenditures on education. Belarus' spending on education is high if compared to most of its neighboring countries as well: in 1999, public expenditures on education in Russia amounted to 3.2% of GDP, in Poland 5.1%, in Ukraine 3.7% – only Lithuania (6.5%) and Latvia (6.7%) resemble Belarus in this regard.

Table 12: Public Expenditures on Education as % of GDP and Total Public Expenditures, 1999-2001

	Year			OECD 1999
	1999	2000	2001	
GDP (millions of current BYR)	3,026,064	9,125,600	16,912,600	
Total public expenditures	1,142,843	3,236,394	6,023,461	
-- as % of GDP	37.8	35.5	35.6	
Public education expenditures	193,144	565,987	1,143,532	
-- as % of GDP	6.4	6.2	6.8	5.2
-- as % of total public expenditures	16.9	17.5	19.0	12.7

Sources: GDP data from World Bank SIMA database. Data on expenditures from Ministry of Finance.

OECD data from OECD, 2002, Table B3.1.

General secondary education is becoming more expensive...but why? The breakdown of total public education expenditures reveals that the largest line items are general secondary education (approximately 40% of the consolidated budget) followed by preschool education (approximately 20%) and higher education (approximately 10%). Moreover, the shares of general secondary and higher education have grown during the period 1999-2001, while preschool education's share has gone down. However, while the upward trend for higher education is plausible given growing higher education enrollments, the reasons behind the trend for general secondary are less apparent given the declines in student body size.

In per-student expenditure terms, both preschool and vocational education were roughly twice as expensive as general education during 1999-2001 (Table 13). This is understandable for vocational education, where, for example, the equipment requirements are greater than in general secondary education. For preschool education, this is surprising and a stark contrast to the 1999 ratio of 0.93 in OECD countries but it is explained by the cost of other services delivered in the facility (such as health care). Specialized secondary and higher education were roughly 30-50%

¹² The share of non-state education establishments at the general secondary level was only 0.3%, accounting for 0.1% of the student population at that level. It is therefore mostly at the specialized secondary and higher education levels that the private sector plays any significant role (5% of total establishments by 2000). In higher education, approximately a quarter of establishments in 2000 were non-state.

more expensive than general secondary across the 1999-2001 period. In addition, over this period all levels of education exhibit a downward trend relative to general secondary, i.e. general secondary is becoming more expensive on a per-student basis compared to all other levels.

Table 13. Per-Student Expenditure by Education Level (1999-2001)

Level of education	Ratio relative to general secondary (=1.00)		
	1999	2000	2001
Preschool	2.10	2.02	1.69
General secondary	1.00	1.00	1.00
Vocational training	2.23	2.07	1.92
Specialized secondary	1.54	1.41	1.31
Higher education	1.49	1.46	1.28

Sources: Ministry of Finance and Statistical Yearbook, 2002.

Expenditure on wages, utilities and school meals are crowding out much needed teaching materials and school maintenance. Utilizing the detailed expenditure and budget data provided by the Ministry of Finance, we distinguished between source of funding—Republican or Local governments—and decomposed education spending into its major elements to assess allocative efficiency. In particular we look at the availability of different types of complementary inputs in a bid to better understand changes in the quality of education, at least indirectly.

- *Wages of teaching and non-teaching staff* constitute the largest share of all three budgets, yet at 58% of the consolidated education budget this share is on the low side when compared with the 1999 share of staff compensation in OECD countries in general (60-74%, depending on the level of education) or Poland in particular (70%). This is remarkable given the low student-teacher ratios and increasing numbers of teachers reported earlier. The wage bill thus could either be reduced to enable non-salary items to be expanded; or the size could be maintained for higher pay to a smaller number of teachers. Non-salary *essential* recurrent expenditures that are necessary for improved education quality, e.g. materials and training, represent a mere 1.5% of the consolidated education budget, raising concerns as to the ability of the state to maintain, not to mention enhance, the quality of public education.
- *Utilities* capture fully 13% of the consolidated budget. On the one hand, high utility bills are expected in a cold climate country such as Belarus. On the other hand, particularly in view of the low share of maintenance expenditures in the budget, it seems likely that energy is wasted in heating and lighting poorly maintained facilities. In addition, utility prices have recently increased sharply, and there is anecdotal evidence of utilities capturing as much as 20% of the education budget in some raion.
- *Foodstuffs* constitute the third largest consolidated budget line item (7.4%). In general, provision of school meals in Belarus has been socially-oriented. School meals are provided to children at the primary level (either free or subsidized, depending on household income), and continue to be provided at the lower secondary level for some groups of children (e.g. the disabled, children from low-income families, children in special programs for remote rural areas). However, since subsidized meals may be available to better off as well as poorer children, the subsidy may not be concentrated on the poor. A detailed assessment of public expenditures on education is needed to provide better policy guidance. Analysis of private expenditures on education (see below) also indicates that richer households often pay their share of school meal costs while providing their own better-quality food for their children. Thus, it seems likely that better targeting school meal provision to needy children alone

would not only decrease the fiscal burden but also improve the pro-poor distribution of public spending and the welfare of both poorer and richer households.

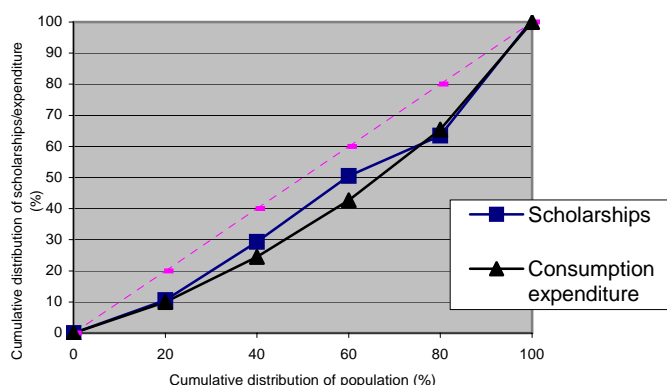
- o *Scholarships* constitute roughly 3% of the consolidated budget, with the lion’s share coming from the Republican budget. Individual, educational, and social scholarships were introduced in 1996 for students at specialized secondary or higher education institutions. Both individual and educational grants are merit-based. As of 2001, scholarships were also extended to students at vocational institutions. Focusing on the age group of 17-22-year-olds, individuals in the poorest quintile are half as likely as those in the richest quintile to receive a scholarship, and when they do receive one, the amount is approximately three-fifths that received by the richest (Table 14). Overall, there is a pattern of increased likelihood to

Table 14: Scholarships to 17-22-year-olds, by Consumption Quintile (2001)

Adult equivalent quintile	Beneficiary rate (% of 17-22-year-olds)	Average grant amount (Q4 2001 BYR)
Poorest	10.1	31,309
II	17.4	31,822
III	18.7	36,394
IV	14.2	28,828
Richest	20.0	50,641
Total	16.1	37,299

Source: HIES 2001

Figure 12: Benefit Incidence of Scholarships, 2001



benefit and higher amounts received by households with higher incomes, except in the case of the fourth quintile. Given that the data presented here combine educational, individual, and social grants, it is likely that we are detecting a situation where the fourth quintile “falls through the cracks”: individuals in this group are neither needy enough to benefit from social grants, nor are they rich enough to buy the high quality education that can give them access to the merit-based scholarships.

than overall consumption expenditure is distributed in Belarus. This is shown by Figure 12 which tracks the cumulative distribution of household consumption (or welfare) against the cumulative population ranked by per adult equivalent consumption. The figure shows that the “concentration curve” for education scholarships lies above the Lorenz curve for aggregate consumption expenditure, implying the progressive nature of the scholarships. The scholarships, however, do not succeed in targeting the poorer segments of the population (admittedly, this is not necessarily their aim): for targeting to have been effective, the concentration curve would have had to lie above the diagonal line.

- o Overall, the scholarship program is pro-poor (or progressive) in the sense that the grant amounts are distributed more equally

Per capita local government education expenditures are inequitably distributed across Regions. Scholarships are the only item predominantly financed by the Republican, as opposed to local, budget. The importance of local budgets in financing public education in Belarus raises the question of possible inequality in expenditure across oblasts. We analyzed the per capita local

budget education expenditure across oblasts and separately for current and capital expenditures. We found that Gomel and Mogilev had, in 2001, the lowest per capita current and capital local education expenditures. These are also among the poorest regions. Overall, however, there is little variation in per capita local recurrent expenditures across oblasts, whereas inequalities across oblasts are greater across *capital expenditures*. The poorer the oblast, the lower the per capita capital expenditure and higher the number of schools which need repair. Minsk City is the clear outlier, with highest per capita spending and lowest rates of poverty and schools in need of repairs. The fact that expenditures are correlated with poverty rates in this manner implies a lack of correction by the government so that the distributional impact of government spending is not pro-poor but rather pro-rich.¹³

3.3 Private (Household) Education Expenditures

In present-day Belarus, private education expenditures on education take many forms and have a differential impact on poorer versus better-off households. At the pre-school level, parents have begun paying fees, amounting to 60% of the cost of meals, although exemptions for low-income families are in place. In basic education, as already mentioned, households may pay for school meals. Textbooks must be rented at 50% of their cost (an average of 5-9,000 BYR per student per year according to the Ministry), although again there are exemptions stipulated for those who cannot afford to pay. Anecdotal evidence suggests that frequently, parents find it necessary to purchase books that are not defined as textbooks by the school but that teachers indicate are necessary for learning the subject, in particular in the case of foreign languages. In addition, anecdotal evidence abounds of schools canvassing parents for contributions towards the running of the school, for example for urgently needed repairs. Further private expenditures for education at the upper secondary level are related to the provision of extra classes after school for students to prepare for university entrance examinations. These classes are deemed a necessity for entrance to both public and private universities, and they cost from 1–13,000 BYR per hour in 2003 and vary in duration from as low 9 to as high as 160 hours.

The burden of these expenditures is higher for poorer people. These expenditures, while necessary in many cases to help defray the cost of delivering education services, calls into question the affordability of good quality education for poorer households. Affordability of these expenditures is assessed by looking at the ratio of average schooling expenditure per student to household nonfood spending per adult equivalent, with the latter serving as a proxy for discretionary household income (Table 15). We see that that average monthly expenditure amounts per child in preschool are largest in Minsk City and for the richest quintile, and smallest in rural areas and for the poorest quintile. However, when affordability of these expenditures is considered, it is apparent that the burden on rural households is greater than that on residents of Minsk City. Moreover it is greatest for the poorest households and declines in size the richer the household. Thus, when considering welfare of the household, the fact that richer households spend more on average on pre-school than the poorer household does not translate into higher burdens for these richer households. This is also true for basic education, where the burden of private expenditures is almost twice as high for households in the poorest quintile compared to those in the richest.

¹³ Since 2003 the Government has revised the social standards regulating the norms of budget expenditures per student to correct these inequities, but the impact of such changes needs to be evaluated.

Table 15: Affordability of Basic Education, by Household Characteristics, 2002
(ratio of schooling cost to nonfood expenditure)

	Transport ^a	Clothing for school	Educational materials ^b	School meals	Contributions to school ^c	Total
Total	0.6	32.5	3.1	12.2	2.2	50.5
Gender						
Female	0.6	32.4	3.3	12.4	2.2	51.0
Male	0.6	32.5	2.8	12.1	2.2	50.1
Location						
Minsk city	0.7	34.1	3.9	15.9	3.7	58.3
Large city	0.9	26.4	2.9	12.7	2.5	45.4
Small city	0.5	29.5	3.5	12.8	1.6	47.8
Rural	0.5	39.9	2.3	9.1	1.5	53.3
Oblast						
Brest	0.4	27.0	2.9	16.8	1.7	48.8
Vitebsk	1.1	23.8	2.6	11.6	1.5	40.6
Gomel	0.1	31.3	1.8	5.5	2.3	41.0
Grodno	0.4	31.4	3.0	13.7	2.1	50.7
Minsk	0.9	50.7	4.7	16.1	2.1	74.2
Mogilev	0.9	25.4	2.3	5.6	1.4	35.5
Minsk city	0.7	34.1	3.9	15.9	3.7	58.3
Consumption quintile						
Poorest	0.9	43.9	3.5	15.3	2.6	66.0
II	0.5	33.6	3.2	12.3	2.3	51.8
III	0.4	29.1	2.8	11.2	2.1	45.6
IV	0.6	27.6	3.0	11.4	2.1	44.7
Richest	0.7	23.5	2.6	10.0	1.7	38.5
Poverty Status						
Non-poor	0.5	29.2	2.9	11.3	2.0	46.0
Poor	1.0	44.2	3.4	15.8	2.8	67.0
Extreme poor	1.1	47.4	3.1	18.5	3.3	72.9

Source: Bank staff calculations based on HIES 2002 (including additional modules).

Notes: ^a To and from school.; ^b excludes payments for the use of school-provided textbooks; ^c for example, for maintenance or general functioning of school.

In post-basic education, richer people are able to afford better quality education. For post-basic education, the same detail as to type of private expenditure is not available. In addition, it is at this level of education that the private sector has made some inroads, so that available data mix payments made to public and private education institutions. In the case of universities, public universities today admit a limited number of students tuition-free and have privately-run departments that do charge tuition. An informal qualitative survey conducted in the context of this poverty assessment highlights private expenditures on higher education as the primary concern with respect to education for the poorer segments of society who want to see their offspring attend higher education but are afraid of not being able to afford it (Box 13).

Box 13: The Dream of Higher Education

Our elder daughter will soon finish school. She is a good student but we will not be able to pay for her higher education. This is my other concern. I do not want her to have no education like myself. (Gomel)

I cannot afford to give my children the education they would like to get. This year my daughter (she finished school and was awarded with a gold medal) will try to enter the university. We had to choose the university where we will not need to pay if she succeeds to enter it. I had to be frank with her saying that there's a dividing line in her life i.e. the income of her father and at present this line limits her future. (Grodno)

Source: Interviews, June 2003.

Households in the richest quintile spend on the order of *twenty times as much per post-basic student than those in the poorest quintile*. However, for the first time, the higher expenditures by richer households translate into higher burdens on these households than on poorer ones. The explanation for this particular finding is probably that the better-off are purchasing higher quality schooling for their offspring. The greater burden on the non-poor's budget has to be weighed against their gains in terms of better-quality education.

3.4 The Benefits of Education

The fact that Belarusians are willing to pay for better education indicates that they expect to gain from it. We have already demonstrated in earlier chapters that a marked increase in annual wages is associated with increased level of education for wage earners. Differential returns for the *same* level of education do persist, however, both for wage earners in general and public education employees in particular.

- We also find that the returns to higher education levels is high: for example, wage earners with higher education earn 58-66% more than those with basic education only, all other factors being equal.
- Across all wage earners, women generally earn less than men with the same level of education; and those employed in public education earn below the average for all wage earners at every level of education.
- Following up on the last point, the average wage of public education employees is roughly 90% of the national average wage. Public education wages were declining throughout the late 1990s relative to wages in general, industry wages, and per capita GDP. This trend was reversed in 2001, so that school teachers' wages amounted to 95% of the average national wage that year. Despite this increase, school teachers' wages remain low in Belarus when compared to OECD countries, for example, where the ratio in 2000 of a primary teacher's salary to GDP per capita was 1.32 (and for a lower secondary teacher: 1.35; for an upper secondary teacher, it was 1.45). In order to earn higher salaries, many teachers are working on average 25-27 hours per week (as compared to the mandated norm of 18 hours), that is, they are engaged in 1.5 shifts. Focusing on annual wages, employment in public education is associated with an 18% decrease in wages compared to employment in other sectors *for individuals of similar characteristics*, with females in education earning fully 30% less, and males in education 22% less, than males in other sectors.

A reduction in the size of the teaching force combined with increases in the working hours and moderate pay increases seems advisable, given the expected positive effects on teacher morale and the quality of education received by students.

3.5 Policy Recommendations

Belarus needs to continue to improve its education service delivery system to address both equity and efficiency issues. As we have stated earlier, improvement of overall service delivery performance will be necessary to address the needs of poorer children. Thus not only from the performance point of view but also from the poverty reduction perspective, the bold set of reforms launched by Belarus needs to be assessed for their efficacy and taken to the next stage.

- *Remote rural areas.* The ongoing policy of school closures in remote rural areas is motivated by the need to improve efficiency of school and class size given declining student populations. While recognizing the need for such a measure, we suggest that the policy should be monitored and evaluated because there is already evidence of lower enrollment in rural areas. An evaluation of the implementation effects could provide Belarus with early warning as to whether or not school closures are compounding the problematic trend by further reducing enrollment and attendance rates in these areas. Alternative options for remote areas could also be weighed, including multigrade teaching (started in some schools) and distance learning. Also in terms of the introduction of new types of schools (lyceums and gymnasia) in basic education, it is important for the government to ensure that the current trend of the rural and poorer segments of society being left out is reversed. The Government undertakes certain measures to expand these new type of schools to achieve national coverage and, thus, is expected that these equally benefit the poor and rural children.
- *Re-sizing the teaching force.* In particular for the general secondary level, given shrinking student body size, low student-teacher ratios, and low teacher pay, there is a need for a resizing of the teaching force combined with improvements in compensation. This resizing could be accomplished partially through the use of multigrade teaching in the smaller schools, cross-training teachers in related subjects, and increasing teaching loads in exchange for better pay. Better pay for teachers has the potential of not only benefiting the teachers themselves but also of impacting positively the quality of education received in the classroom, thus diminishing the need for after-school tutoring in preparation for university entrance exams, a feature which the poorer households can ill-afford.
- *Needs-based targeting of school meals and scholarships.* First, since school meals capture a relatively large share in the overall public education budget, and at the same time constitute a heavier financial burden on the poor than the non-poor, there is a need for moving away from subsidies of meals at the basic education level to means-tested provision only for the needy. Second, given the individual nature of the benefits accruing from higher and specialized education, and the existence of a scholarship program for these levels that does not benefit poor youth as much as it benefits wealthier youth, an option would be to eliminate merit-based scholarships and focus instead on more pro-poor targeting through need-based scholarships. In this regard education officials could collaborate with social protection officials in Belarus who have already successfully piloted the use of means-testing as a way to refine the targeting of resources to those in greatest need.
- *Preschools.* The ongoing decline in the share of preschool education in total public education expenditures is warranted, especially given the high unit costs at this level of education. At the same time, in order to not exacerbate existing disparities, it is advisable to adjust private payment amounts away from a set rate of 60% of cost of meals to a scale that reflects household capacity for payment. In addition, the approach already initiated by the government of encouraging private sector participation in the provision of preschooling is commendable. It is important, however, to further explore low-cost alternatives: for example,

the government could facilitate mobilization of local communities to create quality, inexpensive early childhood development programs through a system of matching grants.

- *Utilities.* In order to address the large and increasing share of utilities in the overall public education budget, options include better insulation of schools and use of more energy-efficient equipment. A reduced school week – from six to five days – is a policy that the government is already in the process of implementing. Some of the necessary measures will require high start-up costs, especially in the poorer oblasts which have a higher number of schools in need of general repair and maintenance. This implies the need to consider a redistributive intervention by the Republican government to needy local governments to counter the existing pro-rich variation in *capital* expenditures across oblasts. It also reinforces the need to reduce inefficiency in the allocation of recurrent expenditures, to free resources for more regular operation and maintenance of schools.
- *Pedagogical inputs.* There is a need for the Government of Belarus to pay more attention to the question of quality of its education system. No doubt utilities and foodstuffs crowd out other important current expenditures that provide necessary pedagogical inputs. In addition, there is evidence of private payments towards improved education quality that benefit the rich more than the poor. There is therefore a need for reassessment of budget priorities and a refocus on provision of important pedagogical inputs. Also in this regard, the government is strongly encouraged to participate in international assessments of learning achievements in order to benchmark the accomplishments of its education system and receive guidance on where any weaknesses may exist.

Chapter IV. Health, Nutrition and Poverty*



Belarus is a country with mixed evidence on health outcomes. On the one hand, the country shows some of the best health indicators in the region and an extensive coverage of health services that are mostly subsidized. Yet there are significant socioeconomic differences in health status indicators: the prevalence of stunting among the poor (17%) is twice that among the better off, and even worse in rural areas (22%). Belarus also faces the challenge of a morbidity profile marked by a double burden: increasing incidence of infectious diseases such as HIV/AIDS as well as an increasing burden of chronic diseases, trends which have serious implications for both public and household health expenditures. Lifestyle risks such as fat or alcohol consumption and smoking have health consequences for the poor and the rich. Alcohol and fat intake per capita is actually higher among wealthier groups than among the poor, but the poor are less able to manage the consequences given lack of access to information, less ability to afford high-cost care and so on. Moreover, reducing the overall caseload of chronic diseases would release fiscal resources that can be redirected to improving services which benefit the poor.

In a context of increasing fiscal pressures, provision of affordable health services for the poor requires policy actions to both increase efficiency and reduce the financial burden of disease. Policies to improve health status and care in rural areas is also required since urban-rural differences are one of the most significant challenges in Belarus. Given the increasing reliance by the health sector on out-of-pocket expenditures, care is also required to develop some form of health insurance for the poor and the vulnerable against catastrophic illnesses, in order to prevent associated costs from propelling these households deep into poverty.

4.1 Health and Nutrition Outcome Indicators

Some of Belarus' health indicators rank among the best in Europe and Central Asia (Table 16). The country has one of the lowest infant and under 5 mortality rates, lowest maternal mortality rates, almost universal immunization rates, and relatively low poverty incidence. Despite these achievements, Belarus also has one of the lowest male life expectancies in the region (only 62

Table 16. Health Expenditures and Health Outcomes

	GDP per capita, PPP (current international \$)	Health expenditure per capita (current US\$)1997	Birth crude rate	Death rate, crude (per 1,000 people)	Life expectancy at birth, female (years)	Life expectancy at birth, male (years)	Physicians (per 1,000 people)
Estonia	10,066	224	9.1	13	76	65	3.0
Russian Federation	8,377	133	8.8	15	72	59	4.2
Belarus	7,544	83	9.4	14	74	62	4.4
Lithuania	7,106	156	9.2	11	78	68	4.0
Turkey	6,974	128	20.5	6	72	67	1.2
Romania	6,423	63	10.4	11	74	66	1.8
Kazakhstan	5,871	62	14.6	10	71	60	3.5
Turkmenistan	3,956	22	20.9	7	70	63	..
Ukraine	3,816	54	8.7	15	74	63	3.0
Azerbaijan	2,936	9	15.2	6	75	68	3.6
Kyrgyz Republic	2,711	15	20.9	7	72	63	3.0
Georgia	2,664	16	8.7	9	77	69	4.4
Armenia	2,559	..	11.2	6	77	71	3.2
Moldova	2,109	36	10.1	11	72	64	3.5
Europe & Centr. Asia	6,794	123	12.2	11	74	64	3.1

Source: World Development Indicators 2002.

* This chapter based on the findings reported in Murrugarra (2003).

years)—only better than Kazakhstan and Russia—and one of the widest gaps in life expectancy between males and females. In addition, growth of HIV/AIDS cases in Belarus is among the highest in the region (after Ukraine and Russia) and while the official notification rate of tuberculosis has decreased in the last years, cure rates and associated mortality rates have not. How can a country embody these two extreme dimensions in health care? The answers are partially linked to lifestyle conditions (particularly smoking and alcohol drinking) that represent risk factors explaining one of the highest rates of cardiovascular diseases and other chronic illnesses.

Children in rural areas appear to face Stunting is a significant problem in rural areas Belarus. Stunting (low height for age) is generally regarded as an outcome of long-term

Table 17: Stunting Rates in the ECA Region (% of children with HAZ<-2)

Country	Year	Stunting
Albania ^b	1997	22.7
Armenia ^a	2000	12.0
Azerbaijan ^b	1996	22.2
Belarus^b	2001	13.4
Kazakhstan rural ^a	1995	21.8
Kazakhstan urban ^a	1995	15.8
Kyrgyz Republic ^a	1997	24.8
Russia ^b	2000	10.6
Tajikistan ^c	1998	55.0
Uzbekistan ^a	1996	31.3

^a Rates are for children 0 to 35 months

^b Rates are for children 0 to 59 months

^c Rates are for children 6 to 59 months

Source: Galloway, Rokx, and Brown (2000); DHS; RLMS.

suggests that about 30% is due to conditions in the perinatal period, indicating that lack of appropriate or good quality practice may be a problem in perinatal care. The decline in the IMR since 1996 reflects the improvements in service provision such as the introduction of multi-level perinatal care. Despite these improvements in reducing IMR during the last decade, however, less progress has been observed in rural areas and poorer regions. While urban IMR rapidly declined, child mortality in rural areas, where poverty is higher, has been less responsive. Similarly, most of the improvements in IMR are observed in Minsk City and Grodno oblast while Gomel, Brest and Vitebsk have the highest IMR by 2001 (these regions also have the highest poverty risk).

deprivation and poverty. Anthropometric evidence collected in the household survey shows that about 13% of children under 5 are stunted in Belarus, less than several other transition countries (Table 17), but slightly higher than Russia (10.6%).¹⁴ Disparities in the stunting rate exist between different parts of Belarus: more than 21% of children under 5 in rural areas are stunted, compared to less than 10% in urban areas. If stunting is reflecting past investment on children's nutrition, the evidence suggests that nutritional inequalities may be present and need attention.

Infant and children mortality declines in rural areas have been less responsive than in urban areas.

Infant mortality rates (IMR) are around 9 per live births in Belarus, decreasing significantly from more than 13 in the mid-nineties (Figure 13) but still far from the MDG target of 5.3.¹⁵

The composition of IMR by cause of death

¹⁴ The anthropometric evidence collected in the household survey covered a sample of 665 children under age five, about 200 in rural areas. This small sample provides suggestive evidence that needs to be complemented with in-depth studies on nutrition in Belarus.

¹⁵ Based on the Ministry of Health data, IMR fell to 8 per live births in 2003-2004.

Figure 13

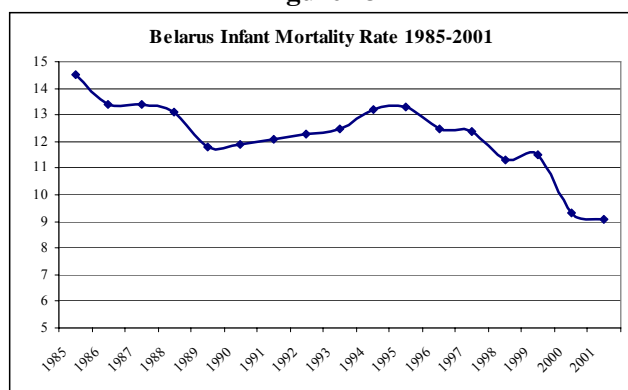
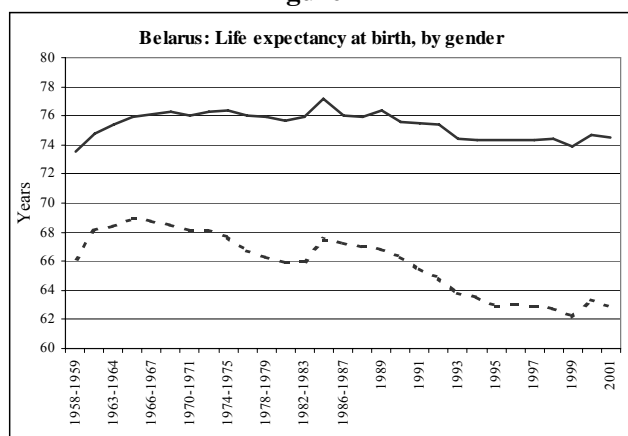


Figure 14



Life expectancy in Belarus is among the lowest in the region, mainly due to the high rate of adult male mortality. Life expectancy in Belarus (Figure 14) reached a peak in the mid-eighties with more than 72 years, coinciding with the anti-alcohol campaign in the former Soviet Union. After that, it has experienced a marked decline, especially after independence and during the early years of transition (1992-93).

Another feature is the widening gap between life expectancy among males and females, from 10 years in 1991 to almost 12 in 2001. During the last decade, females' life expectancy remained relatively constant between 74 and 75 years. During the same period life expectancy for males decreased from almost 67 before independence to 62.8 in 2001.

The major factors driving the decrease in life expectancy are the increased importance of cardiovascular diseases

(CVD) with death rates increasing more than 20% between 1995 and 2001, especially in rural areas. In addition, death rates from injuries and poisoning (some related to excessive alcohol consumption) have also increased by 38% in rural areas. In urban areas, on the other hand, death rates from digestive organs increased by 29%. The evidence then points to a major sources of reduced life expectancy: chronic illnesses related to lifestyle conditions.

Belarus evidences the double burden of increasing chronic diseases and the spread of some deadly infectious ones. Illnesses of the circulatory system are the *fastest growing morbidity* in Belarus (33% between 1995 and 2001), although they still represent a small fraction of the first diagnoses. Despite the small fraction of reported cases, mortality from ischemic heart disease in Belarus is the highest in the WHO's European Region. In other transition countries, an increased pattern of infectious and contagious diseases is also emerging, reflecting the decayed health systems due to fiscal constraints. In Belarus, besides two exceptional and important problems—TB and AIDS—infectious diseases are not growing as fast as in other CIS countries due to the relatively better maintenance of the health network.

The poorest households report being in ill health more than the richest households. Measuring morbidity in household surveys is a difficult task. Household surveys typically contain self-reported measures of morbidity that are, however, affected by individuals' characteristics such as education and income, that affect their ability and sensitivity to prevent, detect, identify and report illness. For example, the fraction of non users of condoms for those having regular sex is the highest among the poor, and attitude towards HIV-infected individuals

among them is the most conservative. Most importantly, prices of and access to health care services also affect self-reported morbidity.

Self reported morbidity and disability, however, are the only indicators available in the survey which can be linked to the household's poverty status.

As part of the Belarus HIES, individuals assessed their health status as "Good", "Bad" or "Not good nor bad" (or Normal). About 24% reported themselves in good health, 57% in normal, and 19% in bad health. For all Belarus, the poorest quintile (below the poverty line) evidences the highest proportion of individuals reporting *bad health* (24%) while among the top quintile it is only 16%. This pattern is only observed in urban areas, since the proportion of people reporting bad health in rural areas is relatively uniform across poorer/richer groups. In terms of gender differences, 23% of females reported having bad health compared to only 15% among males.

Bad health increases with age (as expected) particularly after age 50. The fraction of elderly in bad health is higher among the poor, in both urban and rural areas. Moreover, inequality in morbidity is higher in urban areas where prevalence of bad health in the poorest quintile is more than twice that of the richest quintile. This urban pattern is of particular concern given the observed association of TB and HIV/AIDS incidence with poor living conditions in overcrowded, poorly ventilated homes, with immune systems made weak by lifestyle factors.¹⁶ In summary, morbidity patterns suggest that the poor have worse health status, better observed in urban areas, despite the limitations of self-reported indicators.

4.2 Lifestyle Risk Factors: A Key Poverty Issue

The health status of the Belarusian population discussed above is associated not only with the coverage and quality of health services, but also lifestyle risk factors. Tobacco, fat consumption and excessive alcohol cause a great deal of health damage. Even when the rich and the poor consume equal amounts per capita (or the rich consume more, as we discuss in the case of alcohol and fat in Belarus), these factors have even worse effects among poorer people due to lack of preventative health activities (including safe sex and drug prevention activities), additional economic stress, and somehow less ability to manage the corresponding chronic illnesses (imagine for example a poor rural elderly man and an urban one managing diabetes or cardiovascular problems). Moreover, health policies to reduce poverty need to be broad in addressing lifestyle issues *across the population* since doing so will reduce the financial burden of some chronic diseases and generate fiscal savings which can be redirected as needed. For these reasons, we briefly review three types of lifestyle risks which have been found to be important in Belarus: 1) fat intake, 2) alcohol consumption, and 3) smoking.

The Belarus diet is highly dependent on fats. About 37% of the per capita calorie intake is coming from fats, higher than the recommended 30% from fat sources. Belarus households not only evidence a diet rich in fat, but the fat mainly (64%) comes from animal sources. Fat intake is not entirely associated with poverty or prices, but reflect a cultural symbol in Belarus. The common practice of eating *sala* (*Canio*, or pig fat) in different versions is relatively expensive. The price of *sala* is higher than the price of lean meat. High fat intake is widespread and affects all socioeconomic groups but is particularly large in urban areas. In Minsk City fat-origin calories represent more than 41% compared to 34% in rural areas.

¹⁶ While this is an important issue in Belarus, additional information on the patients and their communities is required for a comprehensive understanding of the poverty linkages.

Individuals in better-off households (such as the richest quintile) have a higher fat intake than poorer households, but poorer individuals also have intake above the recommended levels. Among males, obesity prevalence for the poorest quintile is less than half that of the richest quintile. For females, the relative gap is smaller but prevalence is still important among the poorest. The high fat diet represents a major problem for Belarus in terms of triggering a high burden of chronic heart disease. For the poorer household, treatment of the disease is likely to be a higher financial burden than for the richer household in terms of affordability.

Reduced alcohol consumption can reduce poverty levels. Alcohol is an important piece for the Belarus health puzzle since it is an important risk factor for many diseases and for adult male mortality. There are also several links between alcohol consumption and poverty. *First*, alcohol intake may increase health risks and these could differ across socioeconomic groups. *Second*, alcohol consumption may reduce expenditures and consumption on other goods and services and push households below the poverty line (that includes only necessary goods). This direct effect of alcohol expenditures is examined below. *Third*, alcohol abuse may also reduce productivity and affect households' income and consumption.

Compared to other countries in the region, Belarus ranks among the highest in alcohol consumption. With almost 13 liters of pure alcohol per capita among those older than 15 years, Belarus is above Estonia (10.5), Lithuania (11.6) or the Russian Federation (10.8), but below other countries like Moldova (17.4) and Portugal (18.8). A distinctive element in NIS countries is the composition of total alcohol consumption, where spirits (as opposed to wine and beer) are a major source. Belarus is an extreme case among NIS countries with heavy reliance on spirits, like vodka, where it ranks second only after Moldova. Consumption of pure alcohol via spirits is 7 to 25 times consumption of pure alcohol in beer and wines, respectively, much higher than other NIS and CEE countries.

Table 19. Belarus: Number of drinks per adult per year,
(number of 0.0168 liter pure alcohol doses)

	Poorest	II	III	IV	Richest	Total
Urban	17.0	27.9	39.6	55.7	88.5	49.7
-% vodka	48.8	58.7	63.7	65.0	62.5	61.1
Rural	32.2	49.0	67.3	89.3	132.0	67.7
-% vodka	45.6	54.4	63.3	67.3	70.0	60.1
Total	23.4	36.0	49.5	65.3	98.0	55.6
-% vodka	47.3	56.8	63.6	65.7	64.3	60.8

Box 14: Do Households Respond to Alcohol Prices?

The price of vodka per liter (BYR 4,300) is five times that of beer (BYR 850) and almost 3 times that of wine (BYR 1,520). If prices are standardized by actual alcohol content (BYR per ethanol-equivalent) instead, vodka is the cheapest drink per volume of pure alcohol. The relative cheapness of vodka may explain part of the high consumption in Belarus, and as such, tax instruments (e.g. higher sales tax, VAT) could be explored as a means to deter alcohol consumption.

Alcohol consumption is higher in rural areas (68 drinks), where centralized heating is less accessible and poverty is higher (Table 19). Significant differences across socioeconomic groups are also observed: the better-off adults drink 4-5 times more than the adults in the poorest quintile. Most alcohol consumed in Belarus is hard liquor (hereafter vodka, for simplicity), with more than 60% of total pure alcohol across quintiles. Only the poorest households have a slightly smaller share of vodka (between 45 and 49%).

Given the strong preference for alcohol consumption compared to other countries, allocation of household resources on alcohol were be examined. Average household expenditures on alcohol are around BYR 5,200, and represent about 3% of household total consumption. While better off households spend a larger share in alcohol (more than 4%) even the households in the poorest quintiles spend more than 2%, particularly in rural areas where they spent almost 3% of their consumption value. If household resources were able to be switched from alcohol to other consumption goods and services, a positive impact on welfare measures could be expected (assuming that preference for alcohol is due to dependence and does not improve the individuals well-being). Despite the higher consumption among the rich, the shift in expenditures by poorer households would also reduce poverty incidence by more than 8% (1.7 percentage points).

Tobacco and smoking has less impact on poverty, but is still at a high level among the youth. About 26% of the population aged 17 or more do smoke, but this is mainly a male phenomenon: 52% compared to 6.4% among females. While smoking incidence among the youth (aged 15-25) is slightly lower (40%), more than two thirds of them smoke everyday (World Bank, 2002c). A large fraction of male smokers (about 40% of them) are heavy smokers, as defined by 20 or more cigarettes per day.

Smoking is similarly spread in urban and rural areas, but is higher among the poor than for better off groups. About 62% of males in the poorest quintile smoke compared to only 43.6% in the richest quintile. Among females, however, a reverse pattern is observed. About 8% of urban women smoke compared to less than 3% in rural areas, and it is the better off in urban areas who smoke more.

Expenditures on cigarettes are low in Belarus. On average, households spend BYR 2,436 per month representing slightly more than 1% of the value of total consumption. The better-off households spend more than the poor ones (3,350 compared to 1,640), but tobacco expenditures among the poor represent a 30% larger share of consumption (1.3% for the poor versus 1.1% among the rich). Similar to the exercise on alcohol consumption, shifting household resources from cigarettes to welfare-improving consumption (of other goods and services) would reduce poverty incidence by 5.4% or more than 1.1 percentage points. This has a lower impact on poverty than that of alcohol because of the lower monetary value of expenditures on tobacco.

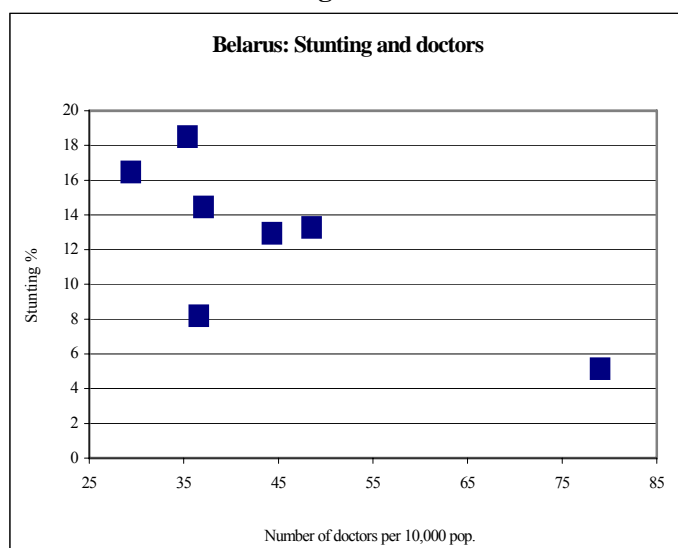
4.3 Improving the Efficiency and Equity of the Health Care System

Health resources: mismatch in distribution of resources and need. Belarus is characterized by a publicly provided health care system with a generous benefit system and an oversupply of resources. To some extent the Belarus system is still characterized by the main features of the Semashko model, although important changes and reforms have been implemented in recent years.

- *The Semashko model.* The former Soviet model was composed of several key elements: management was highly centralized; health care was funded through general taxation, with basically no cost-sharing arrangements with patients; the budget for providers was not based on performance, but on strict input norms; all health care workers were public employees receiving a salary for their services; the provider network was publicly owned and composed of multiple layers of services; the model of care was hospital-based; no general practitioners, as all doctors were specialists; nurses, midwives and *feldshers* (staff with basic health training) had very limited skills and were in general underutilized.

- *Oversupply of staff.* The coverage of health services is widespread, and Belarus has one of the highest numbers of doctors per population in Europe and Central Asia Region. While official statistics indicate about 45 doctors per 10,000, about 27-28 doctors are directly involved in treatments while the rest are in sanatoriums, managers or trainers. This is an indication of the mismatch in skill mix that requires a large fraction of doctors to perform other non medical activities.
- *Geographic disparities.* Despite the large number of doctors, there are a number of ambulatories that have no doctors, suggesting geographic disparities in resource allocation. Allocation of doctors and medical personnel across regions is not uniform, ranging from 29 in Minsk-Oblast (Gomel with 35 doctors per 10,000 population is the next) to 79 in Minsk City. While these differences may be exaggerated because of patients' mobility (such as rural patients visiting hospitals in raion centers), they suggest problems in the system that respond to rigidities in the allocation rules.

Figure 15



such as living in an area subject to cold weather. Similarly, each of these populations may also exhibit a different ability to finance health care services. Thus, when comparing the number of doctors and the level of stunting among children under 5 (Figure 15), regions with higher levels of stunting—and presumably higher levels of health need—such as Gomel (18%), have the fewest number of doctors.

- *Inpatient stays.* This is an important dimension of health care, which signals the presence of inefficient treatment protocols and the use of hospitals as a safety net. Length of inpatient stay in Belarus is about 15 days compared to 16 for Russia, 12 in Latvia, about 10 in Poland and Estonia, and between 5 and 8 days for the European Union. While this may reflect the presence of social patients (see below), it clearly underscores efficiency problems in the use of health resources.¹⁷

¹⁷ Evidence for 2003 suggests that the length of stay in hospital is declining to 12.2 days.

Health care utilization: hospitals are used more by the poor than the rich, while ambulatory facilities are used more by the rich. This unexpected pattern of utilization is evident particularly in rural areas, reflecting accessibility issues with respect to primary care and the use of hospitals as a “safety net” rather than as a source for tertiary, specialized care..

- *Ambulatory care.* The fraction of individuals seeking ambulatory care is 47%, with higher utilization in urban areas. In rural areas, the utilization rate for the richest quintile is 31% higher than for those in the poorest quintile. In rural areas, despite free health care services, utilization may be affected by physical access to providers where better off households can afford the time and financial cost of transportation. On the other hand, the lack of significant differences in utilization in urban areas may reflect the relatively easy access (and probably better quality) in a system of publicly provided health care.
- *Hospitalization.* About 20% of individuals reported staying at hospitals during the last 12 months, but a higher utilization is found in rural areas (22%) than in urban (18%), in contrast to the pattern in ambulatory care. Also contrasting the findings on ambulatory care, people from the poorer quintiles are more likely to stay in hospitals (22%), although in rural areas a very equal pattern of utilization is found. Examining utilization for those in poor-health status only, we find that 40% stayed at the hospital, with slightly more in rural areas (41%). In addition, in rural areas the poor in bad health are more likely to be hospitalized than the better off. In urban areas there is no significant difference across quintiles.
- Why is the hospitalization rate higher for the poor? One explanation is the phenomenon of *social patients*: individuals that seek hospitalization as a means to cope with harsh weather periods. This is a pattern commonly found among the elderly in rural areas, particularly among those without support during the winter.¹⁸ To examine this phenomenon further, hospital utilization rates for the elderly were analyzed. The elderly have higher hospitalization rates (27%) than the average (19%), as can be expected. Most importantly, in rural areas, the elderly-to-average odds of being hospitalized increase with poverty, while the reverse occurs in urban areas. The social patients hypothesis may explain the pattern in rural areas assuming there is no need for drugs (as in fact, illnesses are not severe). In urban areas, however, social patients (if any) may be offset by the financial availability of the better off to pay for drugs if needed. In summary, hospital utilization reflects a good coverage of the health system, with relatively low inequality in utilization.

Public expenditures on health focus on curative, hospital-based care. Similar to the education sector, the state dominates the financing for health services as well. The bulk of health care financing is on hospital care, but given the utilization patterns discussed above, the benefits of hospital financing are actually distributed in a pro-poor way.

Total expenditures in health account for 5% of GDP, while this is below the government’s target of 7.5%, it is much more than that spent in other transition countries. In fact, Belarus spends

¹⁸ A marked seasonality has been observed in health care utilization, especially for in-patient care in rural areas that may not be entirely attributed to real morbidities. Rural areas have a growing share of the elderly although during harvest season their younger members (usually living in urban areas) stay with them. After harvest time, and particularly during the January-February months, pensioners go to hospitals reporting any symptoms and are admitted for several weeks, even if the morbidity does not require it. This anecdotal evidence indicates that hospitals have a safety net role in rural areas, which in fact underscores the need to better design efficient safety net mechanisms.

about US\$ 83 per capita and ranks among the highest in the ECA region, below Russia (\$133), Lithuania (\$156), Estonia (\$224) but much more than Ukraine (\$54) or Moldova (\$36).

As discussed the Belarus health system still emphasizes the curative side of health care, hence, concentrates most of the expenditures on hospital care. Between 2000 and 2002 little change was observed in the composition of public expenditures across providers. About two-thirds are allocated to hospitals (mainly in urban areas), about 14% to Polyclinics and ambulatory services, 7% to FAPs and other local health centers, 3% in epidemic and public health activities, and the rest (about 10%) on administrative and investment activities.¹⁹

Public expenditures on health benefit the poor relatively more. Belarus has a distinctive pattern of health expenditures compared to other transition countries in the region (Table 20). *First*, overall health expenditures are progressive, in the sense that the poor benefit relatively more than the better off. Individuals in the poorest quintile capture almost 23% of government expenditures, compared to only 18% for those in the top quintile. The concentration index takes a value of -.05 corroborating a pro-poor pattern in expenditures. A *second* important aspect is that between primary and hospital care, it is hospital care that is the more progressive intervention (concentration index -.06). This reflects several factors: the curative nature of the system where primary care is less utilized (and in fact less effective), the free delivery of services (except drugs), and the role of social patients among the poor.²⁰

Box 15: Main Elements of Belarus' Health Reform Program

Belarus' health care resources are distributed in a way which provides relatively good access to health care services across all socioeconomic groups and spending per capita across region is relatively homogeneous. Resources are not being used efficiently: hospital utilization rates also indicate that poorer people may tend to turn to inpatient care as a safety net rather than as a health resource. At the same time there continues to be mismatches across regions in terms of resource availability, the actual health care needs of the population and the financial capacity of households.

Recent reforms that were initiated aiming to improve the system, mainly addressing financing, effectiveness and delegation. This major initiative was piloted in Vitebsk and extended to other regions in 2002. In order to enhance efficiency the Vitebsk reform encompassed three major activities. *First*, financing was based on *capitation*: per case in hospitals and per population in rural areas. *Second*, the pilot started training General Practitioners to enhance Primary Health Care services. *Third*, providers were delegated funding and managerial decisions. Preliminary results from the pilot suggest that there is a stabilization of indicators, that is, there is no increase in morbidities. However, a comprehensive evaluation of the impact needs to be conducted.

¹⁹ The share of hospital expenditures may include the budget of polyclinics attached to them and hence, share of hospital care may be smaller than described here.

²⁰ Given that the Belarus system is publicly funded, to assess the impact of expenditures on the population, a expenditure tracking survey (PETS) could provide detailed and useful information to be used in efficiency-enhancing alternatives.

Table 20: Incidence of Public Expenditures on Health, by Provider, 2002

	% of total expenditures captured by quintile					Total Budget	Concentration Index
	Poorest	II	III	IV	Richest		
Hospital	23.6	20.7	19.3	19.2	17.2	528.9	-0.058
Polyclinic	19.6	21.1	20.5	19.4	19.3	173.0	-0.009
Total	22.7	20.8	19.6	19.2	17.7	701.9	-0.046

Source: HIES 2002

4.4 Private (Household) “Out-of-Pocket-Payments”

According to the Constitution, health care is free of charge, but even in this system of freely delivered health care services, patients still have to pay for some items. The limited budgets of health providers and recent changes in the regulations have enabled hospitals to charge for specific items such as hotel services (rooms with TV, food, etc) and for diagnostics and treatments that are approved by the specialist. In addition, drugs are not provided freely, except for specific vulnerable groups of the population. The Resolution 963 and additional amendments authorized social services (such as health) to provide fee-based commercial services for non-prescribed services or treatments (i.e. at the patients’ discretion). It is evident that these fees, which may be necessary from fiscal and efficiency points of view, may impose significant burdens on poorer people.

Health out-of-pocket payments (OOP) are small in absolute terms. In this system, and despite the high utilization rates, household health expenditures are relatively small. On average a household spends BYR 4,680 on health care and it represents 2.5% of their consumption value. For households this is small, even compared to items like alcohol and tobacco. The average Belarus household spends more on alcohol (BYR 5,200) than on health care, particularly in rural areas. Interestingly, OOP for health care represents a similar share of consumption across urban and rural areas and socioeconomic groups. Yet, qualitative evidence suggests that part of the reason for low absolute expenditures on health—especially for the poorer households—may reflect foregone use of health services rather than the low cost of services per se (Box 16).

Box 16: Burden of Health Costs Can Be High

Being poor means that for a couple of years my own income is not enough to make both ends meet. My former husband helps (he pays alimony). My parents also help because our “free” medicine has taken up all my savings. Last year I had a surgery. Up till now I still need to take medicines. I spent a lot of money on initial tests. And it was done in a public hospital! It happened on August 2002 just after the government had adopted the resolution on introducing fee-based services in public health facilities. You have to pay for practically all tests, for many procedures; besides I had to buy syringes, surgical threads and pharmaceuticals for post-surgery rehabilitation. I have recently spent two weeks in hospital. My parents gave me 200 000 BYR for medicines. My salary ranges from 90 000 BYR to 160 000 BYR while a three-months course of therapy costs 189 000 BYR. I need to eat something as well. (Minsk Oblast)

Of course, I would like to undergo some treatment, but today you have to pay for everything but I do not have money. Therefore, I do not go for health care and try to survive without doctor’s help. (Gomel)

I do not go for health care. If the worst came to the worst I would try to get medical services via my acquaintances as I used to work as a driver of an ambulance car.

In hospital, even if you are dying, a nurse will not come to you unless you give her a chocolate bar or any other gift.

Source: Interviews June 2003

Are health expenditures catastrophic in Belarus? We examined the effects of OOP on poverty by comparing poverty estimates if health expenditures were not needed and the savings were instead used in welfare-increasing goods. Table 21 presents poverty estimates for the pre-payment case (where OOP are used on other consumption items) and post-payment case (where consumption decreases because of expenditures on health). Poverty incidence (headcount) would be reduced by almost 9% (1.6 percentage points) and extreme poverty by less than 7%. No significant effect is found on other poverty measures. These numbers are not small, and in fact are very similar to the impact of avoiding alcohol consumption.

Poverty measure	Pre-payment	Post-payment	Effect on poverty	Relative change
Headcount	19.0%	20.6%	1.6%	8.6%
Poverty gap	4.0%	4.3%	0.3%	7.6%
Severity of poverty	1.3%	1.4%	0.1%	7.3%

4.5 Policy Recommendations

The socio-economic disparities in health status and health care utilization indicate the need for reform to the way health care is delivered and resources are allocated. The government of Belarus has already adopted measures to increase efficiency of the system and enhance its effectiveness. There is need to evaluate the initial impact of the reforms with particular attention to whether the reforms have had any unintended consequences in terms of worsening poverty or inequality, or whether they have gone far enough. Addressing these concerns could be integrated into the roll-out of the reform program itself and need not prevent the government from continuing a carefully managed program to improve the effectiveness of the system.

- *Lifestyle patterns.* The levels of alcohol and fat intake among the poor, while lower than for the rich, still represent an important lifestyle risk factor since they exceed internationally recommended levels and can constitute a significant financial burden for the poor. Evidence from several countries suggest that preventive activities that improve lifestyle patterns can both reduce specific morbidities and their associated health care costs. Besides information and education campaigns, instruments that affect the incentives for certain lifestyle patterns can be adopted. Price and tax policies regarding alcohol and tobacco would support the education effort and make it sustainable over time (in contrast to the effective but short lived campaign of the 1980s). Detailed analyses of households' responses to prices are needed for better designed policies.
- *Revising resource allocation rules.* Despite good health coverage, geographic inequalities are observed. Allocation of budgets and medical resources across regions is very uniform but the small variation remaining suggests that regions with more need (higher stunting rates) or with less ability to pay (higher poverty incidence) *do not* have higher levels of medical personnel. Regulations that affect allocation of staff and resources across regions must take into account both need and ability to pay in order to protect the health of the most vulnerable.
- A missing dimension in this analysis is regarding *quality of services.* Health systems in countries facing severe fiscal strain, like Russia in 1998, saw the quality of services significantly reduced by the limited funding for medicines, materials or utilities. A study is called for which focuses on the current quality of health care services and its determinants.

- *Targeted health assistance for the poor.* Household expenditures on health care are relatively low. These low expenditures, however, have important effects on poverty. Out of pocket payments for health care, when shifting resources from consumption, increase the poverty rate by almost 9%. In a system that may be increasingly relying on households' contributions, mechanisms to financially protect the poor from catastrophic health expenditures need to be in place. One option would be for government to commission a study exploring the feasibility of alternative mechanisms which provide protection to the poor in the face of potentially catastrophic health costs.

Chapter V. Social Protection and Poverty*



The Republic of Belarus has a well-developed system of social support. More than 14% of GDP or 31% of the consolidated budget expenditure in 2002 were channeled to social assistance and insurance programs. In addition it is estimated that quasi-fiscal social transfers by enterprises were equivalent to about 2-3% of GDP. In the absence of these direct social protection transfers, poverty would have been higher. Social transfers are generally distributed progressively, but we found that several programs inadequately cover the poor, while entailing substantial leakage to the non poor.

The social protection system is almost universal, covering about 4 in 5 persons. Basically, benefits accrue to both poor and rich households, to those who are in need and those who can fend for themselves. Due to this large coverage, most social protection benefits are small compared to household consumption needs. Pensions are found to be the most adequate benefit, in part because of a strong policy of indexing pensions to real wages. Child allowances are also found to provide adequate protection, but they reach only 30% of poor households.

To generate a larger reduction in poverty within the same resource envelope, there is scope for rationalization of privileges, consolidation, and improvements in social assistance program design. The government has already launched a bold program of phasing out untargeted privileges. It has also piloted a Targeted Social Assistance (TSA) program. The innovations in means testing, targeting and one-stop action initiated under the Targeted Social Assistance (TSA) program are in the right direction and could be expanded further.

5.1 Overview of the Main Social Programs

The details of Belarus' many social programs and policies, including entitlement criteria, recipients, funding and other relevant issues are discussed in the technical background paper on this topic in Volume II of the report. In this section we provide an overview.

Similar to other transition countries, social protection programs in Belarus are regulated through a complex system of laws and regulations. These programs have several components: (i) *social assistance* programs, such as family and child allowances; housing allowances; targeted social assistance benefits; (ii) *subsidies* (both explicit paid by the government, and implicit borne by the producers of the goods and services); (iii) *social privileges* (discounts on utility tariffs, transport fees, and so on) designed to help individuals or households cope with income risks or situations of chronic poverty; and (iv) *social insurance* schemes, such as mandated insurance for unemployment, old age (pensions), disability, survivorship, sickness, etc., which are designed to help mitigate income risks. The social assistance system is characterized by a large number of categorical benefits and subsidies organized into at least 77 privileges, at least 34 categorical groups and at least 43 different subsidies. Over 80% of the country's population are receiving some sort of benefit (excluding pensions, scholarships and the like). About half the population receives social assistance benefits, but the average benefit is only around BYR 6,000 per month (or US\$ 3). Even this low average is influenced by a few high values (reaching up to more than BYR 100,000 per person), with the median transfer around BYR 3,000 – 4,000. Several social benefits are linked to the Budget of Subsistence Minimum (BSM) which is recalculated by the MLSP on a quarterly basis.

* This chapter based on the findings reported in Kuddo and Tesliuc (2003).

The programs are regulated by at least 100 laws, 11 ordinances and 70 decrees by the President of the Republic of Belarus, over 900 resolutions by the Governments of the ex-USSR, ex-Belarusian Soviet Socialist Republic and the Republic of Belarus, about 50 regulatory acts by ministries, and over 60 decisions by local governments. The programs are also financed from multiple sources: state and local budgets, Social Protection Fund, Employment Fund, and resources of public enterprises and organizations. Program administration is fragmented. Different ministries and administration levels are responsible for separate programs, various benefits and social services.

In addition, some of the prices on goods and services are still controlled by the administrative pricing policy. The Law “On Pricing” from May 10, 1999 is in effect. Prices are a mixture of state-controlled and free prices. A total of 19 state agencies, six regional executive committees and the Minsk City Executive Committee are empowered to oversee the pricing of an overly broad range of goods. Approximately 3,000 enterprises are presently included in the national and regional lists of monopolists and the prices for the goods and services they produce are regulated in accordance with anti-monopoly legislation. An average of 81 % of goods is subject to state prices control. The survey of economic entities revealed that in 2002, 66 % of the respondents were affected by pricing controls to a varying degree.

This complex regulatory and delivery system results in rather high expenses for the social security system.

A large share of GDP is redistributed through social programs. Annual allocations for various social transfers to the population amounted to 14.5 % of the GDP (Republican and local budget transfers to the population, and expenditures of the Social Protection Fund), and 31.4 % of the general budget in 2002. By international standards, this is a considerable amount. Quasi-fiscal transfers via enterprises also continue to play an important role in social protection. The value of social expenditures carried out by enterprises according to explicit or implicit Government mandates are estimated at about an additional 2-3 % of GDP in 2002.

5.2 Assessing the Poverty Impact of Social Protection Transfers

The poverty impact of social assistance programs is often evaluated using three common measures – coverage, targeting, and effectiveness. *Coverage* or *outreach* is the share of the poor who receive the benefit; *targeting* is the share of expenditures from the benefit that is received by the poor; the efficiency of targeting of social assistance can be assessed by looking at the two types of targeting errors: non-payment to poor households (exclusion errors) as the under coverage rate or the percentage of poor who do not receive social assistance, and payment to non-poor (inclusion), the leakage rate or number of non-poor recipient households as a percentage of all recipient households; and *effectiveness* or *adequacy* is the share of the benefit relative to household expenditure. In the section below we try to assess these issues separately, but given that the dimensions are closely related to each other, the sub-sections sometimes overlap.

In addition to addressing the above issues as we assess the poverty impact of social transfers, we will also look at work incentives which will be an important issue if cash benefit programs provide a reasonable level of benefit and income thresholds (means tests) are used for determining program eligibility. Keeping the level of benefits low (relative to the average or minimum wage) will create fewer work disincentives, but will also be less effective in pushing households out of poverty. The duration of benefits is also a key question, as is benefit dependence.

(a) Coverage or outreach

From the wide range of cash benefits and social services included in the system of social protection, we focus our analysis on pensions, Chernobyl benefits, child allowances, scholarships, unemployment benefits, privileges and a set of various benefits with smaller coverage grouped within one category, “other state subsidies and benefits” (e.g. maternity, burial, etc.). To assess the extent of informal networks in helping households to mitigate risks we look also at *remittances*, the financial assistance the households receive from relatives or friends not living with family or from charitable organizations.

Belarus’ social protection interventions have extensive coverage. According to the 2002 HIES, social protection transfers reach 81% of the Belarusian households (Table 22). *Privileges* have the highest outreach, 61% of the households receiving at least one of the following privileges or discounts: meals, public transportation, housing and utilities allowances, fuel, electricity discounts, telephone, vouchers to holiday centers, medicines, children day care. *Pensions* have the second largest outreach, 55% of households benefiting from at least one of the main five types of pensions (old age, disability, survivor’s, military or social). *Child allowance* is the next major program with large participation, one fifth of the population living in households benefiting from child allowance. Other programs with moderate coverage of the population are *Chernobyl benefits* and *scholarships*, each benefiting almost 7% of the population. The *Targeted Social Assistance* (TSA) program, at the time of the survey, was implemented on a pilot basis, with low budget and coverage.

Table 22. Outreach of Main Social Protection Programs, 2002

Type of Benefit	Outreach of SP benefits		Benefit Per Recipient HHs. Rubels IV O-2001			Importance
	% of Population Covered by Benefits*	% of Households Receiving Benefits	Average Benefit per Household	Median Benefit per household	Coefficient Of Variation	Share in total SP Transfers** %
Social Protection, o.w.	81%	81%	67,030	60,746	0.62	100%
Pensions	46%	55%	81,593	67,719	0.29	82.0%
Chernobyl benefits	7%	8%	1,510	1,139	0.94	0.2%
Child allowances	19%	12%	23,012	20,491	0.61	5.1%
Other state subsidies and benefits	9%	8%	13,985	11,453	1.66	2.0%
Scholarships	7%	5%	12,510	9,404	0.66	1.1%
Unemployment benefits	3%	2%	5,692	3,914	2.91	0.2%
Privileges	62%	61%	8,235	2,691	2.93	9.3%
Remittances	43%	39%	16,731	8,600	2.73	

* Beneficiary Households weighted by household size; ** Social Protection Transfers without remittances

Source: Belarus Household Income and Expenditure Survey, 2002

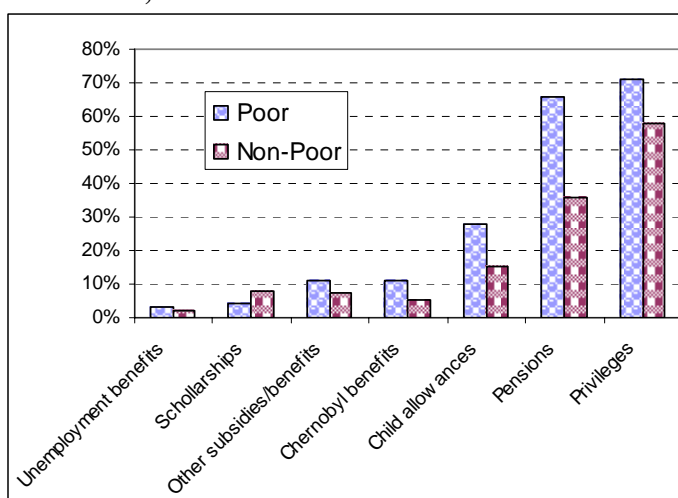
Private transfers are also important, with 39% of households counting on remittances from friends or relatives to cope with income, health, weather or other shocks that may affect the household’s ability to smooth consumption. Remittances are equivalent to 12% of total social protection transfers.

Belarus’ coverage of the population with pensions is the same as in Poland, Hungary, Romania or Bulgaria but there are important differences with regard to other benefits. While in the selected countries less than one third of the households depend on social assistance and other non-contributory benefits, in Belarus over 65% of the population receive at least one type of privilege, price discount, subsidies, Chernobyl benefits or financial assistance. The child allowance program, however, has a very low coverage in Belarus compared to other countries, except Serbia. This may be due to the fact that in Belarus the child allowance for children over three

years old is means tested while in other countries child or family allowances tend to have a universality feature. The low take-up ratio for child allowance could also be a sign of relatively low benefit level compared to the cost for the applicants.

Whatever the assumption, privileges have the highest coverage of the poor followed by pensions and child allowances. In assessing how well social transfers reach the poor per se, a first step involves accurately identifying *which households would fall below the poverty line before receiving these transfers*. The aim is to determine what household welfare would have been without government interventions. We experiment with three possible counter-factuals for the without-transfer welfare level: i) the actual or post transfer consumption (a hypothesis that presumes a total crowding out of social protection, that is, without social protection nothing would happen to consumption as households will work more hours or supply more labor and/or receive help from relatives or friends); ii) the actual consumption minus 50% of the transfers (a hypothesis that presumes that the net gain out of social protection is equivalent to 50% of the transfers, that is, without the transfers consumption will be the post transfer consumption less 50% of the transfers); and iii) the actual consumption less the entire amount of the transfer (a hypothesis that presumes there is no crowding out, that is, in the absence of social protection transfers the household will do nothing and their consumption will be diminished by the entire amount of the transfers).

Figure 16: Coverage of the Poor vs. Non-Poor Households, 2002



Source: Belarus Household Income and Expenditure Survey, 2002

Despite public belief that privileges are untargeted and do not necessarily have a poverty alleviation focus, the survey data suggest that they are the benefits with the highest coverage of the poor (Figure 16), between 63% to 73% of the poor population (under the assumption of no crowding out) benefiting from them. Equally true is that this high coverage of the poor is achieved at the cost of high inclusion error: almost 60% of the non-poor population also receive privileges.

Gaps and duplication exist in program coverage. Overall, the non-pension social protection system has good coverage of the poor and moderate overlap among programs (Table 23). Four out of five poor households are covered by the system, 40% of them receiving multiple social assistance benefits. However, the

Table 23. Gaps and Duplication in Non-Pension Social Protection Programs

Share of Population Benefiting from, %	Poor	Non poor	Total
No benefit	19	34	29
Only one benefit	50	50	50
Cernobil benefits	2	2	2
Child allowances	6	5	5
Other social assistance	1	1	1
Privileges	41	42	42
Multiple benefits	31	17	21
Total	100	100	100

Source: Belarus Household Income and Expenditure Survey, 2002

system has significant leakage to the non-poor. Two in three non-poor households are covered by social assistance programs, with one quarter of them cashing in multiple benefits. At the same time, among the poor “rejected” by the system, we found households headed by individuals with low education, headed by able-bodied individuals without children or living in smaller households. Pensioner-headed households are less likely to be left out compared to workers. Among two poor households with similar characteristics, the chance of being covered by social assistance programs is similar for those headed by males vs. females, or among those living in rural vs. urban areas.

(b) Pro-poor targeting

Transfers are in general very progressive. We also investigate how effectively the social protection system redistributes income, i.e. transfers resources from the rich to the poor. If the poorest groups receive a larger share of program benefits than the share of the group in total population, the transfer is well-targeted and *highly progressive*. A social program that transfers more than 20% to the poorest quintile will be highly progressive. If the poorest groups receive a larger share of program benefits than the share of the group in total consumption, but less than the share of the group in total population, the transfer is *mildly progressive*. A social program that transfers 8-20% to the poorest quintile can be regarded as mildly progressive. If the poorest groups receive a smaller share of program benefits than the share of the group in total consumption, the transfer would be termed regressive. Progressive social protection programs reduce inequality, and contribute to the reduction in poverty as well.

Most social protection programs in Belarus are highly progressive. We performed sensitivity analysis of these results using different counterfactuals of pre-transfer consumption (based on current consumption, consumption - 50% of transfers, consumption - 100% of transfers). The poor get a higher share in population than the non-poor for the last two counterfactuals, and slightly more than their share of population – which means highly progressive still – if we rank households on post-transfer consumption. Among the programs with the best targeting performance are the child allowances, pensions and Chernobyl benefits. Scholarships have the poorest targeting performance (Table 24).

**Table 24. Benefit Incidence Analysis of Main Social Protection Programs
(share of program benefits by consumption group)**

	Total	Poverty status		Without transfers Quintiles*				
		Poor	Non poor	1- Poorest	2	3	4	5- Richest
Distribution of SP Transfer by Group								
Social Protection	100%	50%	50%	34%	23%	18%	13%	11%
Pensions	100%	52%	48%	35%	24%	18%	13%	10%
Chernobyl benefits	100%	50%	50%	33%	25%	18%	12%	12%
Child allowances	100%	52%	48%	37%	23%	19%	14%	7%
Other state subsidies and benefits	100%	35%	65%	26%	17%	20%	17%	20%
Scholarships	100%	16%	84%	8%	13%	17%	32%	30%
Unemployment benefits	100%	42%	58%	17%	30%	16%	6%	31%
Privileges	100%	41%	59%	27%	20%	19%	17%	17%
Remittances	100%	16%	84%	9%	12%	20%	20%	39%
<i># of Individuals in the group</i>	<i>100%</i>	<i>33%</i>	<i>67%</i>	<i>20%</i>	<i>20%</i>	<i>20%</i>	<i>20%</i>	<i>20%</i>
<i>HH Consumption</i>	<i>100%</i>	<i>17%</i>	<i>83%</i>	<i>8%</i>	<i>14%</i>	<i>18%</i>	<i>23%</i>	<i>36%</i>

Note: *welfare groups are based on a counterfactual consumption (HH consumption - 50% of SP transfers)

Source: Belarus Household Income and Expenditure Survey, 2002

Targeting performance not so good compared to other countries. In other countries in the region, targeted poverty-reduction programs achieve higher targeting performance than social assistance programs in general in Belarus. In Armenia, Romania, Kyrgyz Republic or Serbia, the share of benefits captured by the poorest quintile goes from 50% to 65% of total spending under the program. Some of these programs are means-tested: they restrict benefits to households whose income or assets are above a certain threshold (Serbia, Romania, Kyrgyz). Other programs use proxy-means test – household scores computed based on a formula that takes into account a few household characteristics highly correlated with poverty status – to select eligible households. Such methods can increase the targeting performance of social assistance benefits.

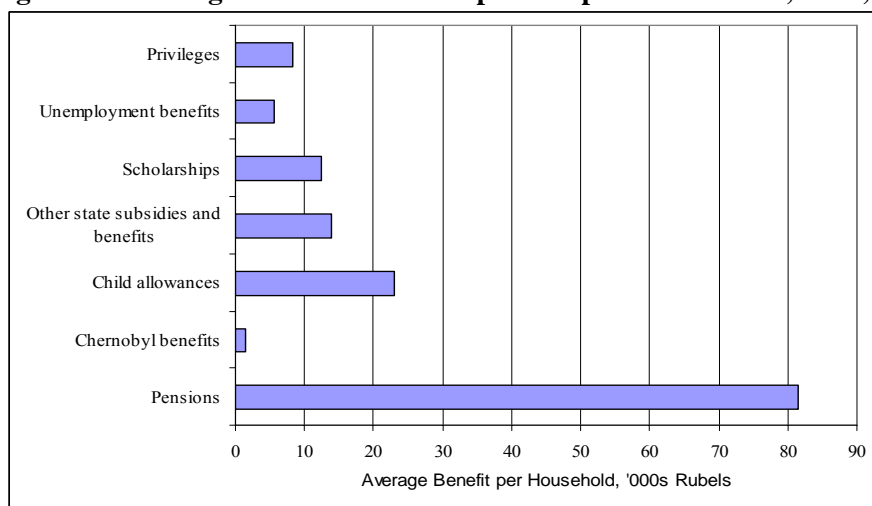
The preceding analysis suggests that in spite of the high volume of resources channeled through the social protection system, the government's efforts appear to be weakly targeted towards those in need. The Targeted Social Assistance program – the only program that attempts to focus resources to the neediest households – accounts for too small a share of budgetary resources to make a difference. Most other programs use categorical targeting criteria, with less efficient outcomes.

(c) Poverty reduction effectiveness

The importance of Belarus' social protection programs for poverty reduction comes not only from its extended outreach, but from its sizable contribution to the income of the poor and extreme poor.

There is considerable variation in the average benefit level per household across programs (Table 22 above and Figure 17 below). *Pensions* provide the highest average benefits for households, consistent with their role to provide replacement incomes contingent on socially insured risks. They represented about 82% of the total social protection transfers received by households in 2002. The *child allowance* is the next most important household benefit both in terms of absolute amount and relative share in total transfers. *Privileges*, as suggested by the household's own estimation of the financial value of various privileges, discounts and subsidies, are not very important in absolute terms, but because of their pervasive coverage, they account for a large share in total transfers after pensions (above 9% of total social protection transfers). A

Figure 17. Average Size of the Benefit per Recipient Household, BYR, 2002



Benefits in constant prices of IV Q 2001.

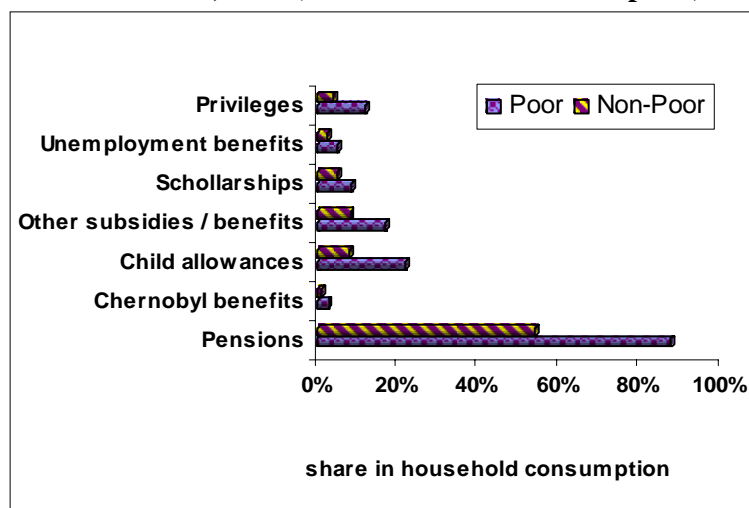
Source: Belarus Household Income and Expenditure Survey, 2002

sharp decrease in the share of population covered by *Chernobyl benefits* can be noticed in 2002, following a thorough reform of these benefits in 2001. With 50% less beneficiaries in 2002 compared to 2001, the relative share of these benefits in total household's social protection transfers represented less than a half percentage point.

In contrast, there is little variation of benefit levels *within* programs (for example, between the pension receipts of different pensioner households), with the exception of privileges and unemployment benefits. *Pensions* are distributed rather evenly across recipient households, the variation in terms of average pension benefits per household being very low. While pensions reflect length of service and wage level prior to retirement, benefits at the top and the bottom of the pension distribution have indexation coefficients resulting in a compression of the distribution. This could be perceived as socially unfair especially for old age pensioners with longer service records and could weaken worker incentives to contribute to the system. Small differentiation in pension benefit level has been observed in all the CIS countries. *Privileges* exhibit the largest variation among recipient households. In 2002 a household received on average about BYR 8,000 per month (US\$ 5.5) from privileges, however 50% of the recipient households benefited from less than one third of that amount. *Unemployment benefits* display large variation among households consistent with the program's design that intends to cover lost wages, which are expected to differ from one individual to another.

Social transfer benefits are more important for the poor vs. the non-poor. The social transfers and privileges, especially pensions, account for a larger share in the consumption of the poor than for the non-poor (Figure 18).

Figure 18 Adequacy of Program Benefits, Poor vs. Non-Poor Households, 2002 (benefits as a % of consumption)



Source: Belarus Household Income and Expenditure Survey, 2002

The welfare of the poor and extreme poor is crucially dependent on social protection transfers. To illustrate this, Table 25 compares the income from social transfers with the household consumption before the receipt of social protection benefits. Pensions, social assistance benefits and privileges account for 27% of average household consumption, but for 45% of the consumption of the *poor* and 52% of the consumption of the *extreme poor*. Assuming that 1 Ruble reduction in the transfer entails a similar reduction in household consumption (there is no mitigation or coping), social protection benefits represent 59% of the pre-transfer

consumption of the poor, and 70% of the non-poor. Assuming that 1 Ruble reduction in the transfer entails a 0.5 Rubles reduction in household consumption (there is some coping), social protection benefits represent 62 % of the pre-transfer consumption of the poor, and 78 % of the extreme poor.

Table 25. Importance of Social Protection Benefits for the Consumption of Poor and Extreme Poor Households

	Total	Cs after receipt of SP benefits		Cs - 50% SP		Cs - 100% SP	
		poor	extreme poor	poor	extreme poor	poor	extreme poor
Household Consumption, o.w.:	100%	100%	100%	100%	100%	100%	100%
Social Protection, total	27%	45%	52%	62%	78%	59%	70%
pensions	22%	34%	37%	53%	66%	51%	61%
Chernobyl benefits	0.1%	0.1%	0.2%	0.1%	0.2%	0.1%	0.1%
child allowances	1.4%	5.5%	9.0%	3.3%	4.4%	2.5%	2.7%
other state subsidies and benefits	0.5%	0.7%	0.8%	0.9%	1.2%	0.9%	1.0%
scholarships	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
unemployment benefit	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%
privileges	2.5%	4.2%	5.2%	4.7%	5.6%	4.3%	4.7%

Note: Cs stands for consumption. Cs - 50% SP is the counterfactual consumption determined from current (observed) consumption less 50% of the social protection transfers. Cs - 100% SP is the counterfactual consumption determined from current (observed) consumption less 100% of the social protection transfers.

Source: Belarus Household Income and Expenditure Survey, 2002

In the absence of social protection benefits, poverty would increase substantially (Table 26). Assuming that 1 Ruble reduction in the transfer entails a 0.5 Rubles reduction in household consumption (there is some mitigation or coping), for example, there would be 1.8 times more poor people, and 2.8 times more extreme poor people. Distribution-sensitive poverty measures, such as the poverty gap or severity, will increase even more.

Table 26. Simulated Increases in Poverty in the Absence of Social Protection Transfers

	Observed Poverty	Cs - 50% SP		Cs - 100% SP	
		Counterfactual Poverty	Counterfactual/O bserved	Counterfactual Poverty	Counterfactual/O bserved
Total Poverty					
Poverty Headcount (P0)	18.5%	33.2%	1.79	45.0%	2.43
Poverty Gap (P1)	0.037	0.101	2.76	0.217	5.94
Consumption gap of the poor	20%	30%	1.54	48%	2.45
Poverty Severity (P2)	0.011	0.046	4.09	0.149	13.28
Extreme Poverty					
Poverty Headcount (P0)	7.0%	19.5%	2.77	33.9%	4.82
Poverty Gap (P1)	0.012	0.057	4.69	0.169	14.00
Consumption gap of the poor	17%	29%	1.69	50%	2.90
Poverty Severity (P2)	0.004	0.026	7.03	0.121	33.03

Note: Cs stands for consumption. Cs - 50% SP is the counterfactual consumption determined from current (observed) consumption less 50% of the social protection transfers. Cs - 100% SP is the counterfactual consumption determined from current (observed) consumption less 100% of the social protection transfers.

Source: Belarus Household Income and Expenditure Survey, 2002

Which programs are most efficient at protecting the poor against the risk of poverty? One way to focus on the poverty effectiveness of various programs is to estimate the amount of resources spent in order to reduce the poverty gap of the program beneficiary by 1 Ruble (Table 25). A cost-benefit ratio is thus computed for each program, where (i) the program benefits were measured as the reduction in the poverty gap due to the program; and (ii) the program costs are

the total receipts under the program²¹. The resulting ratio gives the numbers of Rubles spent per 1 Ruble reduction in the poverty gap (Table 27). The lower the figure (preferably close to one), the better is the outcome. Assuming the targeting performance would not change with the size of the program, the Government may reduce poverty keeping the same level of social protection spending by transferring resources from programs with higher cost-benefit ratios toward programs with lower ratios.

The analysis suggests that the child allowances and pensions are the best instruments from the set of current programs to fight poverty and extreme poverty. Scholarships and the unemployment benefits are the least efficient means to reduce extreme poverty.

**Table 27. Cost-Benefit Analysis of Selected Social Protection Programs
of Rubles transferred by the program/ 1 Ruble reduction in poverty gap**

Total Poverty	Total Poverty	Extreme Poverty
Social Protection	2.0	2.9
Pensions	2.0	3.0
Chernobyl benefits	3.9	9.7
Child allowances	1.7	2.8
Other state subsidies and benefits	4.3	9.6
Scholarships	7.7	28.9
Unemployment benefits	3.0	10.2
Privileges	3.4	7.0
Remittances	4.5	8.6

Source: Belarus Household Income and Expenditure Survey, 2002

None of the social protection programs implemented in Belarus in 2002 are close to the “perfect program” benchmark in terms of coverage or targeting. The indicators of coverage, absolute target incidence, and relative target incidence (importance/adequacy) all reveal important information about the effectiveness of the programs. This section seeks to combine those multiple indicators for a more comprehensive review of these programs, in particular with respect to their effectiveness in reducing poverty. Figure 19 plots in a single graph the three related concepts of coverage, absolute target incidence, and adequacy for various social protection programs based on a simulated model that classifies the poor based on a counterfactual of consumption (i.e., in the absence the transfers). The x-axis presents the coverage of the poor. The share of total benefits received by the poor is plotted on the y-axis (absolute target incidence). Adequacy is captured by the size of the “bubbles” in the graphs.

A “perfect” program would be located on the upper right-hand side of these graphs, with a large bubble (equal to the size of the poverty gap before the transfer). None of the programs appear to meet the “ideal” criteria. This is not a deficiency of the Belarus social protection system; such programs are difficult to design and implement. However, the more programs are close to that quadrant, the better the social protection system is at reducing poverty efficiently, that is minimizing the amount of budgetary resources spent for one Ruble reduction in the poverty gap.

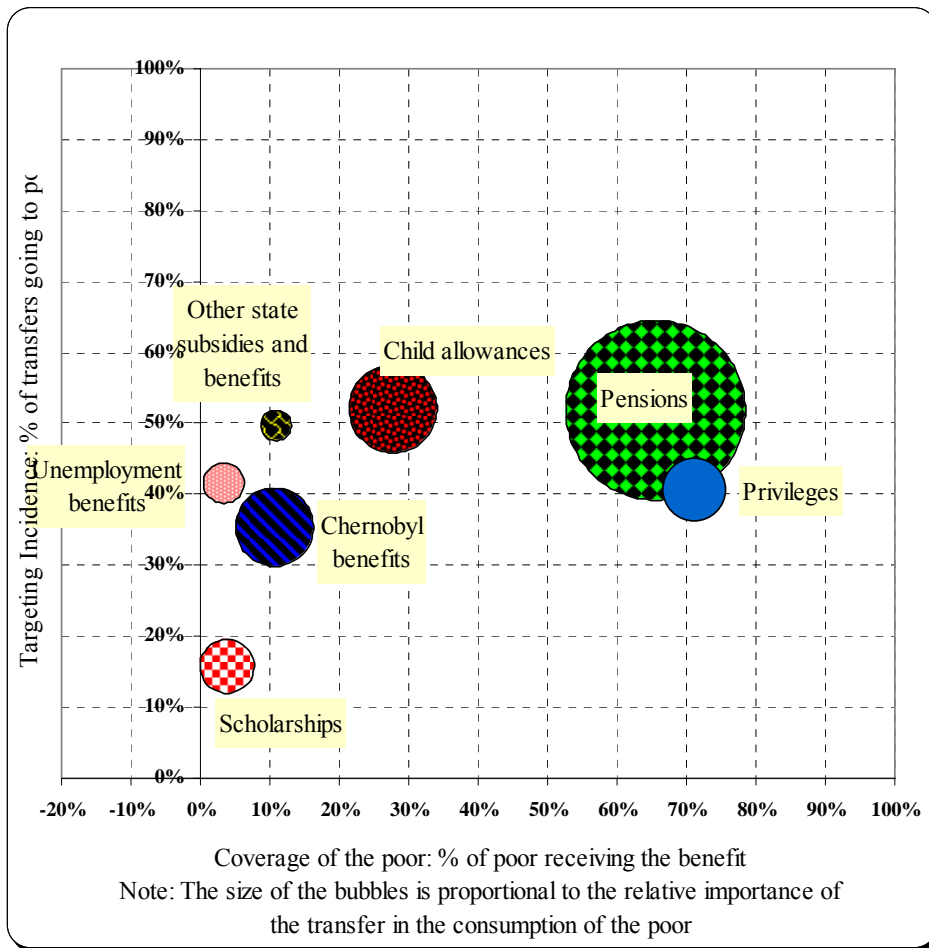
²¹ Due to limitations in the HIES data, the program cost includes only the amount of benefits received by the beneficiaries (as reported or assessed by the beneficiary). This means that neither administrative costs nor other take-up costs (registration costs, travel to the social assistance office, etc.) are taken into account.

From a poverty alleviation perspective, pensions have an important role in mitigating the risk of poverty. A reduction in the pension adequacy may result in a large number of poor pensioners, given that pensions constitute the principal income source for this group, while other sources of income are almost non-existent (unlike in most other transition countries).

Child allowances and other social assistance benefits have the best targeting performance, but the benefit adequacy of child allowances is smaller, and their coverage of the poor is low. Unlike them, untargeted programs such as privileges have larger coverage of the poor. The least contribution to the poverty reduction agenda are from the scholarships. As discussed in an earlier chapter, a reassessment of the system may be warranted, to better target it toward the poor in order to break the inter-generational transmission of poverty.

Figure 19. Adequacy of Program Benefits, Poor vs. Non-Poor Households, 2002

Overall effectiveness of main social transfers: coverage of the poor, targeting of funds to the poor and importance of benefits in their consumption



Source: Belarus Household Income and Expenditure Survey, 2002

5.3 Improving the Efficiency of Social Transfers

In recent years, the Government of Belarus has taken important steps to reforming the existing social assistance system. We focus on two major examples here: the Targeted Social Assistance Program (TSA) and the reforms to generalized utility subsidies.

Targeted social assistance pilot proved to be promising. Starting from January 2001, a new system of targeted social assistance (TSA) was introduced. In comparison to the previous system, TSA is focused on assistance to those families that fall short of a certain guaranteed minimum income (GMI) per family member and fulfill a large number of requirements and conditions. The Government has simultaneously started to revise the existing – categorical – system of social benefits. At first, guaranteed minimum income (GMI) was set at 50 % of the crisis (subsistence) minimum. Beginning October 2001, it was increased to 60 % of the crisis minimum. The increase in the GMI has turned out to be unsustainable. During the first 9 months of 2002, due to absence of the working mechanism for redistribution in some regions, the available resources were already overspent. This raised questions about the sustainability of the system and about the definition of the eligibility criteria.

As a response to these questions, following the Resolution of the Council of Ministers of Belarus “On Measures for Unified Targeted Social Assistance System Implementation” issued on February 11, 2002, the social assistance pilot was carried out in the Osipovichi district, Mogilev region, to appraise the approaches incorporated in the Strategy for the Implementation of the Unified Social Assistance Program.

- *Level of benefit.* The new draft decree of the Cabinet of Ministers establishes the threshold for the targeted social assistance as 60% of the subsistence minimum, and the benefit level is determined as the gap between the actual per capita income of the household and the established threshold.
- *Duration.* The maximum duration of benefit payment is established at 6 consecutive months following the date of application.
- *Eligibility criteria.* The basis for income calculation is total household incomes during the last six months prior to submission of application. An employment test is applied, e.g., targeted assistance is not provided to non-working able-bodied population who are not registered at the national employment services (except citizens who take care of a child under 3, disabled child under 18, disabled first group or elderly household members at age 80 and above; etc.). Other excluded categories include, for example, households in possession of land but not utilizing it for agricultural production.

Several lessons have been learnt through the implementation of the pilot program.

- The pilot confirmed that the system of income/means testing is difficult to implement because of flaws in evidence presented by the applicants. Assessment of incomes especially from non-wage and/or from informal sources might still be one of the major problems in evaluating the real welfare status of households. Nonetheless, means testing still constitutes a better way of targeting than relying on categorical or geographic criteria.
- Also a unified application form has been introduced, and a “one-stop shop” approach was applied to certain benefits. The benefit was administered by the same social service, e.g., no additional staff was hired or new units created. The pilot also confirmed that the administrative burden and administrative costs of the social services related to the introduction of TSAP did not increase, partially due to the fact that the eligibility criteria were unified, and a one-stop approach was applied.
- For the first time, the equivalence scale was used to calculate the level of per capita household incomes. However, most applicant families were living in dwellings (houses)

without any modern conveniences, and thus common consumption of especially utilities is not so typical to these families.

- Although no family was denied from the benefit due to “excessive” assets in the family, the experience of the pilot showed that the criteria, such as the year of purchase of expensive durables, were not precise enough to judge about the informal and unregistered incomes of the household.
- An evaluation of the economic potential of the household, e.g. how active the able bodied family members are themselves to improve their living conditions, as a tool to assess the status of eligibility, also provided a valuable lesson.
- The pilot also confirmed that there is a need for professional social workers to assist the clients and monitor the actual status of applicant or beneficiary families. Although social workers are visiting the families of beneficiaries, their authority is quite limited and undetermined.

Utility cross-subsidies are being reduced gradually. Cross-subsidization of municipal services is still common in Belarus: firms are charged for utilities at higher rates than domestic consumers. Reduced prices and tariffs on energy for some categories of consumers (mainly households) means increased costs of energy inputs for other categories (primarily industrial producers). Cross-subsidies have negatively affected both the enterprises of the fuel and energy sector. In 2001, the burden of subsidies on heat energy, electricity and gas, shifted from households to industrial producers constituted: BYR 227.5 billion for heat energy, BYR 188.9 billion for electricity, and BYR 116.2 billion for gas. The level of compensation from the average weighted tariffs for utility services supplied to households in January-December 2001 made up only 23% of the estimated real costs of these services for 2001.

- The government is in the process of phasing out cross-subsidization of consumers of energy resources. From the beginning of the 2002/2003 heating season in November, the government finally started to move on with utility tariffs reform. Average utility prices grew by 190% during 2002, and utility payments reached the level of 10% of consumption expenditures by the end of the year (6 % on average in 2002), compared to only about 4.3 % in 2001.
- Reduction of cross-subsidies are expected to go hand in hand with the adequate growth of household incomes relative to the increase of prices (tariffs) on utilities. The government is expecting that in 2001-2005, real household incomes will grow by 58-63 %, and real wages by 80-85 %, which would be sufficient to offset the impact of the utility tariff increase. This direct comparison between wage increases and utility increases on the grounds of poverty reduction may, however, once again jeopardize the viability of enterprises since these wage increases are largely brought about via administrative wage increases not linked to productivity increases.
- A more appropriate social protection measure in response to the reduction of utility subsidies is the means-tested housing subsidy (primarily to defray the cost of utilities for up to 3 months in the year) introduced by the government in 1994. Since the utility tariffs were administratively controlled by the Government, and were kept low until 2002/3, very few households applied for the benefit. For example, between January-August 2002, 36,400 households received the housing allowance, on average BYR 8,800 per household per month (around US\$ 4). With the shift in policy to reduce the untargeted generalized price subsidy, we can expect the applications to this program escalating. The relevant government decree

on housing subsidies was updated on November 14, 2002, and the family share of monthly utility payments for housing subsidies was raised from 15 to 25 % of total household income.

- The means-tested housing subsidy system allows a “price subsidy” to be targeted to those who need it the most and thus allows the Government to improve the efficiency of public spending relative to the untargeted subsidy in place before.

5.4 Policy Recommendations

The social protection system plays a very important role in mitigating the risk of poverty in Belarus, mainly due to the volume of resources it channels. Without direct social protection transfers, poverty and inequality would have been higher. Yet the poverty reduction impact achieved is not commensurate to the level that should be expected given the large magnitude of resources devoted to these programs. This is largely because of the multiple, fragmented nature of the benefits and the weak or absent targeting, which leads to many programs benefiting those who need assistance *and* those who do not. Resources tend to be “churned” rather than redistributed: most resources go back to the same households that pay the taxes required to finance social benefits. Even programs that have explicit poverty reduction goals inadequately cover the poor, while entailing substantial leakage to the non poor. Much is being done already—and can be deepened further—to address these weaknesses of an otherwise generous social protection system.

- *Child allowances.* Families with children under age 16 are numerous, they are nurturing the future of the country, and their ability to engage in the labor market is constrained. Yet *child allowances*, which is one of the best performing social programs, still covers less than 30% of the poor and provides far less adequacy of benefits than pensions. Thus, efforts to improve the pro-poor coverage and adequacy of the child allowance may be considered a high priority.
- *Social Protection Fund.* Special attention should be dedicated to pensions, whose legislated function is to provide social insurance for contributors and their dependents, to not depart from their role as instruments for mitigating social risks, and become another redistributive or coping mechanism. Furthermore, freeing the Social Protection Fund from the obligation of financing non-pension benefits (child allowances, maternity and birth-related benefits, health-related vacations) will restore the financial equilibrium and incentives the workers to contribute, should the number of corporate tax payers increase, following market reforms.
- *Payroll taxes.* Social contributions are high, 35% of payroll paid by employers plus 1% paid by employees. For individual entrepreneurs and legal entities, in July 2002, the mandatory pension contribution has been set as 30% of their incomes, and for other social payments, 6% of their total incomes, but the tax base is not less than the level of subsistence minimum per capita. Consolidating the set of social transfer programs and improving their targeting would enable the state to reduce the tax burden on enterprises, thereby facilitating economic growth.
- *Privileges.* Privileges can be divided into two types (i) those for veterans of war and labor, disabled workers and (ii) those for members of particular occupational groups (such as the police, military, MPs, judges, attorneys and custom officials). Though public opinion is favorable about war veterans, it is not favorable to occupational privileges. Yet the recipients represent powerful constituencies and as such occupational privileges are difficult to be removed. One option—which has already been adopted by the Belarusian authorities—could be to place these benefits within the budgets of the respective employing agencies and ideally

cash out as wage and salary compensation as incentive for worker retention and quality. A similar approach is undertaken by the Ukrainian Government.

- *Targeted Social Assistance.* Currently it is difficult to assess the poverty alleviation impact of the TSA program, since the HIES does not have any question to collect information on program participation or benefits. Given the intention to expand this program, we highly recommend improving the monitoring of the program and plan a baseline survey²² as a prerequisite for a thorough future impact evaluation.
- *Means testing.* Despite difficulties of measuring non-formal incomes, means testing is still likely to be a better option for Belarus than categorical or geographical targeting of social protection transfers to poor people. Geographic targeting or targeting using household or individual characteristics will entail substantial inclusion and exclusion errors. This is because groups with the highest risk of poverty represent a small share of the total poor, while the largest share of the poor is found among large socio-economic groups such as workers or pensioners, who also include households that are not necessarily poor.

²² The most economical option would be to modify the HIES to collect information on the program and over sample potential program participants. Alternatively, a survey of program participants can be implemented in parallel with the main survey, who will provide the control group.

Chapter VI. A Poverty Monitoring and Analysis Agenda

The Government of Belarus has been conducting poverty assessments regularly since the mid 1990s. This current poverty assessment with the World Bank and the UNDP has also been conducted at the request and with the full cooperation of the government. *What happens next in the realm of poverty monitoring and analysis?* We offer a few suggestions for further discussion.

- **Updating the methods for measurement of poverty.** The collaborative work undertaken in the course of the poverty assessment to develop regional and inter-temporal cost-of-living deflators and adjustments to adult equivalence scales, is important to ensure that poverty estimates over time and space are comparable. It is also important to minimize inconsistencies between estimates of GDP growth and movements in poverty measures. The data and the technical capacity to implement these changes is there in MOSA, which is a highly competent institution. An extensive discussion is required between MOSA and other key institutions such as MOLSP on the implications of these measures for other key policy variables, such as the minimum consumption basket, the CPI, and so on. Also of assistance would be a standing capacity-building fund for MOSA to be able to regularly send its staff to international statistical institutes and conferences to be able to contribute to, and maintain links with, the latest developments in poverty measurement.
- **Improving coverage of non-income dimensions.** Belarus' regular household survey, while highly detailed in collection of income and consumption data, is relatively weak in coverage of non-income dimensions. Yet a few modifications of the HIES—as was attempted with the special module for this poverty assessment—would enable a more textured analysis of education, health, risk and social protection dimensions could be immensely improved. Given the distributional issues which have been identified, these dimensions are likely to acquire greater importance.
- **Complementing quantitative information with qualitative information.** The current poverty analysis conducted in Belarus—including this assessment—relies heavily on quantitative data. In order to verify the validity of some of the quantitative results, and to answer the “why” question behind some of the findings, a regular qualitative or participatory assessment of living conditions may be introduced in the appropriate institution.
- **Introducing a panel data component for better poverty dynamics and vulnerability analysis.** The analysis of some key poverty dynamics—such as poverty traps—was not possible given the absence of panel data, that is, data collected on the same households every year. Belarus could designate, say, 10% of the HIES sample to be tracked over time.
- **Analytical outreach to encourage data use.** While the data collection and production system is strong, there is scope to improve the dissemination of the data and to increase its use in policy analysis. In this regard it may be noted that MOSA has a clear mandate to collect and produce poverty data, but the institutional mandate for conducting poverty analysis and drawing out policy implications is less clear. Furthermore, capacity for such analysis also needs to be strengthened: for example, for several of the sectoral ministries, the availability of relevant information in the household survey and the techniques for using this data to draw out policy implications for service delivery, was relatively new. At the same time, Belarus has an almost unique and outstandingly rich set of household survey data that could be utilized to go into depth on many policy questions that the present poverty assessment has only touched.

- We would thus recommend that capacity-building funds be sought to establish an analytical and outreach program involving sector ministries, academies, institutes, universities and research NGOs. Participants from these institutions need to learn how to utilize household survey data for poverty analysis and more refined policy analysis. The apex of the poverty analysis system would require a central coordinating body. The system also needs to develop a system of disseminating findings to a wide range of users, including local authorities, civic groups, the media, and so on. A two-pronged strategy has been shown to be effective in other countries: outreach and capacity-building of line agencies, academies and universities in poverty analysis; and the establishment of an ongoing Study Fund that promotes the use of poverty data to analyze poverty impact of policies.
- **Strengthening service delivery and accountability.** Belarus can be justly proud of the elaborate system of social services it provides its population. The analysis of the preceding chapter shows that the ability of households to access quality education, health, and social protection services makes a large difference to their living standards in the present, and their prospects for the future. Yet the analysis also shows that a sizable proportion of the

Box 17: Service Delivery, Trust and Local Authorities

In general I do not fully trust the authorities. I experienced so many humiliations and insults from them after the release from prison that I do not want to ask for any assistance from them. They do not need me... (Gomel)

If the situation worsens, I will not appeal to government authorities as I do not trust them. In my opinion, our court system operates against ordinary people. I am totally disappointed with it. In my community nobody trusts law enforcement agencies or other government bodies. (Gomel)

Several times we have requested the village council to give us additional land but we got a polite refusal. Four years ago we cultivated the deserted land owned by the collective farm and we were fined for that (the amount of fine made up half of the disability allowance; the land was confiscated and it is still deserted). (Grodno)

My wife supposedly has the right to maternity leave, but she was forced to resign and she immediately lost membership in the collective farm. On the next day after she resigned we needed a machine for planting potatoes. We had to pay a full price - 88000 BYR for 0,35 ha though she had worked in the collective farm since 1993. She was thus punished because 4 years ago I was illegally dismissed and my wife filed a complaint, my rights were restored and those who violated the law were prosecuted. In rural areas, however, such things are kept in mind. Now she may also try to prove her right to maternity leave instead of resigning, but we are so exhausted by the situation that the laws giving us sufficient rights are not enforced in practice. (Grodno)

The procedure is humiliating both physically and morally. I felt miserable and humble because I could not resist humiliation to which my son was subjected. I was told to get out. Now I had to fight either for a supplement to a scholarship or compensation for unused sanatorium voucher though we have statutory entitlements. I think that our poverty helps officials responsible for enforcement of laws to pretend that there's no relevant law. (Grodno)

An opportunity has emerged recently to get out of the crisis situation through non-governmental associations which help to get information needed for addressing yet another social problem. There's an opportunity for self-education. It is important for me to learn how to find solutions and moral balance through concrete actions. People are kept in poverty by fear, helplessness, lack of trust in their own strength. It is not enough to give people clothing and food, it is more important to teach them confidence and to create opportunities for implementing their strength. Only changes in the mentality can dismantle the old system. By joining hands we become capable of solving problems which we are unable to address through only personal effort. (Grodno)

Our generation has been brought up with no initiative skills...My skills and ideas acquired in childhood do not meet today's demands. I have no complexes on this account as I am sure that others will come to replace us. I mean my children and the children of my neighbors who will build their lives differently. My major task is to keep going and give my children an opportunity to take their chance. (Grodno)

Source: Interviews, June 2003

population are failing to access services adequately, especially in rural areas and especially among the poorer segments of society. Even for those services that are being accessed, there are few mechanisms of assessing the quality of the services being provided or the responsiveness of providers to their consumers or clients, especially the poorer ones.

- The meager qualitative evidence we collected for the poverty assessment suggests that the issue of accountability mechanisms between local authorities and poor people on the one hand, and service providers and poor people on the other, are raw, alive and important (Box 17). Poor people often feel voiceless or regard themselves as powerless to effect change when they lack information on their rights, on the resources being channeled to local service providers, and when they lack mechanisms to exercise any choice in providers.
- The 2004 World Development Report offers many avenues for strengthening the accountability of providers and administrators to the poorer segments of society. A general element involves the empowerment of community and civic institutions through the provision of regular information to these groups on basic parameters, such as budget and expenditures for their local school or clinic, and a feedback loop to policy makers on a service satisfaction “report card”. The development of such accountability mechanisms would bring in the “voices of the poor” regularly and would also enable Belarus to deepen the poverty reduction impact of its public resources and service delivery system.

References

The references include those articles mentioned in this report as well as those used in the background papers.

Abu-Ghaida, D. (2003) "Education and Poverty in Belarus" background Paper for the Poverty Assessment.

Alwang, J. and Bradford Mills (2002) "Why Has Poverty Increased in Zimbabwe: A Non-parametric and Parametric Analysis of the Causes", *mimeo*, Washington D.C., World Bank

Bakanova, M. (2003) "Economic Growth and Poverty in Belarus" background Paper for the Poverty Assessment.

Batty, D. and D. Leon (2002) "Socioeconomic position and coronary heart disease risk factors in children and young people. Evidence from UK epidemiological studies," in *European Journal of Public Health*, Vol. 12(4), pp. 263-272.

Betcherman, G. (2000) *An Overview of Labor Markets World-Wide: Key Trends and major Policy Issues*, HDNSP, World Bank.

Betcherman, G., A. Luinstra, and M. Ogawa (2001). "Labor Market Regulation: International Experience in Promoting Employment and Social Protection." Social Protection Unit, World Bank.

Blanchard, Olivier (1997). *The Economics of Post-Communist Transition*. Clarendon Lectures in Economics. Oxford: Oxford University Press.

Blanchard, O., and M. Kremer, "Disorganization", *Quarterly Journal of Economics*, vol. 112, n° 4, pp. 1091-1126, 1997.

Blanchflower, David G., and Oswald, Andrew J. (1998). "What Makes an Entrepreneur?" *Journal of Labor Economics* 16, No.1: 26-60.

Blanchflower, David.G. "Self-Employment in OECD Countries." *Labour Economics*, September 2000.

Blinder, A.S. (1973) "Wage Discrimination: Reduced Form and Structural Estimates", *The Journal of Human Resources*, 8: 436-455.

Bonilla-Chacin, M. et al (2002) *Health Care during Transition and Health Systems Reform: Evidence from the Poorest CIS Countries*. Paper prepared for the Lucerne Conference of the CIS-7 Initiative, Switzerland, January, 20-22, 2003.

Bos, E., A. Ryskulova, S. Patel, and M. Hiraga, 2002. "Infant and child mortality rates in Eastern Europe and Central Asia: what's wrong with the data?" WB: manuscript.

- Britton, A. and M. McKee (2000) "The relation between alcohol and cardiovascular disease in Eastern Europe: explaining the paradox," in *Journal of Epidemiological Community Health*, Vol. 54(5), pp.328-332. May.
- Canning, Mary, Peter Moock, and Timothy Heleniak. 1999. "Reforming Education in the Regions of Russia." World Bank Technical Paper No. 457, Washington, DC: World Bank.
- Center for Disease Control and Prevention (1999) ANTHRO. Software for Calculating Anthropometry. Version 1.02.
- CIS STAT (2001). 10 years of the Commonwealth of Independent States (1991-2000). Statistical Abstract. Moscow.
- CIS STAT (2002a). Bulletin No 5 (284). Moscow.
- CIS STAT (2002b). Commonwealth of Independent States in 2001. Moscow.
- Committee on the Problems of the Consequences of the Accident at the Chernobyl NPP, Republic of Belarus. 15 years after Chernobyl catastrophe. National Report. Edited by V.E. Shevchouk, V.L. Gourachevskiy. Minsk, 2001.
- Dar, A. and Z. Tzannatos. (1999) "Active Labor Market Programs: A Review of the Evidence from Evaluations." Social Protection Department, Human Development Network (January).
- De Melo, M., C. Denizer, A. Gelb, and S. Tenev, "Circumstance and Choice: the Role of Initial Conditions and Policies in Transition Economies", The World Bank, Policy Research Working Paper, n° 1866, 1997.
- de Neubourg, C., Loza, Z., and D. Jelisèjevs (2003). Targeted Social Assistance in Belarus. Simulation model and scenario analysis. Mimeo. World Bank.
- Deaton A., and Salman Zaidi (1999) "Guidelines for Constructing Consumption Aggregates for Welfare Analysis", *mimeo, Research Program in Development Studies*, Princeton University
- Deaton A., and Margaret Grosh (2000) "Consumption" in *Margaret Grosh and Paul Gleewe (eds): "Designing Household Survey Questionnaires for Developing Countries: Lessons from 15 Years of Experience"*, Living Standard Measurement Study, Washington D.C., World Bank
- Deaton, A., and Alessandro Tarozzi (2000) "Prices and Poverty in India", *mimeo, Research Program in Development Studies*, Princeton University

- Dijk, M.P. (1995). *The Internationalization of the Labour Market*. Global Employment. An International Investigation into the Future of Work. Vol. 1. Ed. by M. Simai with the assistance of V. Moghadam and A. Kuddo. UNU/WIDER. Zed Books Ltd. London, New Jersey and Tokyo.
- Djankov, S. and B. Hoekman, "Trade Reorientation and Productivity Growth in Bulgarian Enterprises," World Bank Working Paper n° 1707, The World Bank, Washington D. C., 1997.
- Dobronogov, A. (2003). "Social Protection in Low Income CIS Countries", mimeo, ECA Social Protection Unit, The World Bank
- Easterly, W., M. de Melo and G. Ofer, "Services as a Major Source of Growth in Russia and other Former Soviet States", World Bank Policy Research Working Papers, WPS 1292, 1994.
- EBRD (2000). Transition report 2000: Employment, skills and transition. London.
- European Bank for Reconstruction and Development (EBRD), Transition Report, several numbers, London, UK.
- EUROSTAT (2002). Comparison of the labor force indicators: EU Candidate Countries. Mimeo.
- Falcetti, E., M. Raiser and P. Sanfey, "Defying the Odds: initial conditions, reforms and growth in the first decade of transition", EBRD Working Paper n° 55, EBRD, 2000.
- Farrell, S., W. Manning and M. Finch (2003) "Alcohol dependence and the price of alcoholic beverages," in *Journal of Health Economics*, vol. 22, pp. 117-147.
- Fischer, S., and R. Sahay, "The Transition Economies After Ten Years", IMF Working Papers, WP/00/30, IMF, 2000.
- _____ and A. Végh, "Stabilization and Growth in Transition Economies: The Early Experience", *Journal of Economic Perspectives*, vol. 10, n° 2, pp. 45-66, 1996.
- Fretwell and Wilson (1999) Public Service Employment: A review of Programs in selected OECD countries and Transition Economies, World Bank Discussion paper, (June), #9913.
- Fretwell, D., J. Benus, and C. J. O'Leary (1999). "Evaluating the Impact of Active Labor Programs: Results of Cross Country Studies in Europe and Central Asia." Social Protection Discussion Paper No. 9915. The World Bank.

- Fretwell, David, T. Beck and E. Johannsson. (1995). "Privatization and Restructuring: Issues Related to Divestiture of Labor and Social Assets", Working Paper, World Bank.
- Galloway, R., Rokx, C., and L. Lynn (2000) "Prospects for improving nutrition in Eastern Europe and Central Asia", World Bank mimeo.
- GOSKOMSTAT of USSR (1989). *Naseleniye SSSR 1988*. Moscow.
- GOSKOMSTAT of USSR (1990). *Uriven obrazhovaniya naseleniya SSSR. Po dannym Vsesojuzhnoy perepisi naseleniya 1989 g.* Moscow.
- GOSKOMSTAT of USSR (1991a). *Itogi Vsesojuznoi perepisi naseleniya 1989 goda. Vol. VIII. Istotchniki sredstv sushestvovaniya naseleniya SSSR*. Moscow, 1991.
- GOSKOMSTAT of USSR (1991). *Narodnoye khoziaistvo SSSR v 1990 godu*. Moscow.
- Granick, D. (1987). *Job Rights in the Soviet Union: Their Consequences*. New York: Cambridge University Press.
- Gray, R., S. Malla and A. Stephen (1998) "Canadian dietary fat substitutions, 1955-93, and coronary heart disease costs," in *Canadian Journal of Agricultural Economics*, Vol. 46(2), pp. 233-46. July.
- Gregory P., and I. Collier (1988). *Unemployment in the Soviet Union: Evidence from the Soviet Interview Project*. *The American Economic Review*, September.
- Guriev, S. and B. Ickes, "Microeconomic Aspects of Economic Growth in Eastern Europe and the Former Soviet Union, 1950-2000", mimeo, 2000.
- Havrylyshyn, O. and T. Wolf, "Growth in Transition Countries 1990-1998: The Main Lessons", Paper prepared for Conference "A Decade of Transition", IMF, Washington, February 1-3, 1999.
- Havrylyshyn, O., I. Izvorski and R. Van Rooden, "Recovery and Growth in Transition Economies 1990-97: A Stylized Regression Analysis", IMF Working Paper, WP/98/141, 1998.
- Hemström, Ö. (2002) "Alcohol-related deaths contribute to socioeconomic differentials in mortality in Sweden," in *European Journal of Public Health*, Vol. 12(4), pp. 254-262.
- Hentschel, J. and Peter Lanjouw (1996) "Constructing and Indicator of Consumption for the Analysis of Poverty", *Working Paper 124*, Washington D.C., World Bank

- Idler, E.L., and Y. Benjamini (1997) "Self-rated health and mortality: a review of twenty-seven community studies," in *Journal of Health and Social Behavior*, 38(1), pp.21-37.
- ILO (2000). Current International Recommendations on Labor Statistics. 2000 Edition. Geneva.
- IMF Country Reports: 03-119; 03-118; 03-117.
- IMF, *Republic of Belarus: Recent Economic Developments*, IMF Staff Country Report, various issues.
- Kakwani, N. and Zurab Sajaia (2003) "Internationally Comparable Poverty Lines for CIS Countries", *mimeo*, Washington D.C., World Bank
- Klugman, J. and G. Shieber with the assistance of T. Heleniak and V. Hon (1996). *A Survey of Health Reform in Central Asia*. World Bank Technical Paper No. 344. Washington, D.C.
- Kuddo, A. (2002). Chernobyl review: Social issues and poverty: A Background Paper to the Report No. 23883 "Belarus: Chernobyl Review". Mimeo. World Bank.
- Kuddo, A. (2003) "Labor markets and living standards in Belarus" background Paper for the Poverty Assessment.
- Kuddo, A., and C. Tesliuc (2003) "Social Protection Transfers and Social Privileges in Belarus" background paper prepared for the Poverty Assessment.
- Labor Code of the Republic of Belarus (1999). "Registr", Minsk.
- Lanjouw, P and Martin Ravallion (1994) "Poverty and Household Size", *Economic Journal*, 105, 1415-34
- Liang, Xiaoyan. 1999. "Teacher Pay in 12 Latin American Countries: How does teacher pay compare to other professions, what determines teacher pay, and who are the teachers?" Human Development Department, LCSHD Paper Series No. 49, the World Bank.
- McKee, M. Healy, J., and J. Falkingham (2002) Health Care Systems in Central Asia: an Introduction in *Health Care in Central Asia*, edited by M. McKee, J. Healy and J. Falkingham. Copenhagen: European Observatory on Health Care Systems.
- McKee, M. and A. Britton (1998) "The positive relationship between alcohol and heart disease in Eastern Europe: potential physiological mechanisms," in *Journal of the Royal Society of Medicine*, Vol. 91(12), pp.661-.

- Michalopoulos, C. and D.G. Tarr (eds), "Trade in New Independent States", Studies of Economies in Transformation, paper n°13, 1995, The World Bank, Washington, D.C.
- Milanovic, B., *Income, Inequality and Poverty during the Transition from Planned to Market Economy*, Washington D.C.: World Bank, 1998.
- Ministry of Education of the Republic of Belarus. 2001. *The Development of Education: National Report of the Republic of Belarus*. Minsk: International Bureau of Education.
- Ministry of Finance (2002) *Statistical Yearbook*. Minsk.
- Ministry of Health (2002a) *Public Health in the Republic of Belarus*. Minsk.
- Ministry of Health (2002b) *Mother and Child Health (analytical data)*. Ministry of Health Protection – UNICEF - Research Institute of Mother and Child Protection. Minsk.
- Ministry of Statistics and Analysis (2000). *Population of the Republic of Belarus by sex, age and marital status*. Minsk.
- Ministry of Statistics and Analysis. 2001. *Education in the Republic of Belarus*. Minsk.
- Ministry of Statistics and Analysis (2001b). *Economically active and not economically active population, employment and unemployment in the Republic of Belarus*. Statistical book. Results of the 1999 population census conducted in the Republic of Belarus. Minsk.
- Ministry of Statistics and Analysis (2002a). *Belarus Household Income and Expenditure Survey, 2002*. Minsk.
- Ministry of Statistics and Analysis (2002b). *Statistical Yearbook of the Republic of Belarus 2002*. Minsk.
- Ministry of Statistics and Analysis (2002c). *Trud i zanyatost' v Respublike Belarus*. Minsk.
- Ministry of Statistics and Analysis (2002d) *Age-Gender Structure of the Population of Belarus, Oblasts and Annual Averages 2001*. Minsk.
- Ministry of Statistics and Analysis (2003). *Chislennost i zarabotnaya plata rabotnikov v narodnom khozyaistve Respubliki Belarus za janvar-dekabr 2002 goda*. Minsk.
- MOH-UNICEF (2002) *Infant Mortality in Armenia: A Review of Procedures for Registration, Classification, and Related Medical Services*. Ministry of Health and UNICEF/Armenia. December 2002.

- Morova, A. (2002). Pensionnaya sistema: realii i buduscheye. Natsionalnaya ekonomitcheskaya gazeta. No. 80 (600). October 25.
- Murrugarra, E. (2003) "Health and Poverty in Belarus: Socioeconomic Inequalities on Health" background paper prepared for the Poverty Assessment.
- Nuti, D.M., and J. Pisani-Ferry, "Post-Soviet Issues: Stabilization, Trade and Money", Paper presented at a conference on "The Economic Consequences of the East", Frankfurt, April 1992.
- Oaxaca, R. (1973) "Male-Female Wage Differentials in Urban Labor Markets", *International Economic Review*, 14: 693-709.
- Odling-Smee, J., "Belarus", 1992, IMF, Washington, D.C.
_____, "Common Issues and Interrepublic Relations in the Former USSR", IMF, Washington D.C., 1992.
- OECD. 2001. *Knowledge and Skills for Life: First Results from the OECD Programme for International Student Assessment (PISA) 2000*. Paris: Organization for Economic Co-operation and Development.
- OECD (1998). *Employment Outlook*. Paris.
- OECD (1999a). *Employment Outlook*. Paris.
- OECD (1999b). *Implementing the OECD Jobs Strategy: Assessing Performance and Policy*. Paris.
- OECD (2000). *Employment Outlook*. Paris.
- OECD. 2002. *Education At a Glance: OECD Indicators 2002*.
- Orlowski, L., "Indirect Transfers in Trade among Former Soviet Union Republics: Sources, Patterns and Policy Responses in Post-Soviet Period", in *Europa-Asia Studies*, 45(6), pp.1001-1024, 1993.
_____, "Direct Transfers between the Former Soviet Union Central Budget and the Republics: Past Evidence and Current Implications", in *Economics of Planning*, vol.28, pp.59-73, 1995.
- Oxenstierna, S. (1990). *From Labour Shortage to Unemployment? The Soviet Labour Market in the 1980s*. Swedish Institute for Social Research. Gotab. Stockholm.
- Paci, Pierella (2002). *Regional Gender Study*. World Bank. Washington, DC.
- Popkin, B. (1998) "The nutrition transition and its health implications in lower-income countries," in *Public Health and Nutrition*, Vol 1(1), pp. 5-21.

- Rashid, M. and Rutkowski, J. (2001) Labor Market Strategy For Transition Countries: Recent Developments and Future Options, Social Protection Policy Paper, No. x, World Bank.
- Ravallion, M. (1994) "Poverty comparisons: a guide to concepts and methods", *LSMS Working Paper 88*, Washington D.C., World Bank
- Ravallion, M. (1998) "Poverty Lines in Theory and Practice", *LSMS Working Paper 133*, Washington D.C., World Bank
- Ravallion, M. (2001) "Measuring Aggregate Welfare in Developing Countries: How Well Do National Accounts and Surveys Agree?", World Bank working paper, WPS_2665, August 2001.
- Ravallion, M. and Shaoua Chen (2002). "Measuring pro-poor growth," *World Bank Poverty Research Working Paper*, no. 2666.
- Ravallion, M. and Gaurav Datt (1992). "Growth and redistribution components of changes in poverty measures : a decomposition with applications to Brazil and India in the 1980s," *Journal of Development Economics* no. 38, pp. 275-295.
- Ravallion, M. and Monika Huppi (1991). "Measuring changes in poverty: A methodological case study of Indonesia during an adjustment period," *World Bank Economic Review* no.5, pp. 57-84.
- Riboud, M, and C. Sanchez-Paramo and C. Silva-Jauregui. (2001), Does Euroschlerosis Matter? Institutional Reform and Labor Market Performance in Central and Eastern European Countries in the 1990s, World Bank.
- Roland, G. and T. Verdier, "Transition and the Output Fall", *Economics of Transition*, 7(1) 1999, pp.1-28.
- Rutkowski, J. (2002). Policies for Job Creation and Employment Growth. An Introduction. Presentation at the Labor Conference in Zlatibor, Serbia. June 7. World Bank, Washington, DC.
- Standing, G. (1988). Unemployment and Labor Market Flexibility.: Sweden. ILO, Geneva.
- Statistical Yearbook of the Republic of Belarus, Minsk, Ministry of Statistics and Analysis of the Republic of Belarus, various years.
- Tarr, D., "How Moving to World Prices Affects the Terms of Trade in 15 Countries of the Former Soviet Union", World Bank Policy Research Working Papers, WPS 1074, 1993.

- _____, “The Terms-of-Trade effects of moving to world prices on countries of Former Soviet Union”, *Journal of Comparative Economics*, Vol.18, 1994, pp.1-24.
- Tesliuc, C. (2003) “Poverty in Belarus: Quo Vadis?”, WB mimeo, 2003.
- Tzannatos, Z. and S. Roddis. (1998). “Unemployment Benefits” World Bank, Human Development Network (October).
- United Nations Children’s Fund. 2002. *TransMONEE DATABASE*. Innocenti Children’s Centre, Florence, Italy.
- UNESCO-UIS/OECD. 2003. *Financing Education – Investments and Returns: Analysis of the World Education Indicators, 2002 Edition*. UNESCO Institute for Statistics, Organisation for Economic Co-operation and Development, World Education Indicators Programme.
- UNICEF (2001) Report on the Results Thyroid Cancer
- US Department of Commerce (2001). *Statistical Abstract of the United States 2001*. Washington, DC.
- Vinonokur, A. (2000) *Trends in Alcohol Consumptions and Alcohol-related Harm in the Europe and Central Asia Region, 1980-1998*. Mimeo. December.
- Vodopivec, M., Wörgötter, A. and Raju, D. (2000) “Unemployment Benefits In Transition Economies: Lessons Learned And Policy Options”, (September), Washington D.C.
- Wagstaff, A. and E. van Doorslaer (2001) *Paying for Health Care: Quantifying Fairness, Catastrophe, and Impoverishment, with Applications to Vietnam, 1993–98*. Policy Research Working Paper No.: 2715. Washington D.C.: The World Bank.
- WHO (1998) *Report on studies of goiter prevalence and urinary iodine excretion in the young population of Belarus born before and after the Chernobyl accident as important factors for the evaluation the thyroid pathologies currently observed*. Mimeo. February.
- WHO (2000a) *Obesity: preventing and managing the global epidemic*. Report of a WHO Consultation. WHO Technical Report Series 894. Geneva.
- WHO (2000b) *Highlights on Health in Belarus*. WHO Report E72016. October.
- Wodon, Q. (1999) “Growth, Poverty and Inequality: A Regional Panel for Bangladesh”, *Working Paper no. 2072*, Washington D.C., World Bank
- World Bank (1995). *Understanding Poverty in Poland*. Washington, DC.

- World Bank (1995). *Workers in an Integrating World*, World Bank Development Report, World Bank, Washington, DC.
- World Bank (1996). Hungary, Poverty and Social Transfers. Washington, DC.
- World Bank (1996) “Belarus: An Assessment of Poverty and Prospects for Improved Living Standards”, *Report no. 15380 – BY*, The World Bank
- World Bank (1999) *Curbing the Epidemic. Governments and the Economic of Tobacco Control*. Development in Practice Series. Washington D.C.: The World Bank.
- World Bank (2000a) Balancing Protection and Opportunity: Social Protection Strategy for Transition Economies, Washington, DC.
- World Bank. (2000b) *Hidden Challenges to Education Systems in Transition Economies*. Washington, DC: World Bank, Europe and Central Asia Region, Human Development Sector.
- World Bank (2000c) “Making Transition Work for Everyone”, The World Bank
- World Bank (2002a) Improving Health and Health Care in Belarus. Belarus Health Policy Note. Report No. 24203-BY. May.
- World Bank (2002b) Belarus Chernobyl Review. Report No. 23883-BY. Ukraine, Belarus and Moldova Country Unit. Europe and Central Asia Region. July.
- World Bank (2002c). Belarus: Strengthening Public Resource Management. Washington, DC.
- World Bank (2002d) Youth and Medical Personnel on the Socially Relevant Diseases. Minsk 2002. Human Development Department. Europe and Central Asia Region.
- World Bank (2002e). Belarus: Strengthening Public Resource Management. Washington, DC.
- World Bank (2002f). Labor Market in Russia: Moving from Crisis to Recovery. Washington, DC.
- World Bank (2002g). Bulgaria: Poverty Assessment. Washington, DC.
- World Bank (2002h). Serbia HHPS 2002. Washington, DC.
- World Bank (2003a). Romania: Poverty Assessment. Forthcoming. Washington, DC.
- World Bank (2003b) “Public Expenditure Review”, forthcoming, The World Bank

World Bank (2003c) *Belarus: Improving Business Environment*, World Bank Report, January 31, 2003.

World Bank (2003d) *Belarus: Strengthening Public Resource Management*, World Bank Report N26041-BY, June 20, 2003.

Wyplosz, C., “Ten Years of Transformation: Macroeconomic Lessons”, mimeo, 1999.