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Azerbaijan
Living Conditions Assessment Report

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CURRENCY EQUIVALENTS

(Exchange Rate Effective Feb 8, 2009)
Currency Unit = New Azerbaijan Manat (AZN)
AZN 1.00 = US$ 1.24
US$ 1.00 = AZN 0.81
Fiscal Year
January – December 31

ACRONYMS AND ABBREVIATIONS

ACMI	Agency for Compulsory Medical Insurance
AZM	Old Azeri Manat (Azerbaijan, unit of currency)
AZN	New Azeri Manat (Azerbaijan, unit of currency)
CBA	Central Bank of Azerbaijan
CBN	Cost of basic needs
CCTs	Conditional cash transfers
CEM	Country Economic Memorandum
CIS	Commonwealth of Independent States
ECA	Europe and Central Asia
ETF	European Training Foundation
EU	European Union
FAO	United Nations Food and Agriculture Organization
FDI	Foreign direct investment
FSU	Former Soviet Union
FY	Fiscal year
GDP	Gross domestic product
GDP	Gross domestic product
GOA	Government of Azerbaijan
HBS	Household Budget Survey
ICP	International Comparison Program
IDP	Internally displaced person
ILO	International Labor Organization
LFS	Labor Force Survey
LiTS	Life in Transition Survey
LMP	Labor Market Programs
LSMS	Living Standards Measurement Study
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MED	Ministry of Economic Development
MF	Ministry of Finance
MLSPP	Ministry of Labor and Social Protection of the Population
OECD	Organization for Economic Co-operation and Development
OOP	Out-of-pocket

PISA	Program for International Student Assessment (OECD)
PPP	Purchasing Power Parity
PRSP	Poverty Reduction Strategy Papers
R&D	Research and development
SAE	Small Area Estimation
SP	Social Protection
SPPRED	State Program for Poverty Reduction and Economic Development
SSC	State Statistical Committee
SSPF	State Social Protection Fund
TA	Technical assistance
TSA	Targeted social assistance
UN	United nations
UNICEF	United Nations Children's Fund
VET	Vocational Education and Training

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PREFACE

The Government of Azerbaijan (GOA) and the World Bank have a long history of partnership in poverty monitoring and knowledge sharing aimed at strengthening national capacity in data collection and poverty analysis. *Azerbaijan: Living Conditions Assessment Report* is the latest product of this collaborative effort. The report is the main output of work undertaken under a three-year Azerbaijan Programmatic Poverty Assessment (FY08–FY10) that comprised implementation of a nationally representative household survey, monitoring and evaluation of the targeted social assistance (TSA) program, technical assistance and capacity building, and analytical work carried out jointly with the GOA counterparts.

The 2008 Living Standards Measurement Study (LSMS) survey was undertaken in collaboration with the Ministry of Labor and Social Protection of the Population (MLSPP), the State Statistical Committee (SSC), and representatives of other government agencies that formed the Working Group for implementation and monitoring and evaluation (M&E) of Azerbaijan's TSA program. M&E is an integral element of the design and implementation of the TSA program, which was launched in mid-2006 with the goal to provide income support for the very poor and vulnerable households. The MLSPP, which administers the TSA, took the lead role in financing and implementing the 2008 LSMS, with technical support of the World Bank. The Ministry of Refugee Affairs provided the list of the internally displaced persons (IDPs) for oversampling of this large but vulnerable group.

The 2008 LSMS survey, undertaken employing the services of a new local survey firm with extensive World Bank technical support and capacity building and wide-ranging quality-control measures, is the main source of data for this report. The 2008 LSMS provides supplementary evidence and an alternative source of data, to the year-round Azerbaijan Household Budget Survey (AHBS). However, the 2008 LSMS differs from the AHBS in many important aspects that may prevent robust comparison of the results based on the two sources. The AHBS is implemented throughout the year, while the LSMS was fielded only during the first quarter of 2008. The seasonal differences in consumption patterns, prices, and income-generation opportunities can be significant.

This report provides an overview of poverty and inequality trends since 2001 and assesses the links between growth and poverty developments. It evaluates the impact of the GOA's TSA program and provides direct evidence of the extent to which the program reaches its intended beneficiaries and improves their lives. The report also takes a critical look at the linkages between poverty and social policies in education, health, social protection, and the labor market, and provides recommendations that support greater integration of the poor and the vulnerable. Particular attention is given to the disparity between the rural and urban areas and between the IDPs and the general population. Moreover, the report provides indicative estimates of the poverty impact of the global financial crisis. Since the LSMS was implemented immediately before the onset of the

global economic crisis, the data and the report could serve as a baseline for evaluating the impact of the crisis.

The main findings of the report, covering various aspects of the living conditions, have important implications for Azerbaijan's overarching goal of a broad-based, diversified, and globally competitive market economy. The findings are particularly relevant in the aftermath of the current global economic crisis, when Azerbaijan's situation is different from the one during the last few years of expanding oil production, rising oil prices, and a more favorable external environment.

ACKNOWLEDGEMENTS

The report would not have been possible without the joint effort and cooperation of the GOA counterparts. The team is particularly grateful for the support provided at all phases of the work by H. E. Deputy Minister Mr. Ilgar Rahimov, International Relations Director Mr. Elnur Sultanov, and Lead Social Protection Specialist Mr. Babek Huseynov, all from the Ministry of Labor and Social Issues. The team also extends its appreciation to the State Statistical Committee, in particular to Mr. Yashar Pasha (head, Household Statistics Department), who was instrumental in designing the sampling frame for the 2008 LSMS. The report benefited extensively from written comments and discussions with the Ministry of Finance, the Ministry of Economic Development, the Central Bank of Azerbaijan and the Ministry of Labor and Social Issues.

The task manager of the report is Lire Ersado. Core team members include: Alkesandra Posarac (social protection); Arvo Kuddo (labor market); Branko Milanovic (inequality); Diego F. Angel-Urdinola, Sara Bin Mahfooz, Emilio Puerta, and Lars Sondergaard (education); Joanna De Berry (internally displaced persons); Owen Smith (health); and Sangeetha Malaiyandi (rural poverty). Christos Kostopoulos has kindly provided useful inputs on the structure of the Executive Summary. Sujani Eli and Carmen Laurente provided able assistance with formatting and production of the report.

The task was undertaken under the guidance of Donna Dowsett-Coirolo (former country director, ECCU3), Asad Alam (country director, ECCU3), Gregory Jedrzejczak (country manager, Azerbaijan), Tamar Manuelyan Atinc (sector director), Jesko Hentschel (sector manager) and Gordon Betcherman (former sector manager). Peer reviewers were Gero Carletto (DECRG), Ambar Narayan (PRMPR), and Carolina Sanchez (PRMPR).

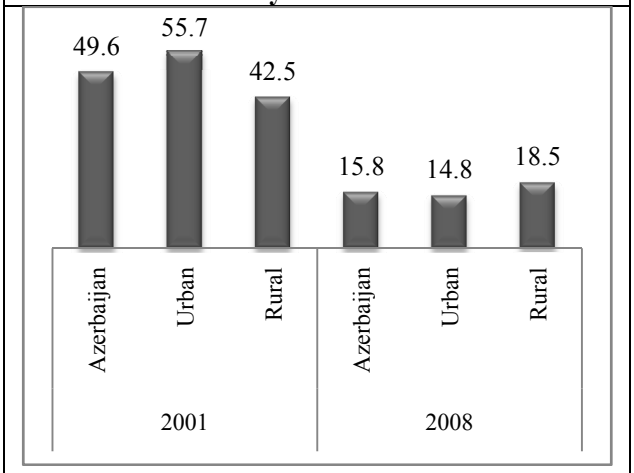
EXECUTIVE SUMMARY

Azerbaijan saw a substantial reduction in poverty during the 2000s, owing to significant economic growth and policies and programs that improved the distribution of wealth. Seizing the opportunity afforded by the oil boom, Azerbaijan initiated large public sector investment programs and supportive policies to increase wages and social protection transfers to the population, and institutional reforms aimed at modernizing the economy. These efforts translated into double-digit growth and an impressive reduction in poverty. The report underscores that the government's targeted social assistance program has been successful in channeling public transfers to the most needy. On the other hand, high dependence on oil revenues, compounded by the current global economic crisis, presents challenges to maintaining growth and could jeopardize the gains made in poverty reduction. Moreover, while Azerbaijan has made significant progress in building capacity to redistribute the benefits of growth, significant challenges remain in developing the human capital of the population to participate actively in future growth and to close the productivity gap with its comparators in the post crisis world.

I. Azerbaijan's pro-poor growth and poverty reduction

1. ***Living standards in Azerbaijan improved considerably between 2001 and 2008, owing to significant growth and policies and programs that improved the distribution of income.*** According to a comparable consumption aggregate (as described in detail in Annex B) and based on the 2001 poverty line of 120, 000 AZM per capita per month, the headcount index of poverty declined from nearly 50 percent to less than 16 percent at the beginning of 2008 (Figure 1). While the estimations reported in this report are primarily based on the World Bank methodology and the LSMS survey implemented during January–April 2008, the results of poverty trends are similar to those reported by the government's State Statistical Committee (SSC). According to the SSC, based on the comparable HBS data of 2001—2008, the overall poverty headcount declined from 49 percent in 2001 to 15.2 percent at the end of 2007 and further decreased to 13.2 percent at the end of 2008.

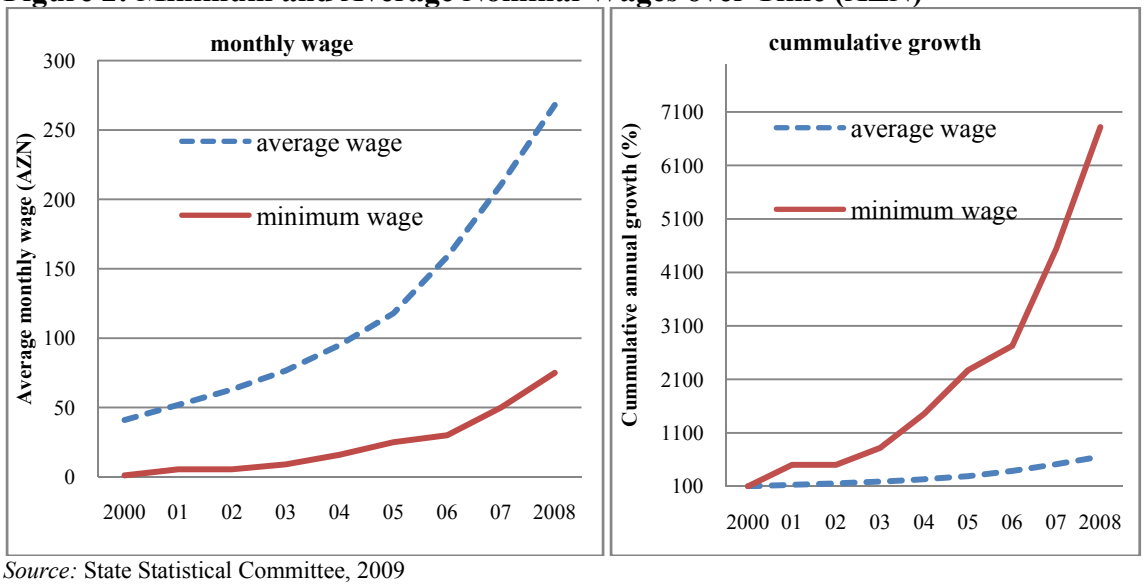
Figure 1: Azerbaijan Achieved an Impressive Reduction in Poverty



Source: 2001 HBS and 2008 LSMS

2. ***Azerbaijan's economy has grown at an impressive rate during the 2000s, owing to the oil boom and substantial fiscal expansion***. Azerbaijan's GDP grew at an average annual rate of 17.3 percent in 2001-08. In 2001-08, public spending increased from AZN 1.1 billion to AZN 12.5 billion, or from 20 percent to over 70 percent of non-oil GDP. The large increases in consolidated public spending, in both recurrent and capital spending, helped fuel non-oil GDP growth. While oil GDP grew at 23.5 percent during 2001-08, the non-oil economy grew at 12.4 percent during the same period. To ensure that the growth is widely shared, Azerbaijan instituted policies to increase wages and transfers to the population. Between 2000 and 2008, the minimum wage increased by more than 6700 percent from an extremely low level of AZN 1.1 to 75 (Figure 2). The average wage also grew in double digits per year and reached AZN 268 in 2008, compared with only AZN 41 in 2000, a cumulative increase of more than 650 percent. Azerbaijan's per capita income rose by over 90 percent in 2001-05 and further by 100 percent during 2006-08, reaching $3,830.[1]

Figure 2: Minimum and Average Nominal Wages over Time (AZN)



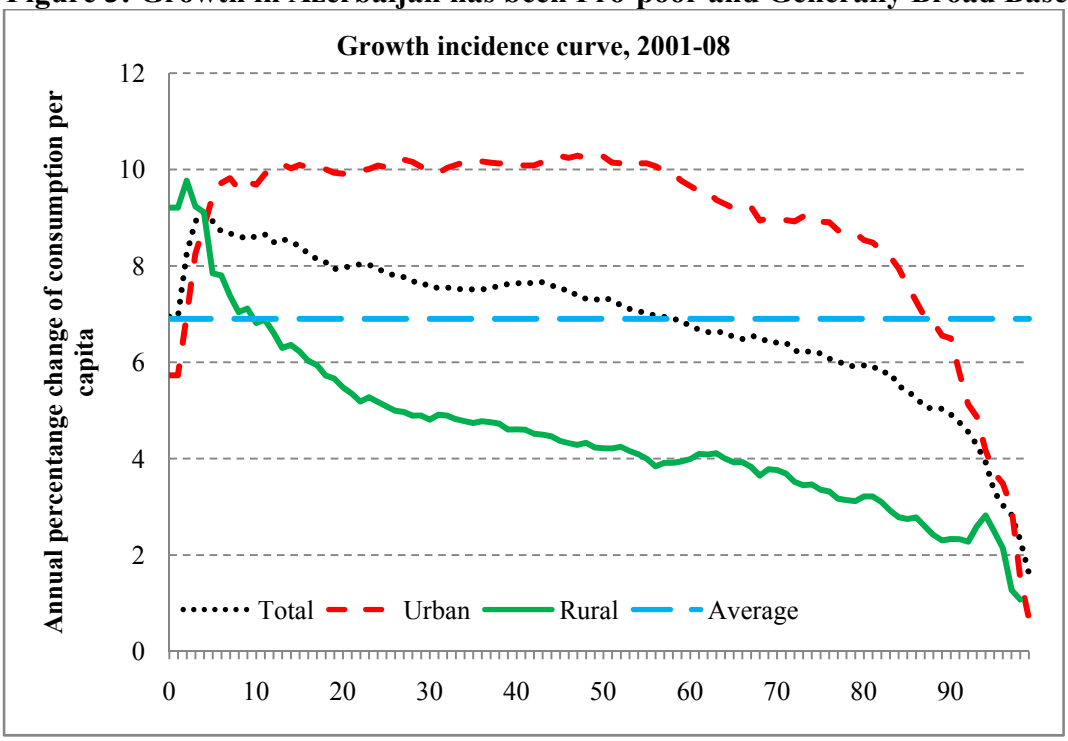
Source: State Statistical Committee, 2009

3. ***The reduction in poverty in Azerbaijan was thus driven by both growth and redistributive policies.*** Out of 34 percentage points reductions in poverty incidence between 2001 and the beginning of 2008, about 67 percent was due to growth in per capita consumption. Inequality in Azerbaijan, which is moderate when compared to other oil-producing countries and Former Soviet Union (FSU) countries, declined by nearly 15 percent from a Gini index of 36.5 percent in 2001 to 31 percent in 2008. As a result, the economic growth has generally been broad-based and pro-poor, lifting the consumption of all income groups (Figure 3). However, gains have been uneven. While overall rural consumption growth rates have been lower, the poor have gained proportionally more.

[1] Per capita income estimated using Atlas method.

Conversely, growth in urban areas has been more broad-based, with the majority of the population in the middle income groups benefiting more.

Figure 3: Growth in Azerbaijan has been Pro-poor and Generally Broad Based

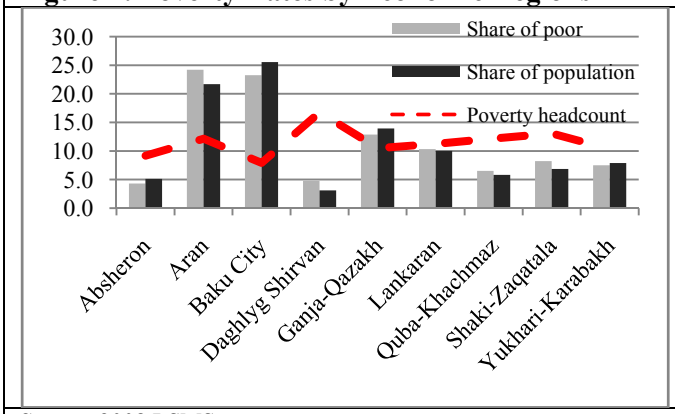


Sources: 2001 HBS and 2008 LSMS

II. The profile of the poor

4. ***There was a considerable reduction in the geographic disparity of living standards during the 2000s.*** A breakdown of poverty by geographic location reveals growing convergence across the nine economic regions in mainland Azerbaijan (Figure 4). The relative share of the population and the poor are virtually identical within each of the economic regions, suggesting a significant decline in regional disparity in poverty compared to 2001 (World Bank, 2003). However, Baku still enjoys lower poverty, although the gap between the capital and the rest of the country has shrunk.

Figure 4: Poverty Rates by Economic Regions



Source: 2008 LSMS

5. ***Poverty became shallower in Azerbaijan, with a large number of people concentrated around the poverty line.*** This is evident from the sensitivity of poverty rates to choices of the poverty line. If the poverty line were increased by 10 percent, it would add 4.6 percentage points to the poverty rate in 2008. Similarly, lowering the poverty line by 10 percent would reduce the poverty rate by 4.8 percentage points. Therefore, a 10 percent increase (decrease) in household consumption would lead to more than 30 percent decrease (increase) in the poverty rate in 2008. In contrast, a 10 percent increase in the poverty line would have led to only a 12 percent increase in the poverty rate in 2001. The precipitous declines in the poverty gap and poverty severity also provide further evidence of the growing shallowness of poverty in Azerbaijan.

6. ***Between 2001 and 2008, urban areas experienced a more rapid decline in poverty than rural areas.*** In urban areas, the incidence of poverty declined from 55.7 percent in 2001 to 14.8 percent in 2008. The corresponding decline in rural areas was from 43.5 percent to 17.0 percent (Figure 1 above). While consumption expenditures in major urban areas, including Baku, increased by more than 140 percent, the increase in rural areas – while still healthy -- was less than 90 percent. Compared to 2001, when only less than 40 percent of Azerbaijan's poor population lived in rural areas, poverty in Azerbaijan has become somewhat more of a rural phenomenon in 2008. About 51 percent of Azerbaijan's poor now live in rural areas, despite accounting for about 45 percent of the total population.

7. ***But the disparities within urban areas are large and grew substantially, particularly between Baku and other urban areas.*** As a result, poverty in Baku fell from about 49 percent in 2001 to only 9.3 percent in 2008. While the non-Baku urban areas in Azerbaijan saw substantial reduction in poverty incidence, the relative pace of the improvement there was somewhat slower than in Baku. In 2008, the risk of poverty in non-Baku urban areas at more than 19 percent was more than twice that of Baku.

8. ***Internally displaced persons (IDPs) are more vulnerable to poverty and risk as most of them lack self-reliant economic opportunities and are heavily dependent on state transfers.*** However, there are important differences among the IDPs according to their area of settlement and housing conditions. IDP poverty is most pervasive in cities outside Baku. Residence in a public building or dormitory appears to lower the risk of poverty below the average poverty incidence for IDPs. This is perhaps because the IDPs living in collective settlements tend to receive more attention for governmental and nongovernmental targeted interventions. IDPs who have sought their own accommodation outside of government provision are at greater risk of poverty. The risk of poverty increases significantly for IDPs living in houses and apartments and with relatives, suggesting a phenomenon of "hidden" poor among the IDP population.

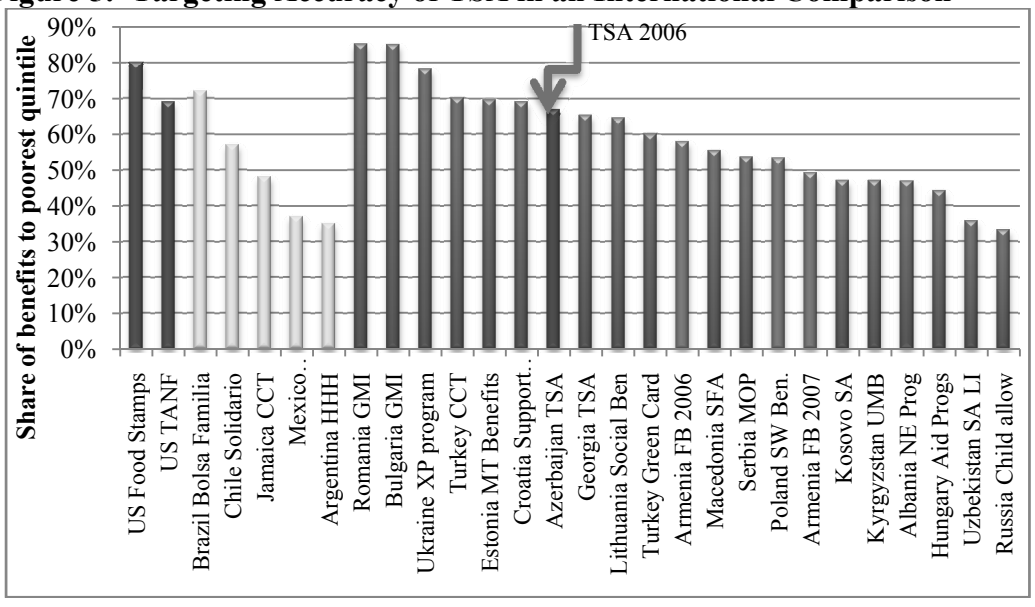
III. The achievements and challenges in human development

a. Social protection programs play a significant role in poverty reduction

9. ***In 2008, social transfers reached 63.2 percent of the population, either directly or indirectly through the sharing of benefits within the household.*** Azerbaijan has been gradually increasing its social protection spending; however, it is not a high spender compared to other countries in the region. In 2008, Azerbaijan allocated an estimated 4.8 percent of GDP to all social transfers. Relative to the fiscal effort (expressed as a percentage of GDP), Azerbaijan's social assistance programs perform remarkably well in terms of their coverage of the poor.

10. ***Without social transfers, the extent of poverty in Azerbaijan would be much higher.*** The pro-poor distribution of social transfers makes them an important source of livelihood for the poor. In particular, the targeted social assistance is empirically found to perform well in reaching the very poor and poor. For example, in 2008, about 49 percent of the TSA beneficiaries, receiving 51 percent of its resources, are from the bottom population decile. Most TSA beneficiaries (86 percent), receiving almost 90 percent of TSA resources, belong to the bottom 40 percent of the population. TSA has a well-functioning administrative structure with fully automated business processes covering much of the country, except for a few regions. Thus, the social safety net system in Azerbaijan is well placed to play a significant role in mitigating the impact of the current global economic crisis and has the flexibility to respond flexibly to other shocks and changing circumstances that require leveraging safety nets as compensatory measures to protect the poor and the vulnerable.

Figure 5: Targeting Accuracy of TSA in an International Comparison



Source: LSMS 2008 for Azerbaijan; ECA Household Survey Database

11. ***In terms of targeting accuracy, TSA outperforms all other Azerbaijan social protection programs.*** TSA distribution is strongly pro-poor and two-thirds of TSA resources accrue to the bottom 20 percent of the population. In fact, TSA performs well compared to similar programs in both developed and developing countries (Figure 5).

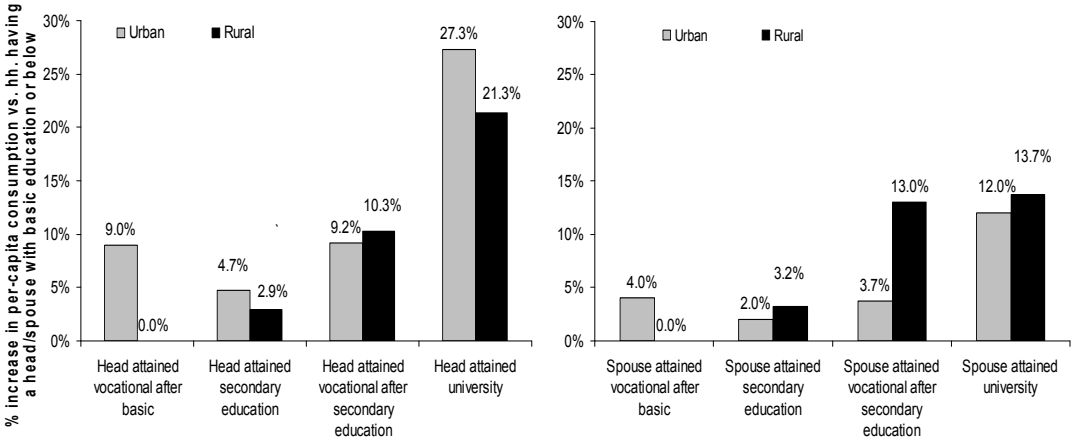
b. Education and poverty outcomes are strongly linked

12. ***There are notable achievements in the education system, including high and very equitable enrolment rates through age 15 and high performance of Azerbaijani students on international mathematics tests that compares well with those of richer countries***. However, Azerbaijan faces several challenges in developing a modern education system that adequately supports a growing market economy and future poverty reduction. Azerbaijan has steadily increased its spending on education during the last several years. Participation in tertiary education is highly lopsided in favor of the rich and low overall given the country's income level. The education system suffers from a mismatch between the training of graduates and the skills demanded by the economy. Close to 80 percent of Azerbaijan's 15 year olds have not attained a minimum mastery of reading, raising serious concerns about their preparedness for onward studies—whether at the upper secondary or tertiary level or in an adult learning opportunity later in life. Overall, the report highlights the need for "postsecondary" human capital accumulation in Azerbaijan.

13. ***As expected, there is a clear relationship between poverty and education in Azerbaijan, particularly at postsecondary levels.*** Low level of education is a main determinant of poverty, with individuals earning 7 to 10 percent higher wages for each additional year of schooling attained. This link at the individual level is reflected in the vast differences in incomes of individuals with different educational levels. Households headed by a better-educated individual and spouses have higher incomes (Figure 6). Besides direct linkages with poverty, educational outcomes are closely linked with employment outcomes. Individuals with low educational attainment are less likely to be employed and more likely to be unemployed. The employment rate for graduates of tertiary education is markedly higher than for graduates of upper secondary education and twice as high as for individuals with basic education or less.

14. ***Low enrolment rates in tertiary education are at least partly explained by the high private cost of attending higher education.*** Affordability constraints constitute the main reason for dropping out after compulsory education. According to the 2008 LSMS, lack of funding is the main reason most students (52 percent) drop out after completing compulsory education. Indeed, the poor cannot afford some of the costs that may need to be incurred to have access to postsecondary education (for example, tuition and tutoring). Disparities in tertiary enrolment patterns are embedded in large regional differences, with Baku City enjoying by far the highest enrolment rates. In the rural areas, in the less-developed regions and among the poor, postsecondary attainment rates are below 11 percent.

Figure 6: Educational Attainment Has Stronger Links to Poverty Reduction



Source: LSMS 2008.

c. Health concerns loom large especially among the poor

15. ***Health is a concern for the general population but this is especially true for the poor.*** About three-quarters of the poor (and 70 percent of all households) reported difficulties in covering health expenses. About one-quarter of the poor attributed their economic hardship in part to the illness of a family member. When the Life in Transition Survey (LiTS 2006) asked Azerbaijani households to name the top two priorities for government investment, the health sector was by far the most common answer, especially among the poor.

16. ***There is substantial inequality in health status and healthcare use between the rich and poor in Azerbaijan***. Respondents in the richest quintile are more than 2.5 times more likely to report being in good health than those in the poorest quintile. Conversely, the poor are 2.5 times more likely to report bad health than the rich. There is strong evidence that the poor are much less likely to use health services than the non-poor. The richest quintile accounts for about one-third of total utilization, while the poorest quintile accounts for just over 10 percent. And these figures understate the extent of inequality, since in view of the generally better state of health of the better off, an "equal" pattern of healthcare utilization conditional on need would entail significantly higher rates of utilization by the poorest.

17. ***There is strong evidence that finance is a key hindrance to utilization of health services by the poor.*** Out-of-pocket (OOP) health expenditures are substantial, both as a share of total household consumption (about 10 percent) and by international standards. The 2008 LSMS suggest that OOP represented about 73 percent of total health expenditure in Azerbaijan in 2008, placing it third highest among 53 European countries (only Georgia and Tajikistan are higher). The high OOP payments for healthcare are thus the most important reform challenge for the health sector in Azerbaijan.

18. ***High OOP for health has a significant impact on poverty.*** Because health spending does not necessarily capture an increase in household welfare in the same manner as other goods, a case can be made for excluding it from the consumption aggregate and thus from calculations of poverty statistics. If the poverty headcount is calculated without OOP, it could increase poverty incidence significantly. Thus, those with large OOP expenditures for health could be classified as poor if their (potentially involuntary and non-welfare improving) health expenditures are subtracted.

19. ***The impact of public health spending on poverty can be enhanced through improved targeting of such expenditures.*** An estimate of the expenditure incidence of current public spending on health shows that the richest quintile captures more than twice as much of the state health budget as the poorest quintile. One option used elsewhere in the region (for example, Georgia) to improve this picture would be to use eligibility for targeted social assistance as a mechanism for extending a more generous package of health services to the poor. The strong targeting performance of Azerbaijan's cash benefit to the poor (Chapter 8) suggests that this could be an effective way of making health spending more pro-poor.

IV. The global economic crisis

20. ***The current global environment could pose serious challenges to achieving Azerbaijan's triple development objectives of macroeconomic stability, economic diversification, and poverty reduction.*** The impact of the global recession on Azerbaijan is felt through, among other channels, a dwindling demand for its main export goods such as oil and gas. Depressed global economic activities and demand would also keep markets for Azerbaijan's non-oil exports suppressed. The crisis thus could have a dampening effect on Azerbaijan's efforts to attract investors and to diversify its production and export base. The impact on poverty comes through various transmission channels such as increased unemployment and reduced earnings. Azerbaijan also saw a decline in remittances (for example, from Russia) stemming from economic slowdowns in source countries. Although remittances do not make up a large share of household income (about 5 percent), a sizable portion of the Azerbaijani population receive them.

21. ***Micro simulations of the poverty impact, based on sectoral growth projections for 2009-2011 and the 2008 LSMS household level data, suggest that poverty incidence in Azerbaijan is likely to have increased in 2009***. The overall poverty incidence could have increased by about 1 percentage point during 2008–09. This would imply an estimated 86,000 people to have fallen below the poverty line in 2009 due to the global economic crisis. The increase in the poverty gap is likely to have been more pronounced as the already poor become poorer. The labor market is the major channel for transmitting the effects of the economic crisis to households. Out of the projected 1.0 percentage-point increase in the poverty headcount during 2008–09, about 0.75 percentage points (or 75 percent) are estimated to have been due to increased unemployment and reduced earnings. The projected decline in remittances is responsible

for the remaining 25 percent of the likely increase in poverty. Finally, poverty incidence is projected to return to its usual course of decline in 2010, if the growth assumptions hold.

V. Conclusion

22. ***Azerbaijan saw a substantial reduction in poverty during the 2000s, owing to high growth and policies and programs that improved the distribution of wealth***. Seizing the opportunity afforded by the oil boom, Azerbaijan initiated large public sector investment programs and supportive policies to increase wages and social protection transfers to the population, and institutional reforms aimed at modernizing the economy. These efforts translated into solid growth and poverty reduction. The growth was accompanied by increased wages and income for most of the population, though the employment gains were modest. Both growth and improved distribution of wealth through large public transfer programs have been keys to welfare improvement for the vast majority of the population. However, high dependence on oil revenues, compounded by the current global economic crisis, presents challenges to maintaining growth and could jeopardize future poverty reduction.

23. ***The report underscores that the government's efforts to build a well targeted social assistance system have been successful***. During 2001-08, policy makers rightly emphasized social protection and social insurance in their social sector policies, given the high poverty levels of the population. These policies have been effective in channeling public transfers to the poor and the vulnerable. Going forward, however, the government may wish to also put more emphasis in its social sector policies on health and education as it seeks to improve its human capital in its efforts to increase productivity in the post-crisis period.

1. INTRODUCTION

1.1 Azerbaijan's economy grew at an impressive rate during the 2000s, owing to oil boom and substantial government spending. Its GDP grew at an average annual rate of 17.3 percent in 2001-08. Per capita income rose by over 90 percent in 2001-05 and further by 100 percent during 2006-08 reaching $3,830.[2] In 2001-08, public spending increased from AZN 1.1 billion to AZN 12.5 billion, or from 20 percent of non-oil GDP to over 70 percent. To ensure that the growth is widely shared, Azerbaijan instituted policies to increase wages and transfers to the population. Between 2000 and 2008, the minimum wage increased by more than 6700 percent from an extremely low level of AZN 1.1 to 75. The average wage also grew in double digits per year and reached AZN 268 in 2008, compared with only AZN 41 in 2000, a cumulative increase of more than 650 percent.

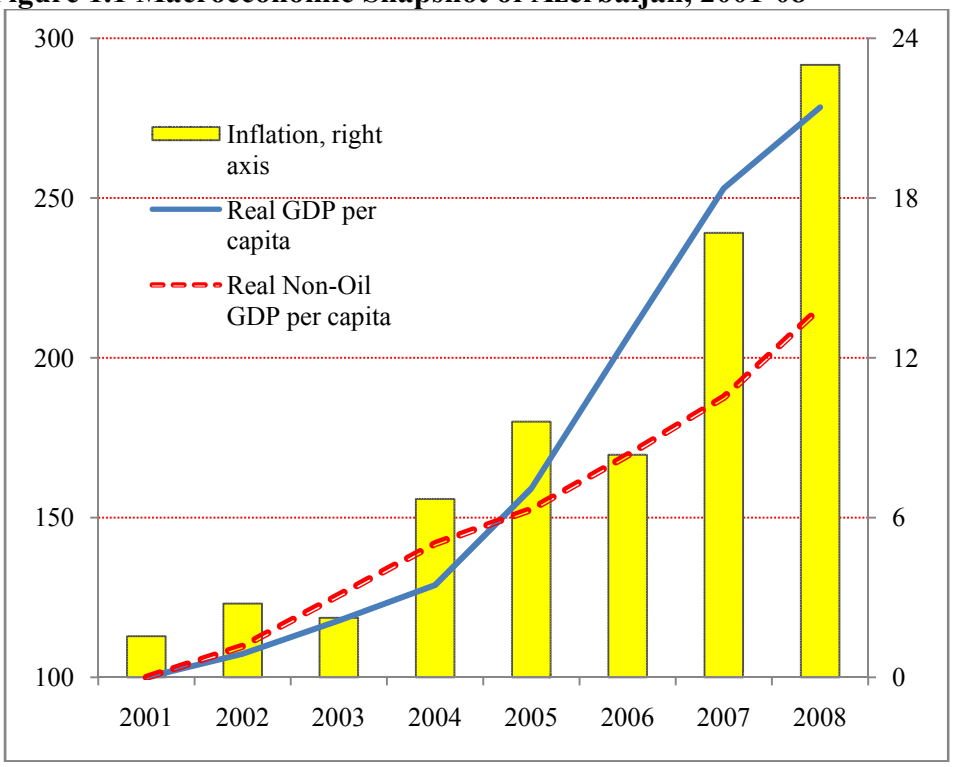
1.2 ***Owing to this significant positive growth record and the various policies and programs that the Government of Azerbaijan (GOA) pursued to improve the living standards of the population, there is a general consensus that the living standards for most Azerbaijanis have improved and poverty declined substantially***. The report provides estimates of the level of poverty and changes in living conditions during the 2000s. It presents a rigorous empirical estimation of how much poverty declined and who benefited the most and by how much from the enhanced growth. The report paints a broad picture of poverty trends, the dynamics in the distribution of the poor among various localities and population subgroups, and the factors driving poverty. Answers are sought to the following questions. Who are the poor in Azerbaijan? Have the benefits of the robust growth and oil and gas boom trickled down to the poor and vulnerable? What are the regional dimensions of poverty? How do the living conditions of the internally displaced persons (IDPs) compare with those of the general population? What are the key factors responsible for the observed trends in the incidence of poverty? Understanding the levels and trends of poverty and inequality among various individual, household, geographic, and socioeconomic groups, as well as assessing the impact of past and current policies and programs, are key to designing policies and strategies to ensure future growth and government spending are widely shared among the population, including the poor and vulnerable groups.

1.3 ***Seizing the opportunity afforded by the oil boom, Azerbaijan initiated large public sector investment programs and supportive policies to increase wages and transfers to the population, and institutional reforms aimed at modernizing the economy and strengthening the functioning of markets***. Recognizing the limited role of the oil sector to generate jobs, Azerbaijan used revenue from its oil windfall to develop its non-oil sector. As Azerbaijan became increasingly integrated into the world economy and its trading partners expanded, both non-oil exports and imports more than kept pace

[2] Per capita income estimated using Atlas method.

with non-oil GDP growth (World Bank 2009).[3] These developments, aided by the oil boom, have translated into a solid and continuous growth by both oil and non-oil sectors (Figure 1.1). Non-oil GDP growth, which more than doubled between 2001 and 2008, was driven primarily by spending oil revenues. However, very high dependence on oil revenues and the associated volatility, compounded by the current global economic crisis, has presented challenges to maintaining the double-digit growth that Azerbaijan has enjoyed since 1998.[4]

Figure 1.1 Macroeconomic Snapshot of Azerbaijan, 2001-08



Source: Azerbaijan authorities and World Bank staff estimates

1.4 ***The first objective of the report is to assess the improvements in the living conditions in Azerbaijan between 2001 and 2008.*** This period precedes the current global economic crisis and straddles implementation of significant reforms, the height of the oil boom, and large public spending programs aimed at enhancing the living standards for all Azerbaijanis. After suffering an output collapse and entering the post

[3] Since 2006, the euro zone countries collectively have surpassed Russia as the largest exporters to Azerbaijan.

[4] The recently completed World Bank "Azerbaijan Country Economic Memorandum – *A New Silk Road: Export-led Diversification*" (2009) dealt extensively with these issues and long-term sustainability and diversification of growth in Azerbaijan. For this reason, this report does not delve into macroeconomic issues beyond what is needed to establish context and linkage between macroeconomic growth, poverty, and inequality outcomes.

independence transition period considerably poorer than many other former Soviet republics, Azerbaijan, in the mid-1990s, began in earnest the task of developing a broad-based and more equitable market economy. Since 1996, Azerbaijan has made noteworthy and sustained efforts to maintain macroeconomic stability, improve the business climate, promote private sector development, and established both the policy framework and the infrastructure needed to realize rapid growth and poverty reduction. During 2006–08, there was a significant increase in public spending to address infrastructural bottlenecks, ranging from electricity shortages to the absence of water and sanitation facilities. Azerbaijan also significantly increased its social spending to alleviate poverty and vulnerability and launched a large-scale targeted social assistance (TSA) program in 2006.

1.5 ***Understanding the impact of these initiatives on poverty and inequality is a key for ensuring that the benefits of growth are widely and more equitably shared***. The report quantifies the level of deprivation and the gains in poverty reduction and overall welfare improvements nationally and among different segments of the Azerbaijani population since 2001. Both monetary and non-monetary measures of poverty and other key indicators of living conditions, such as access to and quality of public utilities and public services, are analyzed. The report aims to support a policy discourse on poverty reduction and strengthening of social protection by providing a robust assessment of living conditions and of the actual and likely future effectiveness of current poverty reduction policies. Ultimately, this will help underpin policy changes and institutional arrangements to transform the opportunity presented by the oil and gas boom into lasting improvement in the quality of life for all Azerbaijanis.

1.6 ***The second objective of this report is to support the GOA by analyzing the main challenges in access to and quality of the education system, labor market institutions, and healthcare service delivery.*** One of the four pillars of Azerbaijan's State Program on Poverty Reduction and Economic Development (SPPRED) for 2006–2015 is "…*increasing the quality of and access to social services, by expanding, among other things, the coverage of good-quality health care services and developing a modern education system and globally competitive knowledge economy*." At present, Azerbaijan lags its comparators in human capital development indexes, which is proving to be detrimental to its quest for sustaining long-term growth, poverty reduction, and competitiveness. Azerbaijan faces substantial challenges in increasing the quality and relevance of skills of its workforce, increasing participation in higher education, and addressing the inequality in access to education and health services. The GOA recognizes the necessity of using the opportunities presented by the current oil boom to develop its human capital, as reflected in the SPPRED 2006–2015. The government intends to enable all Azerbaijani citizens to significantly benefit from the oil and gas revenues through expanded access to better-quality education and health services.

1.7 ***The third objective of the report is to simulate the likely poverty impact of the ongoing global economic crisis.*** The crisis, with important implications for the global economy and for Azerbaijan's main trading partners such as Russia and Turkey, could

impact Azerbaijan's vision of a globally integrated, diversified, and sustainable non-oil economy. The crisis has already reduced Azerbaijan's access to international finance and foreign capital inflows, lowered food and oil prices and reduced demand for its exports. While Azerbaijan may be less affected by the crisis than some of its neighbors, a weak oil price may require medium-term public spending adjustments, with important implications for programs targeted at the poor and vulnerable. Data from the 2008 Living Standards Measurement Study (LSMS) survey, conducted just before the onset of the global economic crisis, provide an opportunity to simulate the potential impact of the ongoing crisis on poverty.

1.8 ***Finally, and more important, the report evaluates the GOA's targeted social assistance (TSA) program to provide direct evidence of the extent to which the program is impacting the living conditions of the intended beneficiaries.*** In an effort to achieve a balanced and shared growth, one of the government's areas of top priority has been the social sectors, particularly social assistance to the poor. Azerbaijan's TSA scheme had successfully reached 150,000 households by the end of 2008. The TSA is the only means-tested program in the country and is aimed at providing income support and consumption smoothing among the very poor households. The report prepares a scorecard for the TSA program to advance the practice of results orientation in program design and implementation.

1.9 ***The report covers several areas of living conditions and evolution of poverty, outlined as follows.*** Chapter 2 discusses poverty and its trends during the 2000s and the poverty impact of the global financial crisis. Chapter 3 provides an in-depth poverty profile of Azerbaijan at the beginning of 2008, including rates of consumption poverty, access to and quality of basic infrastructure, access to and quality of social services, housing conditions, the living conditions of internally displaced persons (IDPs), and other monetary and non-monetary dimensions of living conditions. Chapter 4 looks at the issue of inequality in Azerbaijan. Chapter 5 deals with education and poverty linkages. Chapter 6 addresses the issues of healthcare utilization, out-of-pocket expenses for healthcare, and poverty linkages. Chapter 7 assesses the labor market and its implications for poverty. Finally, Chapter 8 evaluates the TSA program and the overall role of social protection programs on poverty reduction in Azerbaijan.

2. THE EVOLUTION OF POVERTY, 2001-08

Introduction

2.1. This section surveys the dynamics of poverty to provide a vivid picture of improvements in living conditions in Azerbaijan during the 2000s. Using data from two nationally representative surveys in 2001 and 2008 and having ensured their comparability over time, this chapter provides estimates of the trends in poverty and other indicators of living conditions during the 2000s. Both monetary and nonmonetary indicators of welfare are used to assess whether a household or an individual possesses enough resources or abilities to meet current and basic needs. Household consumption expenditures and an associated poverty line, i.e., the amount of consumption that society believes represents a minimum acceptable standard of living, are used to measure monetary poverty (see Box 1.1 and Annex C details on the concept of poverty and the methodology). Detailed data and discussions on a range of aspects of living conditions and their measurements are presented in the subsequent chapters and annexes.

2.2. To establish comparability between the 2001 HBS and the 2008 LSMS, we adapted a version of the small area estimation (SAE) methodology developed by Elbers, Lanjouw and Lanjouw (2003) and imputed the definition of consumption from the 2001 HBS into the 2008 LSMS (see Annex B for details). We also empirically test whether the observed differences in poverty measures for the whole population and population subgroups are statistically significant. It is important to ascertain whether the observed movements in poverty are sufficient to draw robust conclusions about the dynamics of poverty. One way to do this is to check whether the differences in poverty over time pass the conventional levels of statistical significance and are not simply due to sampling error and differences in the survey instruments.

Box 1.1: Concepts and Definitions of Key Variables in Poverty Measurement and Analysis

The notion of poverty. The concept of poverty is multidimensional and encompasses many elements. To name just a few: lack of adequate access to food, clothing, shelter, clean water and sanitation, health care and education; early mortality; powerlessness and social exclusion; and limited access to consumer and productive assets. Put in a different way, poverty measurement and analysis asks whether a household or an individual possesses enough resources or abilities to meet their current and basic human needs.

Measuring poverty. Two key ingredients are required for measuring poverty. First, a relevant indicator of well-being needs to be decided upon. Second, a *poverty line* has to be selected, the threshold below which a household or an individual will be classified as *poor*. With regard to the first ingredient, the two commonly used monetary measures of welfare are income and consumption expenditures.

Consumption expenditures. Construction of consumption expenditures involves aggregating expenditures on various consumption items such as food, user values of durable goods, health and educational expenditures, housing, own-production, and so on. In the aggregation process, several adjustments are made, including: (1) adjustment for differences in needs among households of different size and composition; (2) adjustments for the ages of household members and for economies of scale; and (3) adjustments for differences in prices across regions and at different points in time.

Poverty lines. The poverty line is a cutoff point separating the poor from the nonpoor and echoes an absolute minimum of consumption needed to meet basic needs. Multiple poverty lines can be used to distinguish not only different levels of poverty but also different aspects of poverty. For each type of welfare aggregate chosen, there are two main ways of setting poverty lines—relative and absolute. *Relative poverty lines* are defined in relation to a country's overall distribution of the welfare measure (e.g., consumption). For example, some countries use 60 percent of the mean consumption as relative poverty lines. *Absolute poverty lines* are anchored in some absolute standard of what households or individuals should be able to count on to meet their basic needs. These absolute lines are often based on estimates of the cost of basic food needs, that is, the cost of a nutritional basket considered minimal for the health of a typical family, to which a provision is added for basic nonfood needs. Each chosen poverty line could have a *lower* and *upper* cutoff points to separate, respectively, the *extreme poor* and the *total poor* in the population. Using the cost of basic needs (CBN) framework, lower and upper poverty lines were constructed based on an observed consumption basket of the poor in the 2008 LSMS. Each poverty line includes a food component (common to both lines) plus an allowance for essential non-foods and services (different for each line). (See Annex C for details).

Poverty indexes. The final step in poverty measurement is choosing a mathematical function that translates the comparison of the well-being indicator and the chosen poverty line into one aggregate poverty number for the population as a whole or population subgroups. Three types of poverty measures are used in this report: the headcount ratio, poverty gap, and squared poverty gap. Although the poverty headcount is widely used, the measures of depth and severity complement the incidence of poverty and provide insights on how far the poor are from the socially acceptable level of subsistence, that is, from the poverty line.

A. Changes in Poverty during 2001–08

2.3. ***There have been considerable improvements in the living conditions in Azerbaijan between the turn of the decade and 2008, a period characterized by intensive reform efforts and policies aimed at enhancing living standards***. Household consumption more than doubled from AZN 32 in 2001 to AZN 67 in 2008 (in 2001 prices), an over 110 percent increase in real consumption expenditures (Table 2.1). Urban areas and the poorest wealth groups experienced a higher rate of improvement in their well-being. While consumption expenditures in major urban areas, including Baku, increased by more than 140 percent, the corresponding increase in rural areas was less than 90 percent. Consumption by households in the poorest quintile improved by more than 140 percent and in the second and third quintiles by more than 125 percent compared with 80 percent for the richest quintile. Thus, economic growth has been largely pro-poor, and the poor have captured a slightly greater relative share of the growth than the better-off.

Table 2.1 Consumption Expenditures Increased Substantially between 2001 and 2008

	Mean per capita expenditure, real terms (2001 prices, AZN)		
Area	*2001*	*2008*	*Change (percent)*
Urban	32	73	131
Baku	34	82	141
Other Cities	28	69	146
Towns	30	62	107
Rural	32	60	87
Quintile			
Quintile 1 (lowest)	13	31	144
Quintile 2	20	47	135
Quintile 3	27	61	125
Quintile 4	38	81	111
Quintile 5 (highest)	81	146	80
Total	32	67	111

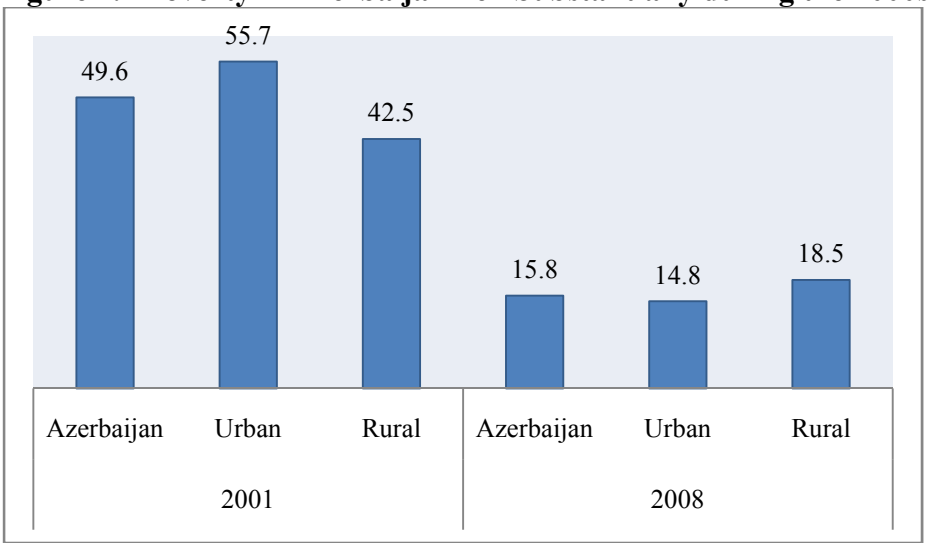
Sources: 2001 HBS and 2008 LSMS.

2.4. ***As a result, living standards in Azerbaijan improved considerably between 2001 and 2008.*** According to a comparable consumption aggregate (as described in detail in Annex B) and based on the 2001 poverty line of 120, 000 AZM per capita per month,

poverty decreased from 49.6 percent in 2001 to 15.8 percent in 2008 (Figure 2.1), an over 34 percentage points decline in seven years. The improvement can be attributed to structural reforms, macroeconomic stability, the ensuing robust growth and substantial public spending on social protection, which lifted the consumption levels of many households.

2.5. While this report is based on the LSMS survey undertaken in collaboration with the Ministry of Labor and Social Protection of the Population during the first quarter of 2008, the results of our analysis of poverty trends are similar to those by the government's State Statistical Committee (SSC). According to the SSC, the overall poverty headcount declined from 49 percent in 2001 to 15.2 percent at the end of 2007 and further decreased to 13.2 percent at the end of 2008 (SSC, 2008).

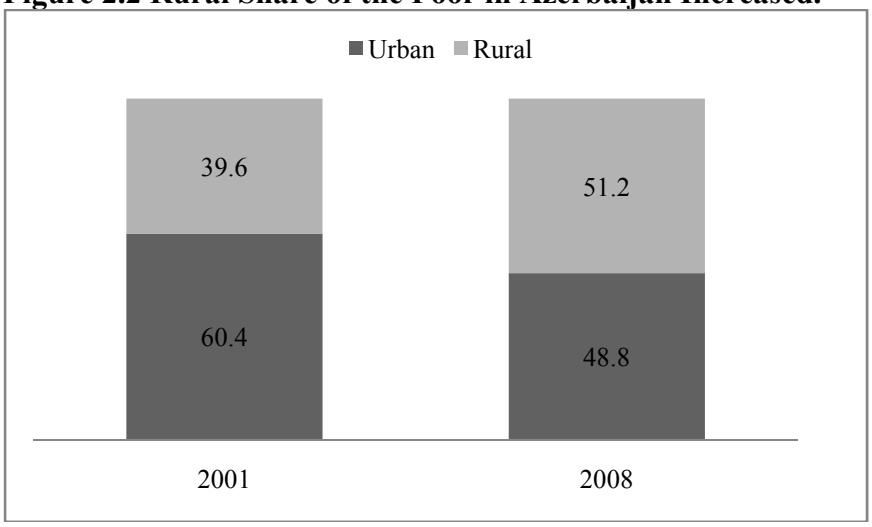
Figure 2.1 Poverty in Azerbaijan Fell Substantially during the 2000s.



Source: 2001 HBS and 2008 LSMS.

2.6. ***Urban areas experienced a more rapid decline in poverty than rural areas.*** The incidence of poverty, based on the World Bank lower poverty line, declined in urban areas from 55.7 percent in 2001 to only 14.8 percent in 2008, and in rural areas from 43.5 percent to 17.0 percent (Figure 2.1). Rural areas, which were less poor in 2001, have become poorer than urban areas. As shown earlier, between 2001 and 2008, real average household consumption increased by over 130 percent in urban areas but by only 87 percent in rural areas.

Figure 2.2 Rural Share of the Poor in Azerbaijan Increased.



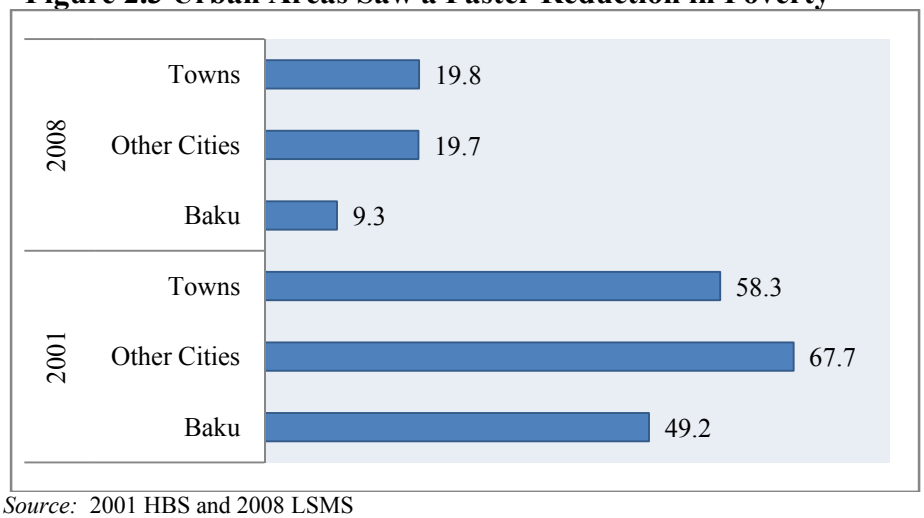
Source: 2001 HBS and 2008 LSMS

2.7 ***About 51 percent of Azerbaijan's poor now live in rural areas, despite accounting for about 45 percent of the total population.*** Compared to 2001, when only less than 40 percent of Azerbaijan's poor population lived in rural areas, poverty in Azerbaijan has become somewhat a rural phenomenon over the 2000s (Figure 2.2). Given that the rural population is heavily dependent on agriculture, the solution to bridge the urban-rural disparity in living conditions may lie in the steps taken to improve the profitability and productivity in this sector (see Chapter 3).

Disparities between Baku and other urban areas grew substantially during the 2000s

2.8 ***Overall, average consumption in Baku, the capital of Azerbaijan, increased by close to 140 percent.*** As a result, poverty in Baku fell by from about 49 percent in 2001 to only 9.3 percent in 2008. While the non-Baku urban areas in Azerbaijan saw substantially reduction in poverty incidence, the relative pace of the improvement there was somewhat slower than in Baku. The risk of poverty in non-Baku urban areas is more than twice that of Baku. People residing in rural and non-Baku urban areas continue to be substantially poorer than those in the capital city.

Figure 2.3 Urban Areas Saw a Faster Reduction in Poverty



Source: 2001 HBS and 2008 LSMS

Poverty is shallow in Azerbaijan and became more so during the 2000s

2.9 ***Poverty became shallower in Azerbaijan, with a large number of people concentrated around the poverty line.*** This is evident from the sensitivity of poverty rates to the choice of the poverty line, using the 2001 poverty line of 120,000 AZM per capita per month (Table 2.2). If the poverty line were increased by 10 percent, it would add 4.6 percentage points to the poverty rate in 2008. Lowering the poverty level by 10 percent would reduce the poverty rate by 4.8 percentage points. Therefore, a 10 percent increase (decrease) in household consumption would lead to more than 30 percent decrease (increase) in the poverty rate. In contrast, a 10 percent increase in the poverty line would have led to only a 12 percent increase in the poverty rate in 2001.

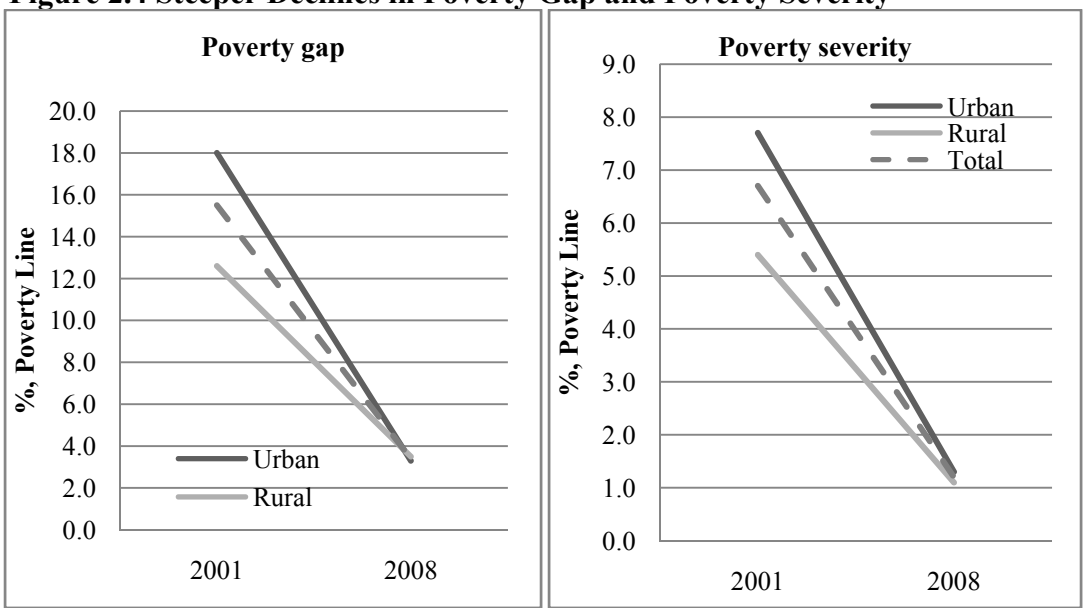
Table 2.2 Sensitivity of Headcount Poverty with Respect to the Choice of Poverty Line

	2008		*2001*	
	Poverty Incidence (P0)	***Change from Actual (percent)***	***Poverty Incidence (P0)***	***Change from Actual (percent)***
Actual	15.8	0.0	49.9	0.00
+5%	18.8	17.9	52.9	5.9
+10%	21.4	34.6	56.0	12.1
+20%	27.1	70.2	61.3	22.8
-5%	13.2	-17.0	46.2	-7.4
-10%	11.0	-31.0	42.7	-14.6
-20%	7.3	-54.5	33.2	-33.5

Source: 2001 HBS and 2008 LSMS

2.10 ***The precipitous declines in the poverty gap and poverty severity provide further evidence for growing shallowness of poverty in Azerbaijan.*** The poverty gap measures how far below the poverty line the poor are, on average, as a proportion of that poverty line. When this measure is low, the poor are closer to the line, poverty is more sensitive to consumption changes, and it is easier to overcome poverty. Based on the upper poverty line, the poverty gap was cut by nearly fourfold between 2001 and 2008 (Figure 2.4). The severity of poverty (the squared poverty gap) measures not only the distance separating the poor from the poverty line but also the inequality among the poor. This measure fell more sharply. While there was some disparity between rural and urban areas in 2001, the faster decline in the poverty gap and poverty severity in urban areas allowed the people there to close the gap in these measures. Therefore, the poor in Azerbaijan have become a more homogeneous group regardless of their geographic location and saw relatively larger declines in the poverty gap and poverty severity than poverty headcount.

Figure 2.4 Steeper Declines in Poverty Gap and Poverty Severity



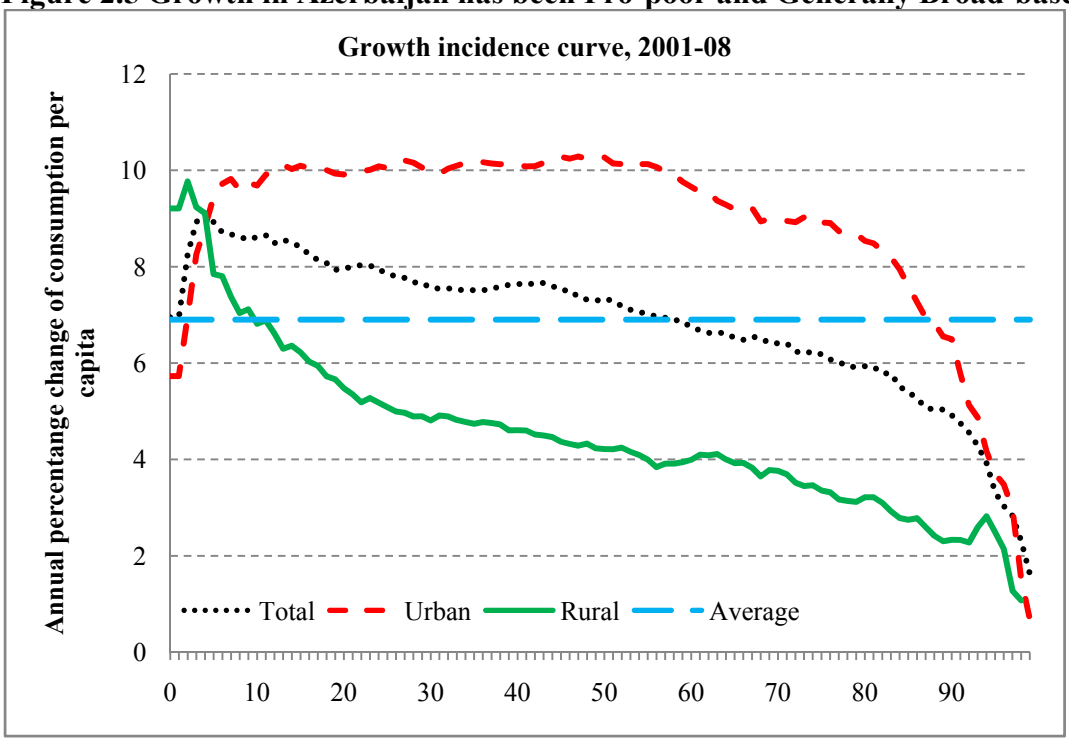
Source: 2001 HBS and 2008 LSMS

B. Growth, Inequality, and Poverty

Growth in Azerbaijan has been pro-poor

2.11 ***Growth in Azerbaijan has generally been broad based, lifting the consumption of all income groups*.** The general improvement in consumption is reflected in the shape of the growth incidence curves (Figure 2.5). A rising tide of higher growth seems to have lifted all boats, but at an uneven pace. While overall rural consumption growth rates have been lower, the poor have gained proportionally more and growth there has been considerably more pro-poor than in urban areas. In rural areas, the bottom deciles averaged an almost 10 percent annual growth rate, compared to 2.5 percent for the top decile. On the other hand, growth in urban areas has been more broad-based, whereby the majority population in the middle wealth groups tended to benefit more than the bottom and the top wealth groups there.

Figure 2.5 Growth in Azerbaijan has been Pro-poor and Generally Broad-based



Source: 2001 HBS and 2008 LSMS

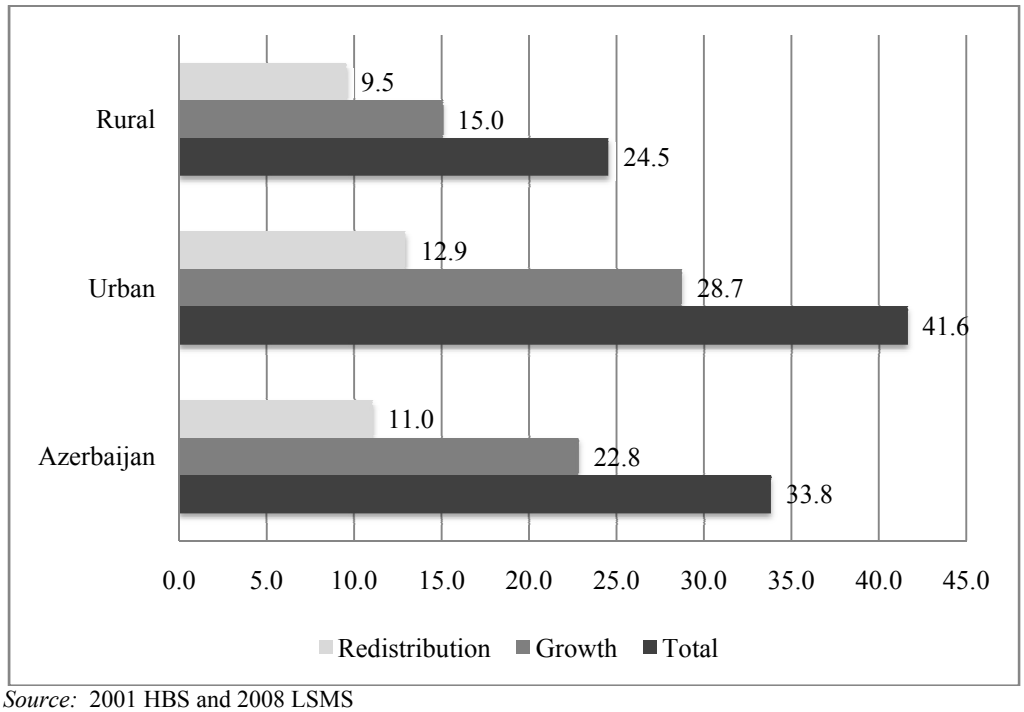
Both growth and decline in inequality contributed to poverty reduction

2.12 ***Poverty reduction in Azerbaijan was driven by both growth and reduction in inequality.*** As shown earlier, overall poverty, as measured by the World Bank upper poverty line, fell by nearly 34 percentage points between 2001 and 2008, based on a comparability established between the two data sources. This decline might be due to the change in mean consumption (growth), change in welfare distribution (consumption inequality), and interaction between the two. Figure 2.6 presents the decomposition of changes in poverty into growth and redistribution components. Between 2001 and 2008, about 67 percent of the reduction in poverty was due to growth in per capita consumption.[5] The decomposition reveals that both poor and rich benefited from growth over the period. In fact, with improved distribution, the poor captured a slightly greater share of welfare improvement. For example, if the distribution of consumption had not improved, the reduction in national poverty incidence would have been lower by 11 percentage points. Moreover, the growth incidence curves above provide another illustration of the pro-poor nature of growth in Azerbaijan between 2001 and 2008 (Figure 2.5). One-third of the decrease in poverty incidence is due primarily to a decrease

[5] The growth-inequality decomposition (Ravallion and Datt 1992) reveals what the impact of growth would be on poverty incidence, keeping inequality constant, and what the impact of redistribution would be on poverty between the two periods if consumption remained constant.

in inequality. Also recall that the magnitude fall in poverty rate in urban areas was larger at 41.6 percentage points, compared to only 24.5 percentage points in rural areas.

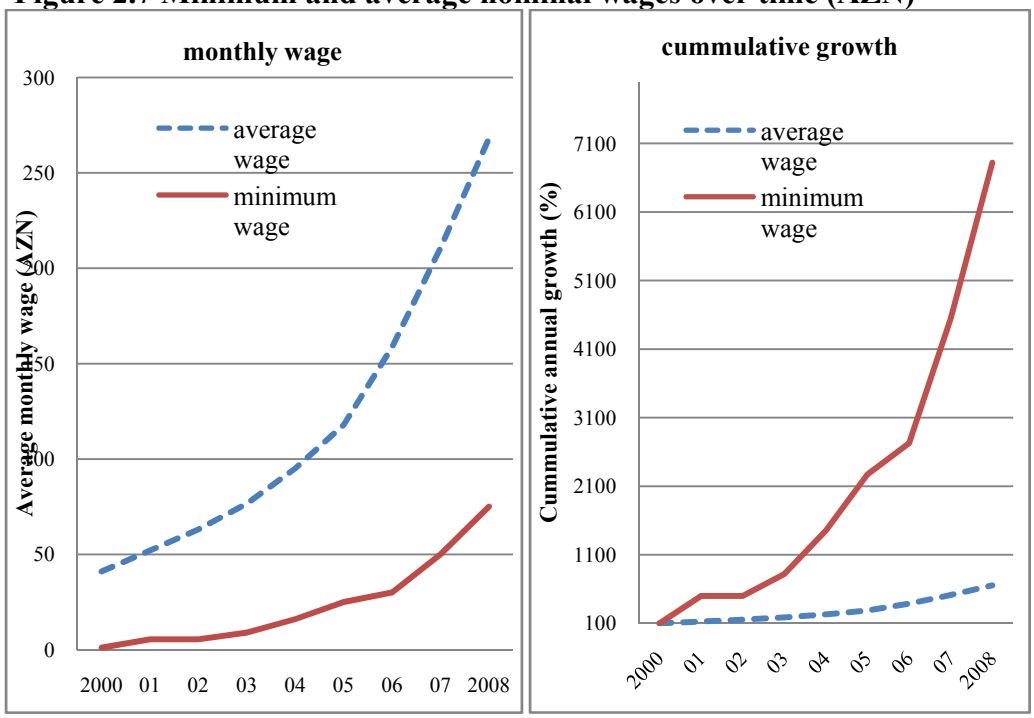
Figure 2.6 Both Growth and Improved Inequality Driven Poverty Reduction over 2001-08



Source: 2001 HBS and 2008 LSMS

2.13 ***Substantial increases in wages and expanded and efficient public transfer programs have in large measure been responsible for the increased consumption and the observed reduction in poverty*** (Figure 2.7; see Chapter 8 for a discussion on public transfers). Between 2000 and 2008, the minimum wage increased by more than 6700 percent from an extremely low level of AZN 1.1 to AZN 75. Average wage has also grown in double digits per year and reached AZN 268 in 2008, compared to only AZN 41 in 2000, a cumulative increase of over 650 percent. However, note that despite its growth many thousand-folds, the minimum wage in Azerbaijan is still less than 28 percent of the average wage.

Figure 2.7 Minimum and average nominal wages over time (AZN)



Source: SSC 2009

Inequality in Azerbaijan declined appreciably between 2001 and 2008[6]

2.14 ***Inequality in Azerbaijan fell appreciably between 2001 and 2008; it could be considered moderate, particularly when compared to those of other oil-producing and Former Soviet Union countries.*** Inequality declined appreciably from a Gini index of 36.5 percent in 2001 to 31 percent in 2008, a nearly 15 percent reduction (Table 2.3). Other measures of inequality such as the decile dispersion ratio, which presents the ratio, for example, of the average consumption of the richest 10 percent of the population divided by the average consumption of the bottom 10 percent, also show a decline in inequality. The decline in inequality is a welcome development with important implications for growth and social cohesion. The distribution of consumption and the associated level of inequality in a country, region, or population group is an important dimension of welfare because most individuals or households pay attention to their relative position in society. In addition, the overall level of inequality in a country, region, or population group has implications for growth and social cohesion. While rural areas have low inequality overall, it is noteworthy that there was a relatively larger improvement in inequality in urban areas, where inequality declined by nearly 18 percent over the same period.

[6] See Chapter 4 for a detailed analysis of inequality in Azerbaijan.

Table 2.3 Inequality in Azerbaijan declined between 2001 and 2008

	Bottom half of the distribution		***Upper half of the distribution***		***Interquartile range***	***Tails***	***Gini***
Total	*p25/p10*	*p50/p25*	*p75/p50*	*p90/p50*	*p75/p25*	*p90/p10*	
2008	1.33	1.39	1.42	2.04	1.97	3.75	0.310
2001	1.38	1.43	1.52	2.33	2.17	4.62	0.365
Urban							
2008	1.37	1.40	1.47	2.11	2.06	4.05	0.326
2001	1.34	1.39	1.58	2.60	2.19	4.83	0.397
Rural							
2008	1.30	1.34	1.39	1.88	1.86	3.28	0.276
2001	1.44	1.41	1.46	2.09	2.06	4.25	0.323

Sources: HBS 2001 and LSMS 2008.

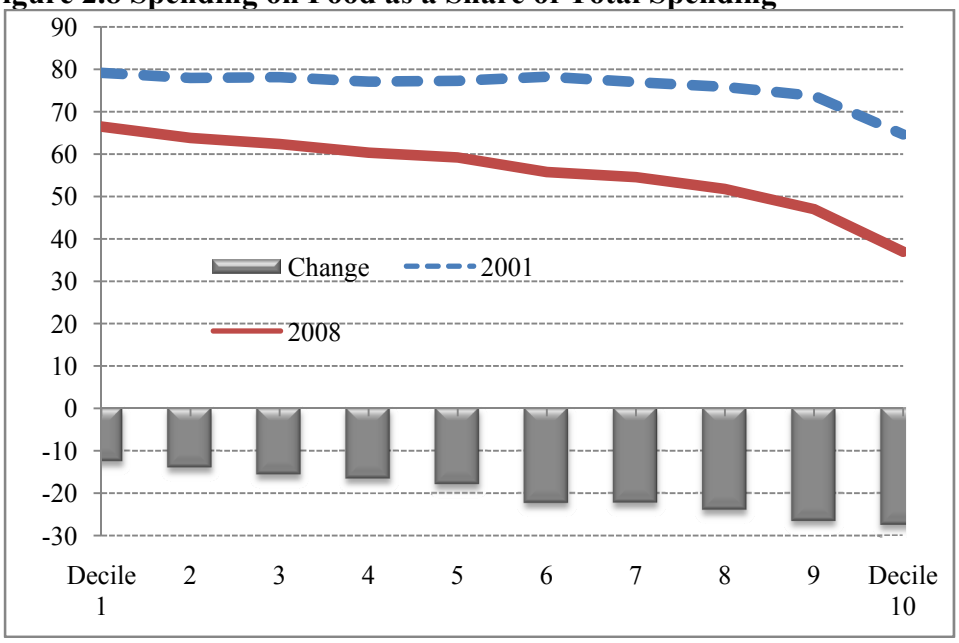
C. Consumption and Spending Patterns

Azerbaijan saw a significant change in consumption pattern during the 2000s

2.15 ***Household consumption patterns have noticeably changed during the 2000s.*** Food, as a share of household consumption, declined significantly between 2001 and 2008. The national average share of household consumption devoted to food was about 75 percent in 2001, which is considerably larger than the 2008 share of about 56 percent (Figure 2.8). In 2001, food represented close to 65 percent of consumption expenditures for the richest decile and close to 80 percent for the poorest decile. Seven years later, the range has drastically shrunk to less than 37 percent for the richest decile and to less than 66 percent for the poorest decile.

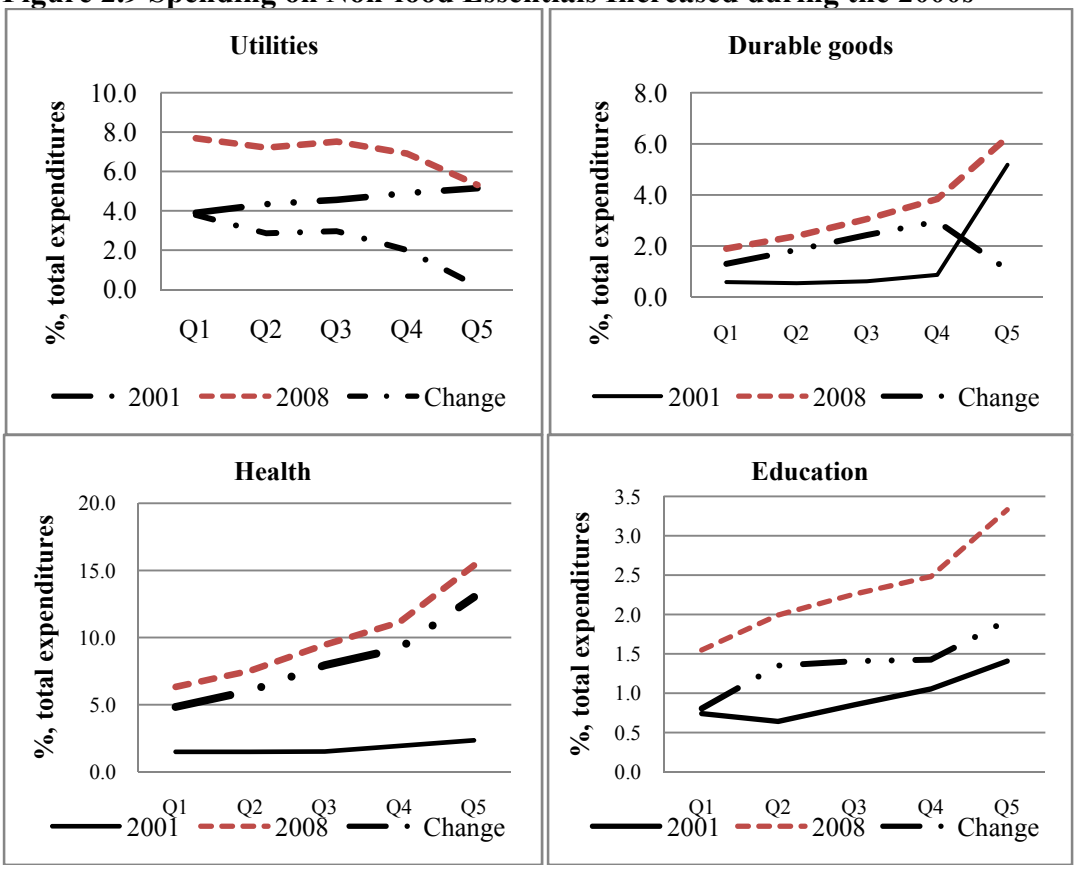
2.16 ***While spending on food decreased, household spending on key non-food goods and services increased during the 2000s.*** Spending on utilities, particularly for the poorer segments of the society, increased substantially, as did household spending on durable goods (Figure 2.9). Private spending on health and education increased considerably between 2001 and 2008. Spending on health now takes up about 10 percent of household spending compared to less than 2 percent in 2001. There was a greater divergence in the share of household resources allocated for food (hence for non-food items) in 2008 than in 2001. While the poorer allocated a relatively larger share of their spending on utilities, the richer tended to spend more on durables, health, and education. This reflects the overall improvement in living conditions of the population and is in line with the country's level of development.

Figure 2.8 Spending on Food as a Share of Total Spending



Source: 2008 LSMS

Figure 2.9 Spending on Non-food Essentials Increased during the 2000s



Source: HBS 2001 and 2008 LSMS

D. Poverty Implications of the Global Economic Crisis

2.17 The global economic crisis, which began as a credit crisis in developed countries, has led to a severe contraction in output and trade worldwide. The most recent forecasts indicate that the global economy is shrinking in 2009 for the first time since World War II, with growth at least 5 percentage points below potential. Countries in the Europe and Central Asia (ECA) Region, including Azerbaijan, are likely to feel the impact, to varying degrees.

2.18 ***Azerbaijan entered the global crisis in a much stronger position than many other countries in the ECA region.*** Azerbaijan's development in recent years has been buoyed significantly by rising oil prices and increasing oil production. The economy did not rely significantly on inflows of foreign capital or foreign aid in 2007 and 2008. The financial sector has thus far avoided a major crisis, and non-oil exports are too small to precipitate a recession. As such, the global economic crisis had relatively lower direct impact on Azerbaijan's macroeconomic stability and the county's growth prospects.

2.19 ***However, the current global environment still posed serious challenges to achieving Azerbaijan's goals of economic diversification and poverty reduction.*** The impact on Azerbaijan is expected to be felt through, among other channels, dwindling demand for its main export goods such as oil and gas. The stimulating role of the oil sector could be weakened by the crisis keeping oil prices low. Depressed global economic activities and demand would also keep markets for Azerbaijan's non-oil exports suppressed. During the first quarter of 2009, GDP grew by only 4 percent, a much slower pace than in previous years.

2.20 ***The expansion of non-oil exports was highlighted as one of the main ways of achieving diversification in the State Program for Poverty Reduction and Economic Development (SPPRED) 2006–15.***[7] Azerbaijan's goal is to move toward a more diversified, globally integrated market economy, with a growing non-oil sector. Significantly improved performance of the agricultural sector and food processing is envisioned to support this goal by helping broaden the current export markets, mainly in Russia and Turkey, to the rest of the ECA Region and beyond. However, the ongoing global financial crisis, with important implications for global and regional growth, has a direct bearing on this means of diversification.

2.21 ***The current external environment had a dampening effect on Azerbaijan's efforts to attract investors and to diversify its production and export base***. The crisis has already reduced access to international finance, lowered food and oil prices, affected foreign inflows (remittances, foreign direction investment (FDI), and rollover financing for commercial banks), and reduced demand for exports. In the absence of the global crisis, Azerbaijan would have succeeded in attracting non-oil FDI and expanding its non-

[7] The State Program for Poverty Reduction and Economic Development (SPPRED) was Azerbaijan's Poverty Reduction Strategy Paper (PRSP).

oil export markets. However, today, as a result of the crisis, capital is less easily attracted by any country and demand for Azerbaijan's non-oil exports is only slowly recovering given growth performance of Azerbaijan's main trading partners.

2.22 ***How does a financial crisis affect poverty in Azerbaijan? It affects through various transmission channels such as increased unemployment and reduced earnings.*** The magnitude of the effects will vary according to sector of employment and depending on household characteristics such as demographics, educational attainment, and location. For Azerbaijan, the impact of the crisis on construction and export-oriented industries is likely to be more severe. Reduced labor demand in these sectors could spur costly labor reallocation, including movement into subsistence activities.

Box 2.1 PovStat Methodology

What is Povstat? PovStat is an Excel-based program designed to simulate poverty measures under alternative growth scenarios, and to forecast or project various poverty measures over a future projection horizon, or more generally, beyond the current household survey period. The need for making such projections naturally arises in the context of assessing poverty implications of expected growth scenarios. Therefore it enables to project poverty levels beyond the most recent available national household survey data.

Poverty projections are generated using country-specific (unit record) household survey data and a set of user-supplied projection parameters for that country. While survey data provide the distribution of household living standards in the country at a point in time, the projection parameters characterize a particular projection scenario. The program is designed to process data at the country level, but can also be used at higher and lower levels of aggregation.

Povstat Methodology. To calculate poverty indices, PovStat uses per capita consumption as the measure of welfare. The basic methodology underlying PovStat is that the rate and sectoral pattern of growth determine how poverty measures evolve over time. In particular, PovStat starts with the initial assumption that household per capita consumption grows at the same rate as that of per capita output in the sector of employment of the household head. This assumption implies constant relative inequalities *within* sectors. The assumption can however be relaxed at the user's discretion by specifying a rate of increase/decrease in inequalities within any sector over the projection horizon.

However, PovStat does not capture heterogeneity within households with multiple income earners in different sectors. This is mainly on account of the nature of data availability. If such data were available, PovStat could be easily run with individual rather than household level data. PovStat allows poverty projections to be further conditioned by a number of projection parameters. Besides the rate of output growth by sector, the additional projection parameters relate to: (i) employment shifts across sectors, (ii) changing terms of trade reflecting differential prices faced by consumers and producers, (iii) changes in the relative price of food that is a prominent part of the poor's consumption bundle, (iv) changes in inequality within sectors, (v) changes in the average consumption-income ratio, and (vi) statistical drift in consumption growth between the national accounts and the surveys. By allowing these adjustments to be built into the projections, PovStat offers a flexible approach to poverty projection that could help avoid the biases typically associated with the simple back-of-the-envelope forecasts relying only on per capita GDP growth and an empirical elasticity of poverty measures with respect to growth. For detailed specification of these projection parameters and their implementation within PovStat, please refer to the User Manual by Datt and Walker (2006).

Source: Datt and Walker, 2006.

2.23 ***Azerbaijan also saw a decline in remittances (for example, from Russia) stemming from economic slowdowns in source countries.*** Although remittances do not make up a large share of household income (about 5 percent), a sizable portion of the Azerbaijani population receive them. About 16 percent of the households surveyed by the 2008 LSMS reported receiving remittance income. A slightly larger share of urban households (17 percent) receives remittances compared to 14 percent for rural households. For recipient households, remittances account for 28 percent of income (30 percent for urban and 25 percent for rural), so any decreases will have important welfare effects. Therefore, depending on the depth of the crisis in Azerbaijan, its main trading

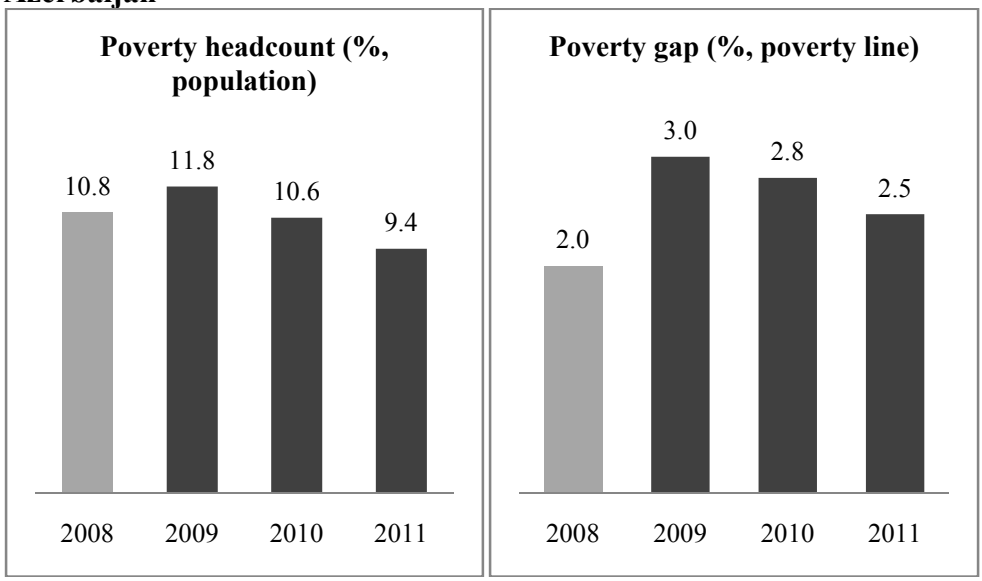
partners and destinations for its migrant workers and the effectiveness of mitigation responses, the crisis could have a negative impact on living standards and poverty levels.

2.24 ***The objective of this section is to simulate the ramifications for poverty of the global financial crisis***. The poverty simulations are based on the assumptions that: (a) real growth in the construction sector declines by 5 percent in 2009 and 2010, while the agriculture and service sectors' growth rates would be 5 percent each during the same period; and (b) remittances decline by 25 percent during 2009–11. The poverty indices are simulated under alternative growth scenarios, taking into account sectoral patterns of growth and employment using the PovStat tool (see Box 2.1). Household data from the 2008 LSMS and projections of sectoral GDP and employment growth rates for 2009-2011 are used to simulate the poverty implications of the financial crisis for Azerbaijan. The key results of the simulation exercise (based on the World Bank lower poverty line of AZN 49.3 per capita per month in 2008 prices) are presented in Figure 2.10.

2.25 ***Simulations of the impact of the crisis suggest that Azerbaijan could see an increase in poverty rates in 2009.*** The overall poverty incidence could increase by about 1.0 percentage points during 2008–09 (Figure 2.10). That means an estimated 86,000 people could fall below the poverty line in 2009 due to the global economic crisis. Poverty is projected to return to its usual course of decline in 2010, if the growth assumptions hold. The increase in the poverty gap would be more pronounced as the already poor become poorer.

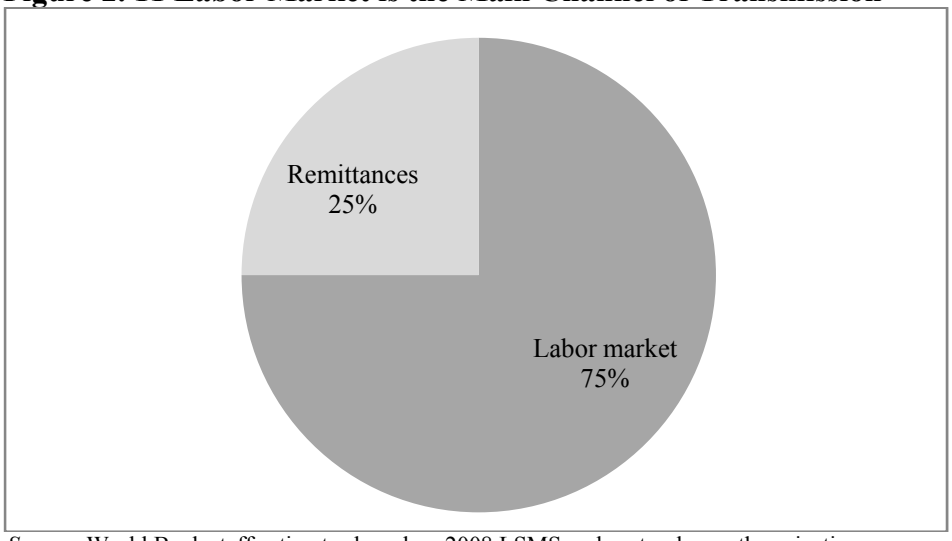
2.26 ***The labor market is the major channel for transmitting the effects of the economic crisis to households.*** Out of the estimated 1.0 percentage-point increase in the poverty headcount during 2008–09, about 0.75 percentage points (or 75 percent) would have been due to increased unemployment and reduced earnings (Figure 2.11). The projected decline in remittances is responsible for the remaining 25 percent of the likely increase in poverty.

Figure 2.10 The Potential Poverty Impact of the Economic Crisis on Azerbaijan



Source: World Bank staff estimates based on 2008 LSMS and sectoral growth projections.

Figure 2. 11 Labor Market is the Main Channel of Transmission



Source: World Bank staff estimates based on 2008 LSMS and sectoral growth projections.

2.7 ***Although the poverty increase appears small compared to other countries in the region, it is important to recognize the burden on households feeling the impact directly through loss of jobs and remittances.*** How much additional spending on social protection programs would be needed to offset the poverty impact of the crisis? The projected additional poverty gaps created due to the crisis using the upper poverty line, which roughly approximates the additional resources that would be needed to cushion the impact, is about AZN 10 million (about 0.15 percent of the 2008 GDP).

3. THE POVERTY PROFILE OF AZERBAIJAN

3.1 This section looks beneath national aggregates and asks: (a) which groups face a higher-than-average risk of poverty, and (b) which groups constitute the majority of the poor. The two questions are not identical: Certain groups can have extremely high incidence of poverty but may not form the majority of the poor because of their small share of the population. The analysis reveals the groups at high risk of poverty—groups where the incidence of poverty, or the poverty headcount, is above the national average—and the largest groups of poor. The profile of poverty in Azerbaijan is based on the 2008 Living Standards Measurement Study (LSMS) survey conducted during January–April 2008. To simplify the presentation, we use simple graphics and concentrate on the poverty line of AZN 50 per capita per month based on the 2008 LSMS and the World Bank methodology of the cost of basic needs framework.

A. Stylized Facts

3.2 First, some basic facts are presented about poverty in Azerbaijan in 2008. Table 3.1 is a snapshot of poverty in 2008. From Table 3.1, the following stylized facts emerge:

- *On average, the consumption of the poor was only 22 percent lower than the poverty line,* and that of the very poor was only 21 percent below the extreme poverty line, both signaling the shallowness of poverty in Azerbaijan, with most of the poor and very poor just below their respective poverty lines.
- *Poverty in Azerbaijan is becoming more of a rural phenomenon.* Rural areas, which were less poor in 2001, are now poorer than the major urban areas.
- *There is less disparity between Baku and the rest of country compared to earlier poverty estimates.* The rate of poverty appears almost identical in rural and small urban areas.
- *The evidence suggests that large households, number of children, youth, and low education are correlates of poverty in Azerbaijan, as would be expected.* These very predictable indicators are consistent with past analysis of poverty in Azerbaijan and international evidence on other countries.

Table 3.1 Consumption Poverty (headcount) in Azerbaijan, 2008

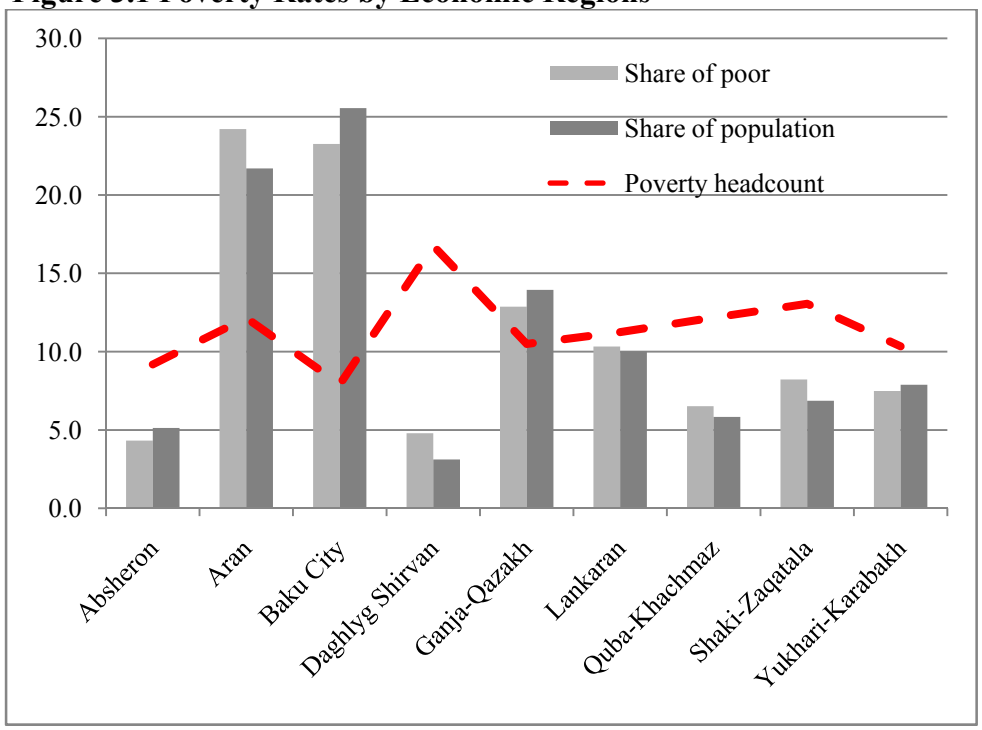
	Azerbaijan	***Baku***	***Major non-Baku Urban***	***Small non-Baku Urban***	***Rural***
Percent, poor	10.8	7.9	8.4	11.7	12
Share of population	100	25.5	14.2	15.2	45.1
Share of poor	100	23.3	11.0	16.3	49.5

Source: 2008 LSMS

B. Poverty Profile in 2008

3.3 ***There has been a considerable reduction in the geographic disparity of living standards over the 2000s.*** A breakdown of poverty by geographic location reveals a growing convergence across the nine economic regions in mainland Azerbaijan (Figure 3.1). But there are still important differences among the regions. In 2008, the incidence of poverty was highest in Daghlyg Shirvan economic region, where about 17 percent of the population lives below the lower poverty line of AZN 50 per capita per month, whereas the capital city has the lowest incidence at 9.9 percent. Except for Baku City and Daghlyg Shirvan economic region, the relative share of population and the poor are virtually identical in the rest of the regions, suggesting a growing decline in regional disparity in poverty in Azerbaijan.

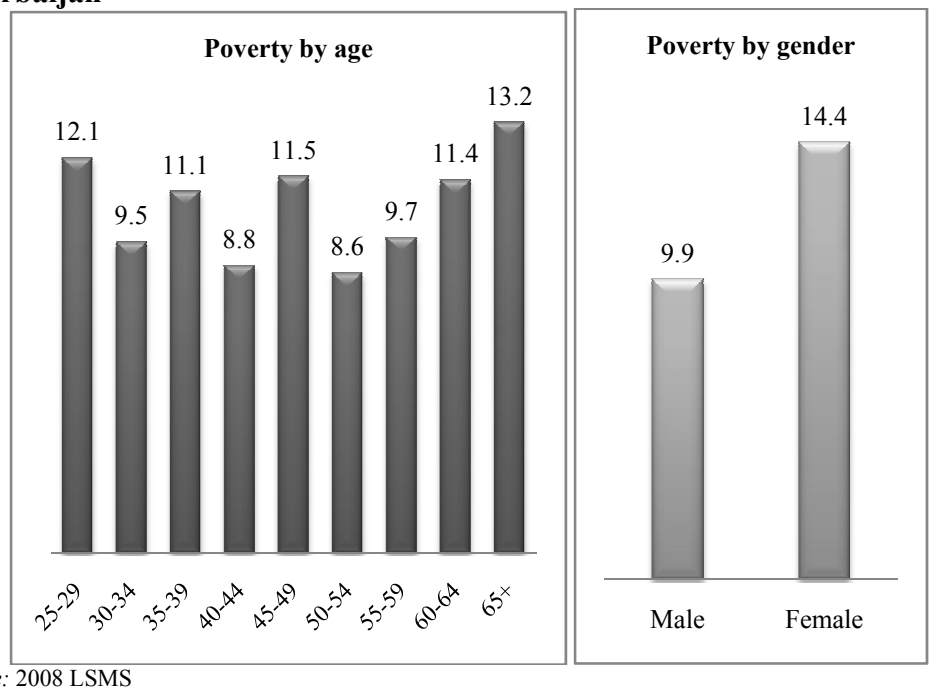
Figure 3.1 Poverty Rates by Economic Regions



Source: 2008 LSMS

3.4 ***Poverty rates are higher among the oldest household heads, but the variability across household head age groups is low in Azerbaijan.*** The headcount poverty varies from about 8.6 percent for household heads aged 50–54 to about 13.2 percent for those aged 65 and above. However, there is a nontrivial difference between male- and female-headed households (14.4 percent and 9.9 percent, respectively) (Figure 3.2).

Figure 3.2 Poverty According to Household Head Age and Gender in Azerbaijan



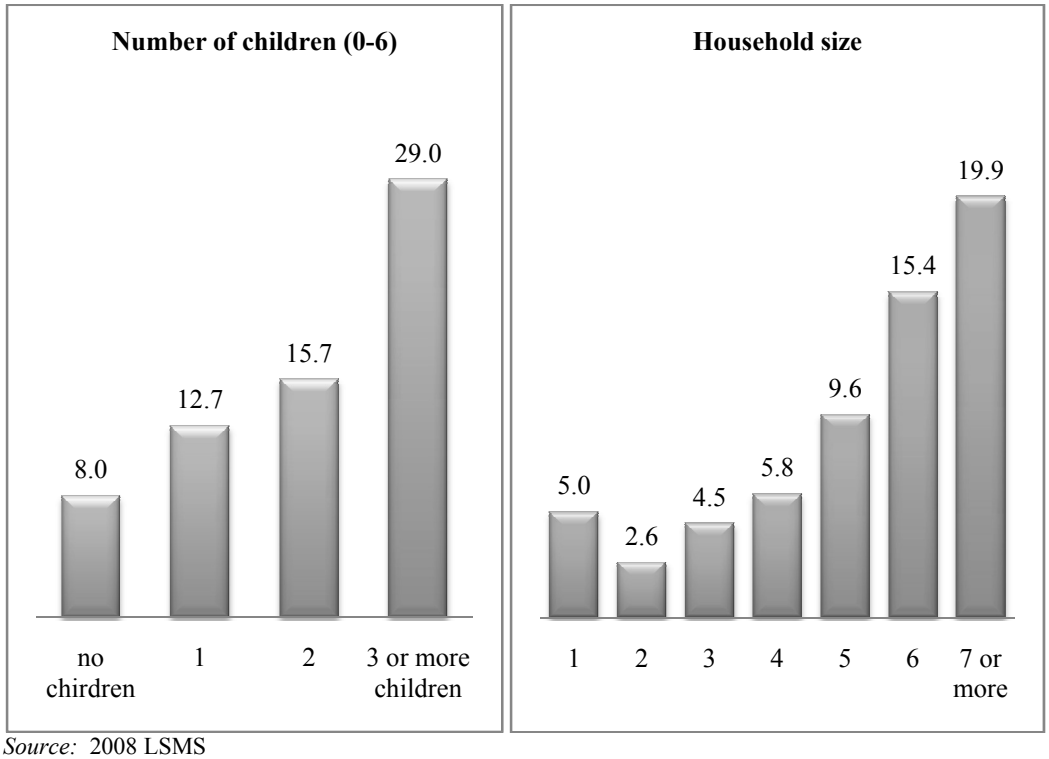
Source: 2008 LSMS

3.5 ***Households with a large number of children face a much higher risk of poverty than those with fewer children*.** More than half of Azerbaijan households had children aged 0–6 in 2008. The average risk of poverty of households with no children under age 6 was significantly lower than the national average. For Azerbaijani households, having one child under age 6 means facing a poverty incidence of nearly 12.7 percent, 2 percentage points higher than the national average. The risk of poverty dramatically increases with a third child, when the likelihood of falling into poverty increases nearly threefold (Figure 3.3).

3.6 ***Household size is directly associated with level of poverty*.** Risk of poverty was higher than the national average for households with six or more members (Figure 3.3). The most typical household in Azerbaijan had four to five members in 2008. Poverty steadily increases with additional household members. For instance, the poverty rate jumps from 9.6 percent for a five-member household to close to 20 percent for a household of seven or more. Households with six or more members represent a larger share of the poor than their respective share of the population.

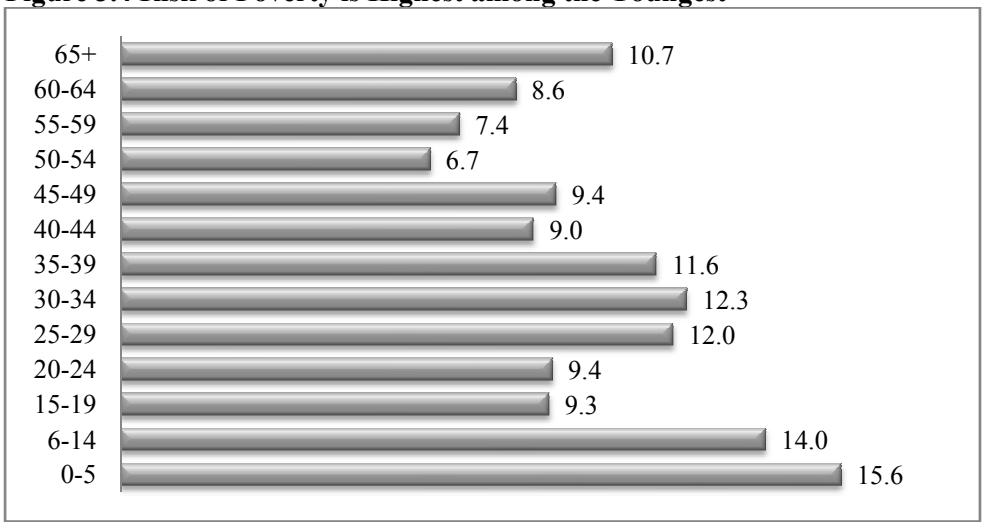
3.7 ***Poverty rates were highest among children***. Children (below age 6) are the poorest, with a headcount poverty rate of 15.6 percent, significantly higher than the national average. Children under age 6 account for less than 9 percent of the population but represent nearly 12 percent of the poor (Figure 3.4). Children aged 6–14 represent the second-poorest category, at 14 percent poverty, which is significantly larger than the national average risk of poverty of 10.9 percent.

Figure 3.3 Poverty Steadily Increases with Number of Children and Household Size



Source: 2008 LSMS

Figure 3.4 Risk of Poverty is Highest among the Youngest

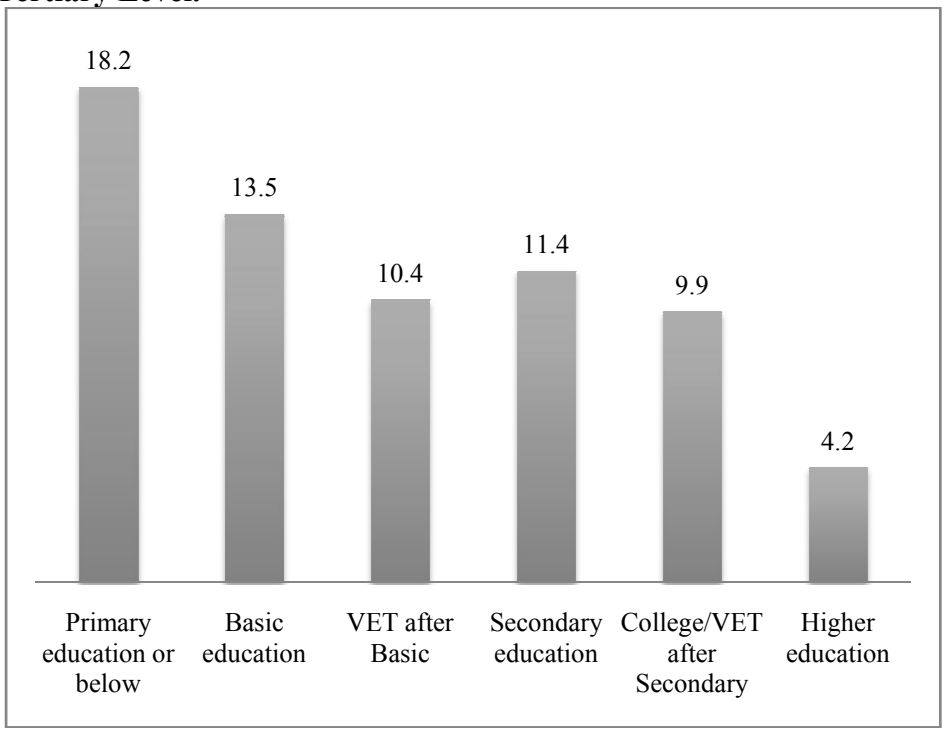


Source: 2008 LSMS

3.8 ***Higher education is strongly associated with lower level of poverty.***[8] Nationwide, close to one in five individuals with a primary or below education attainment lives in poverty (Figure 3.5). Higher education is a way out of poverty: risk of poverty was low at only 4.2 percent for those with formal tertiary education. Except for those individuals with a college or higher degree, all other educational categories were associated with higher-than-average risks of poverty, without substantial differences among them.

3.9 ***The risk of poverty is highest among the unemployed.*** Nationally, the incidence of poverty is about 24 percent among individuals who are unemployed (Figure 3.6). The employed faced less than the national average risk of poverty. Those classified as inactive, including students, retirees, disabled, discouraged, and so forth, accounted for 38 percent of the population and faced higher than the national average risk of poverty.

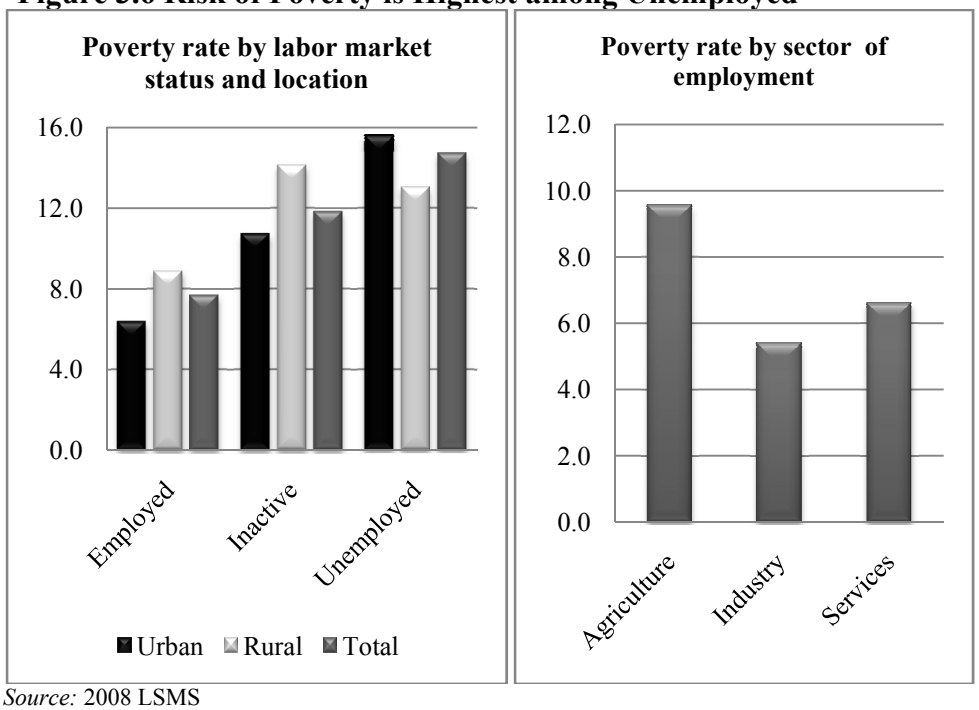
Figure 3.5 Education is Associated with Lower Poverty, Particularly at Tertiary Level.



Source: 2008 LSMS

[8] For a detailed analysis of poverty and education linkages, see Chapter 5.

Figure 3.6 Risk of Poverty is Highest among Unemployed



Source: 2008 LSMS

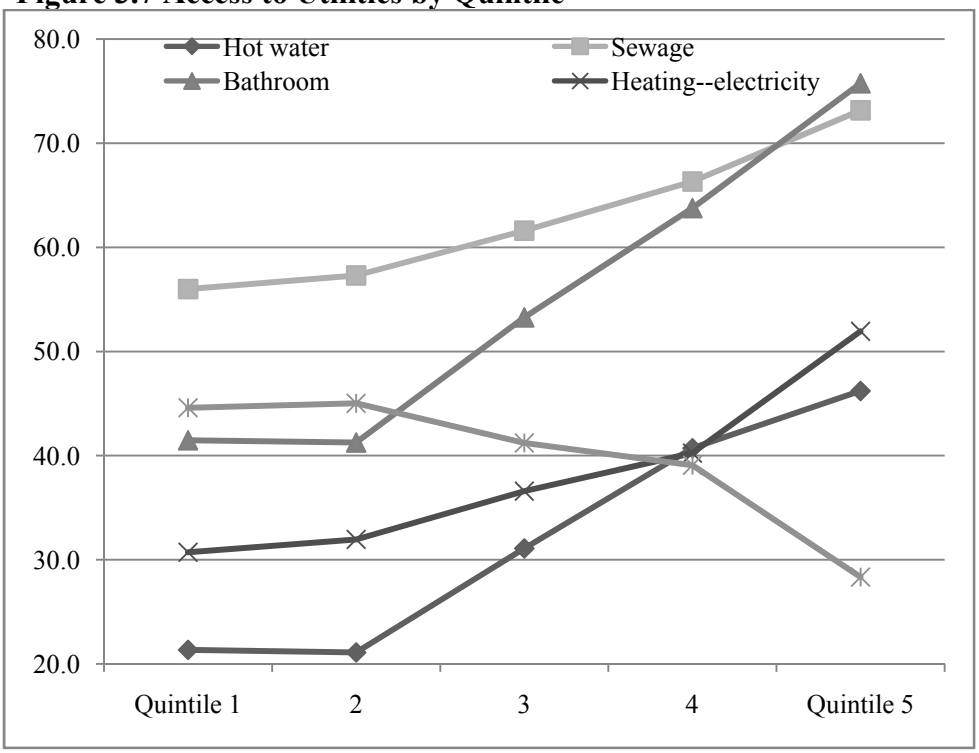
C. Non-income Dimensions of Poverty

3.10 In this section, consumption poverty is contrasted with other dimensions of well-being, such as housing amenities, access to basic infrastructure and public utilities, ownership of essential assets, and subjective perceptions of well-being. Also, individual-level attributes of deprivation such as low level of educational attainment, poor health status, and individual employment status are contrasted with consumption poverty.

The poor and access to infrastructure

3.11 The Azerbaijan Country Economic Memorandum (2009) noted that Azerbaijan's poor quality of public infrastructure has been one of the factors undermining development since the mid-1990s. Azerbaijan has made the development of its utilities sectors a top priority, given the bottlenecks that their poor performance imposes on the rest of the economy. The report underscored the unreliability of the public water supply, particularly in parts of the country outside Baku. The government has gradually been increasing capital investment and, since 2006, has tripled the level of public investment using growing oil revenues. These investments are expected to measurably increase access to and the quality of public utilities throughout the country, helping not only improve the livelihood of households, but also the businesses such as food processing, light manufacturing, and other industries in rural areas.

Figure 3.7 Access to Utilities by Quintile



Source: 2008 LSMS

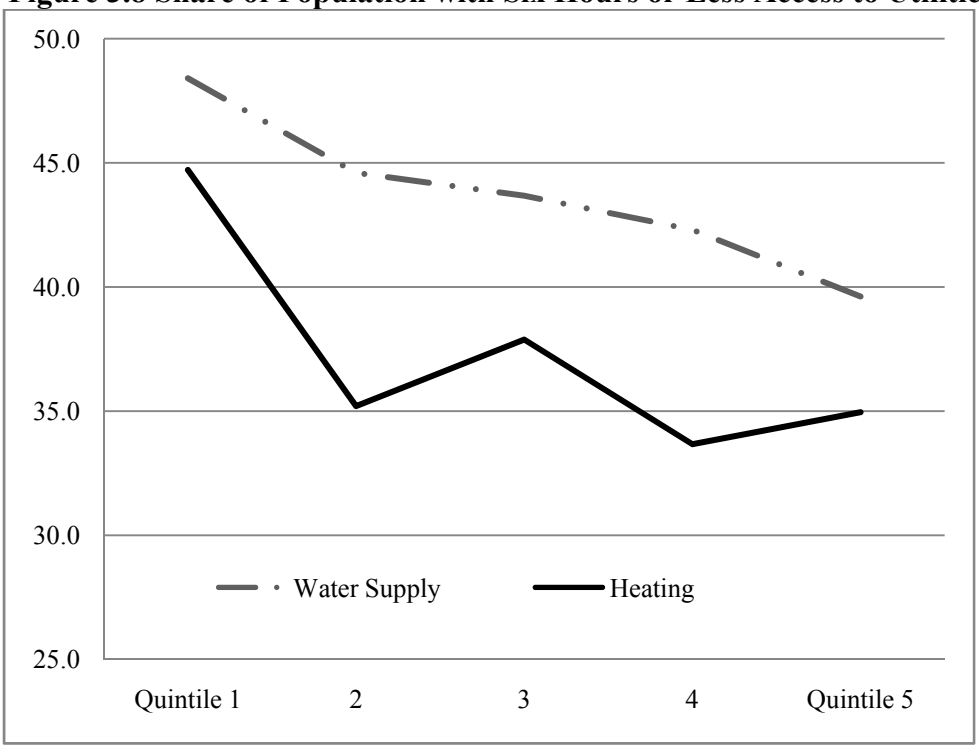
3.12 The 2008 LSMS survey provides an opportunity to assess access, quality, and reliability of public utilities and infrastructure. We examine access, quality, and duration of availability of the most common utilities and public services such as water, hot water, electricity, heating, sewerage, healthcare facility, and educational establishment. The data suggest that many poor Azerbaijani households lack basic access (Figure 3.7). Access to hot water by the poorest 20 percent of the population, which closely approximates the poverty rate, is limited, at 20 percent. Even for the richest 20 percent, accessibility is below 50 percent. While the poorest rely on wood heating, the richer have higher access to electric heating.

3.13 ***The poor not only face limited access to basic utilities, but also the quality of that access is poorer for them.*** Figure 3.8 shows the share of people in different wealth groups with less than six hours a day access to water supply and heating. More than half of the poorest 20 percent of the population do not have more than six hours of these services a day.

3.14 ***Moreover, the poorest quintiles of households spend more on utilities than the richer quintiles.*** The poorest 20 percent spend almost 8 percent of their total consumption on utilities compared to less than 5 percent for the richest 20 percent (Figure 3.9). Rural households spend a larger share of total consumption on utilities. The urban-rural disparity grows at the higher level of consumption, putting the poorest in both rural

and urban areas in the category of being energy poor.[9] Deficiencies in the supply of public services in the rural areas could be an obstacle to poverty reduction because the inconvenience of life without heat, electricity, and sewerage systems in rural areas discourages both people and businesses from locating there and from carrying out new economic activities.

Figure 3.8 Share of Population with Six Hours or Less Access to Utilities

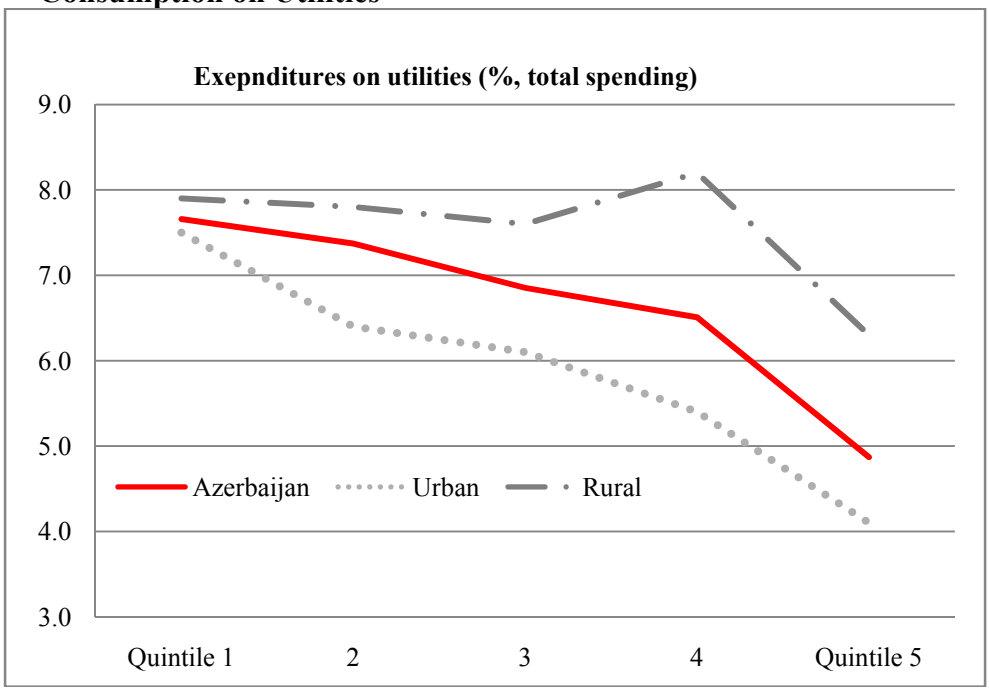


Source: 2008 LSMS.

3.15 ***The poor live in more overcrowded housing conditions.*** Over 65 percent of the poorest reported living in houses too small for them. In Azerbaijan, even the richest are not immune to overcrowding, with over 30 percent of the richest 10 percent claiming to live in overcrowded housing conditions (Figure 3.10). There are also significant complaints about dilapidated buildings, broken windows, and leaking roofs requiring capital repairs. While the situation is worse for the poorest, the problems are widespread throughout the country, and the urban areas appear to suffer the most from overcrowding.

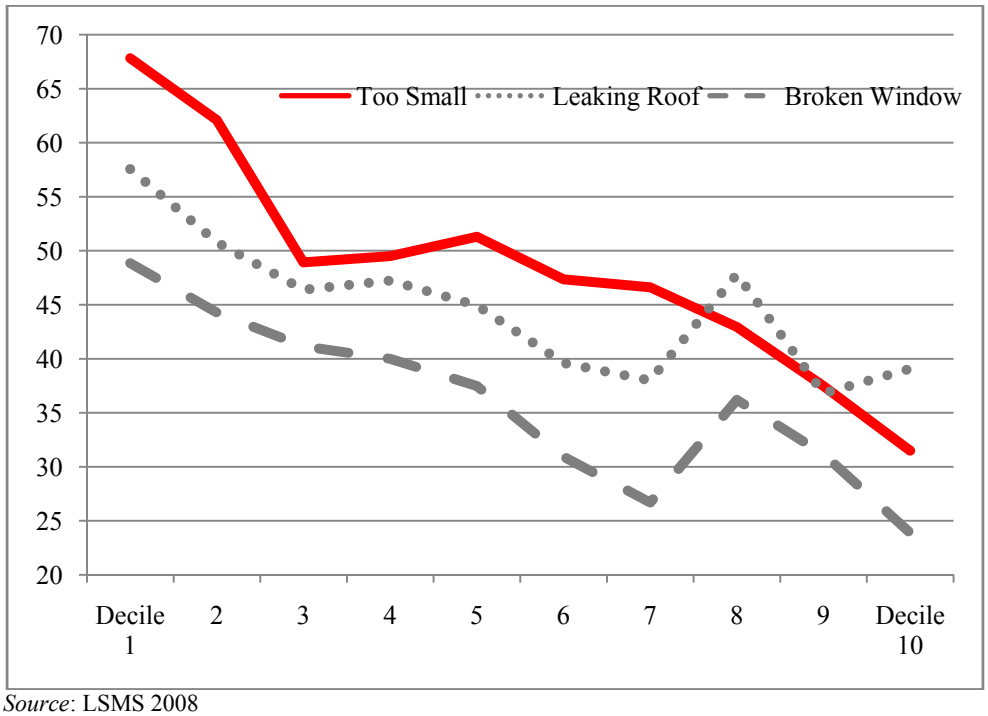
[9] Utilities expenditures include expenditures on water, sewerage, communal services, electricity, and heating (non-electric).

Figure 3.9 The Poorer Households Spend a Larger Share of Their Consumption on Utilities



Source: 2008 LSMS

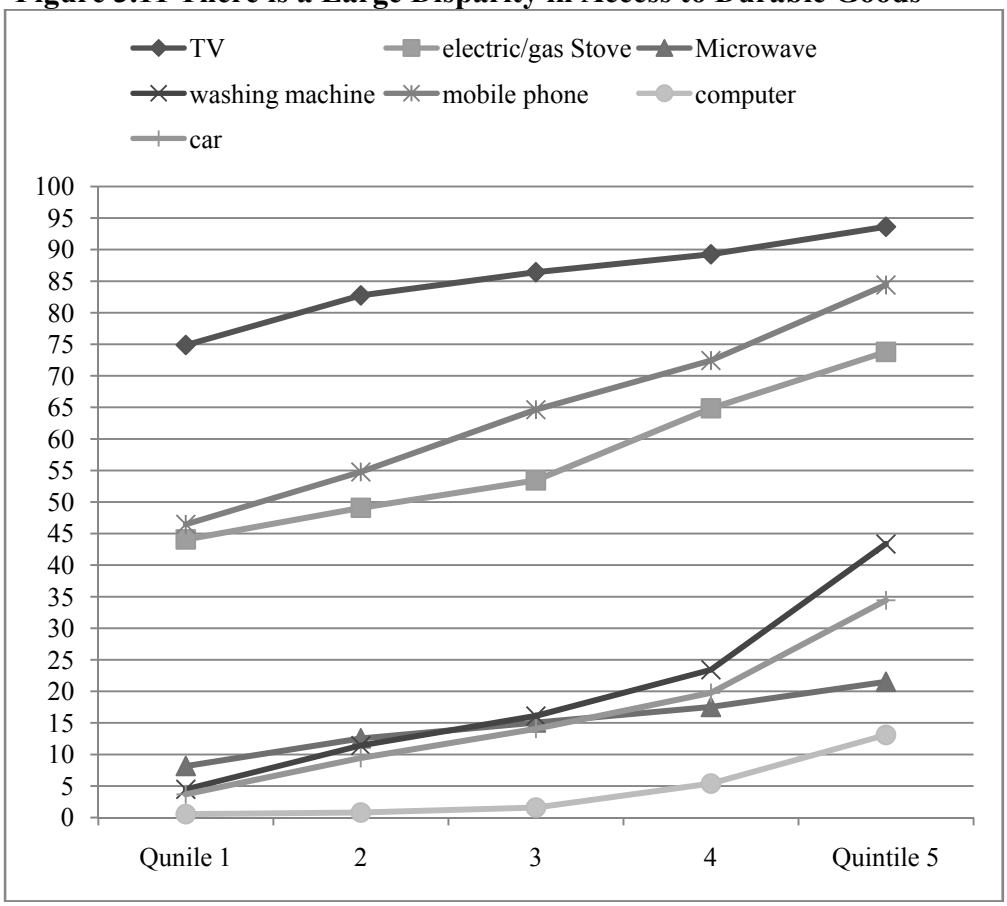
Figure 3.10 The Housing Conditions are overall Bad, but Worse for the Poorest



Source: LSMS 2008

3.16 ***Ownership of durable goods such as a television, an efficient stove, and a computer is much lower for the poorest and steadily increases with wealth level.*** The ownership status of durable goods is a good indicator of the welfare of individuals and the households owning them. The stock of durable goods that households and individuals control largely determines their structural position in society and their likelihood of avoiding or escaping persistent poverty and vulnerability (Lastrapes and Potts 2005). Some goods are inputs to generate income and offer the collateral base for consumption expenditures and productive investments. In Azerbaijan, the poorest segments of the population have limited or no access to some of these essential goods and their services (Figure 3.11).

Figure 3.11 There is a Large Disparity in Access to Durable Goods



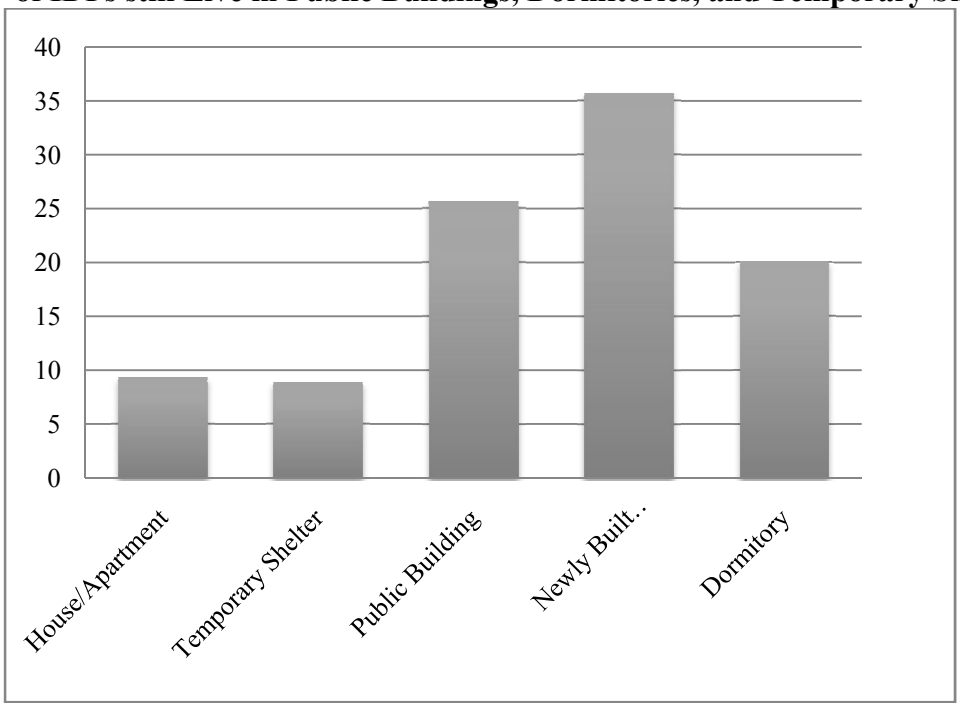
Source: 2008 LSMS

D. Living Conditions of Internally Displaced Persons

3.17 ***Azerbaijan still has a significant share of IDPs, but there is no accurate picture or general agreement on their living conditions until now***. Regardless of their current living conditions, these groups remain particularly vulnerable to poverty and risk since most of them lack self-reliant economic opportunities and are heavily dependent on state transfers. The 2008 LSMS survey included an oversample of 500 IDP households in order to provide a clearer picture of their living conditions than possible in the past. The discussions in this section are based on 800 IDP households—additional 300 households coming from the general sample.

3.18 ***According to the 2008 LSMS, about 11 percent of the population of Azerbaijan, an estimated 900,560 people, reported themselves as internally displaced.*** Although some IDPs have integrated into mainstream Azerbaijani society, many still live in IDP settlements the quality of which ranges from temporary residences in public buildings and informal sites, to newly constructed resettlements built by the Government of Azerbaijan, where IDPs have been resettled. Given the high proportion of IDPs in the Azerbaijan population, the 2008 LSMS oversampled the IDPs, using their list from the Ministry of Refugee Affairs. Therefore, the data provided the opportunity to investigate their living conditions compared to the general population.

Figure 3.12 Despite Significant Resettlement Operations, a large Number of IDPs still Live in Public Buildings, Dormitories, and Temporary Shelters

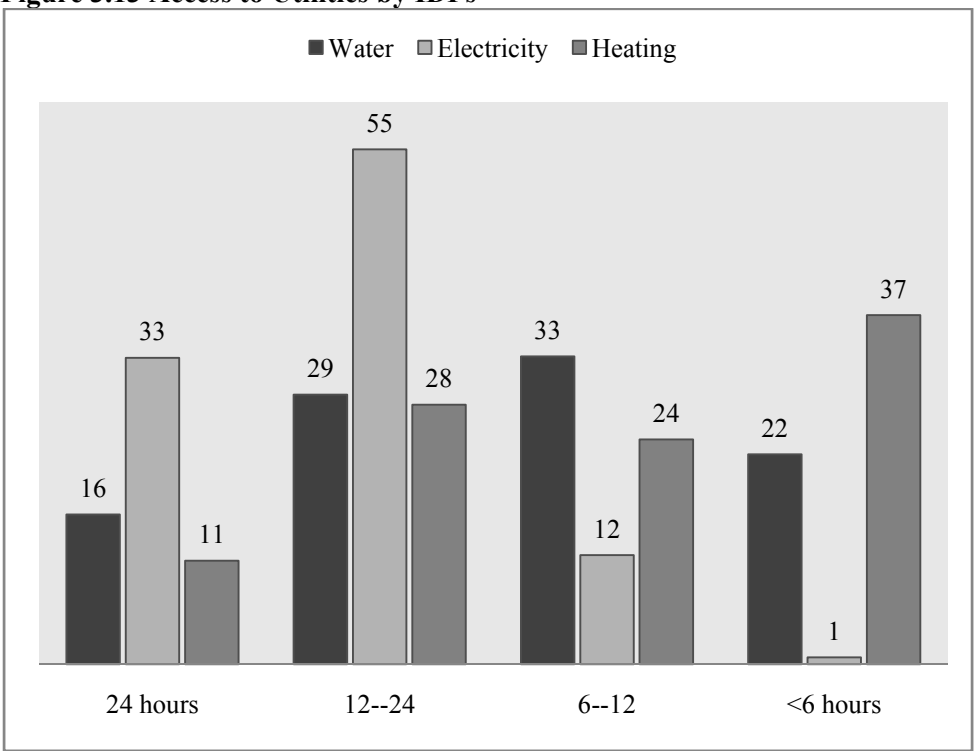


Source: 2008 LSMS

3.19 ***The majority of IDPs still lives in nonresidential areas such as public buildings, dormitories, and temporary shelters.*** About 35 percent of the IDPs have been housed in newly built settlements (Figure 3.12). Resettled IDPs expressed lack of secure legal tenure over housing in new settlements as a serious concern for them in reestablishing their livelihood there. The IDPs who have not been resettled or who do not have the capacity to rebuild their own lives continue to live in accommodations varying from collective centers and mud shacks to abandoned apartments and the homes of relatives.

3.20 ***Poor IDPs and IDPs in general are more likely to live in urban areas than in rural.*** With few jobs in rural areas, many IDPs migrate to cities in the hope of finding work and seeking better access to governmental and nongovernmental assistance programs. About 83 percent of poor IDPs and 86 percent of all IDPs live in urban areas.[10] However, among the minority of IDPs who do live in rural areas, the risk of poverty is greater, at 25.3 percent. Poverty incidence among rural IDPs is thus significantly higher than the overall rural poverty rate of less than 22.8 percent. However, rural IDPs appear to be slightly better off than the rest of the population in terms of the risk of extreme poverty.

Figure 3.13 Access to Utilities by IDPs

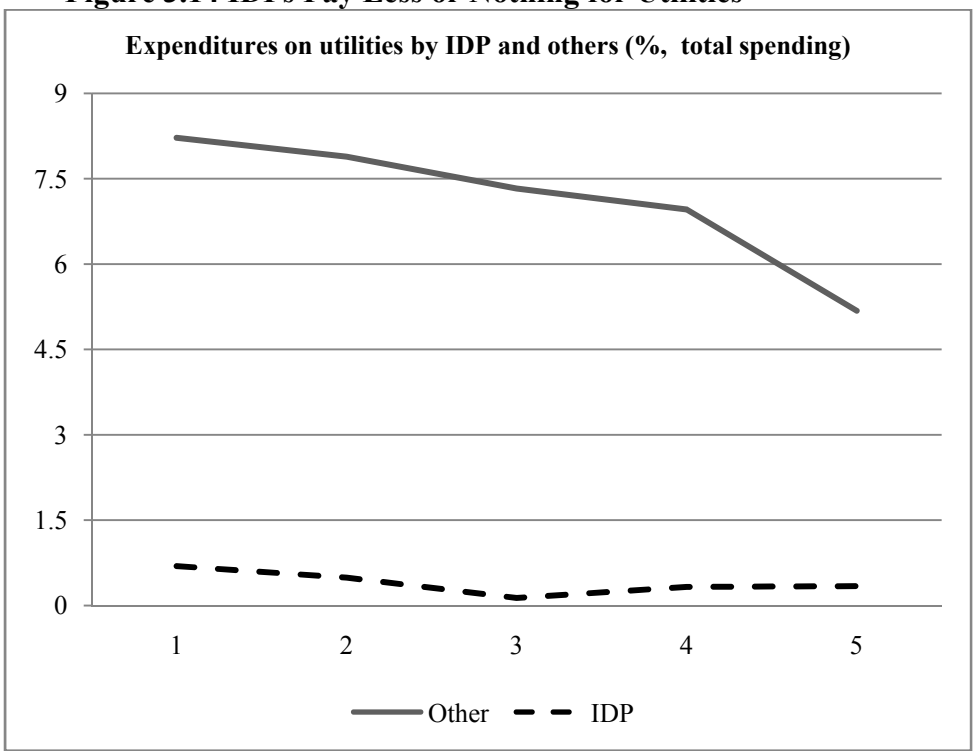


Source: 2008 LSMS

[10] We suspect that the official statistics on the relative size of urban IDPs could be biased downward due to government policies aimed at restricting migration to cities. Some IDPs may be unable to formally register their residence, for example, in the capital, Baku. Without registration, they may be unable to access jobs, public services, and entitlements such as medical care and pensions.

3.21 ***Access to basic housing facilities and services is worse among IDPs.*** IDPs, with the majority of them still living in nonresidential areas, have poor access to utilities such as water, electricity, and heating (Figure 3.13). More than one in three IDPs lack access to heating or their access is limited to six hours a day or less. The majority of IDPs do not have 24-hour access to water, electricity, or heating services. Rates of access by IDPs to hot water, sewerage and bathrooms are significantly lower than for non-IDPs. Only about 33 percent of IDPs have access to 24-hour electricity compared to 53 percent for non-IDPs. But IDPs generally pay less or nothing for public services such as utilities, education, and healthcare (Figure 3.14). IDPs are more likely to say that their accommodation is noisy and too small compared to non-IDPs.

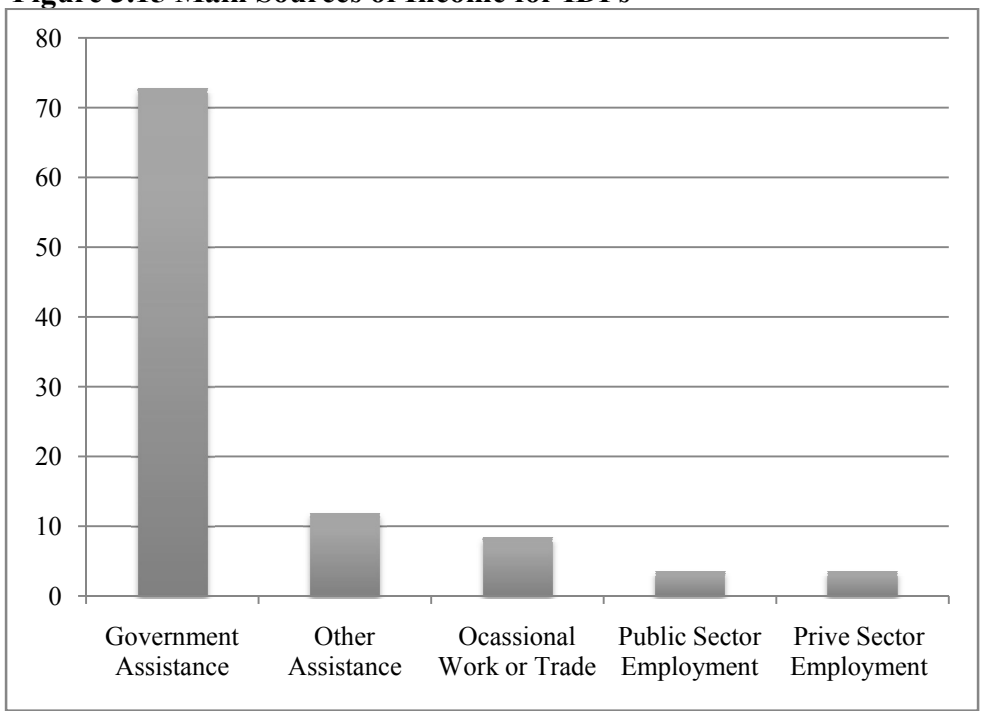
Figure 3.14 IDPs Pay Less or Nothing for Utilities



Source: 2008 LSMS

3.22 ***Government assistance is by far the main source of income for IDP households.*** About 73 percent of the IDPs report government assistance as their main source of livelihood. Only about 15 percent of the IDPs claim to rely on earnings of their own such as from employment and trade (Figure 3.15). In a survey of who had not worked in the past seven days, 60 percent of IDPs had not worked compared to 42 percent of non-IDPs respondents. Over half the IDPs are not active participants in the labor force, either working or looking for jobs, compared to only 36 percent for the general population. For IDPs, one of the most important sources of income is social transfers. On the other hand, the non-IDPs rely on income from wage labor and self-employment in agriculture.

Figure 3.15 Main Sources of Income for IDPs

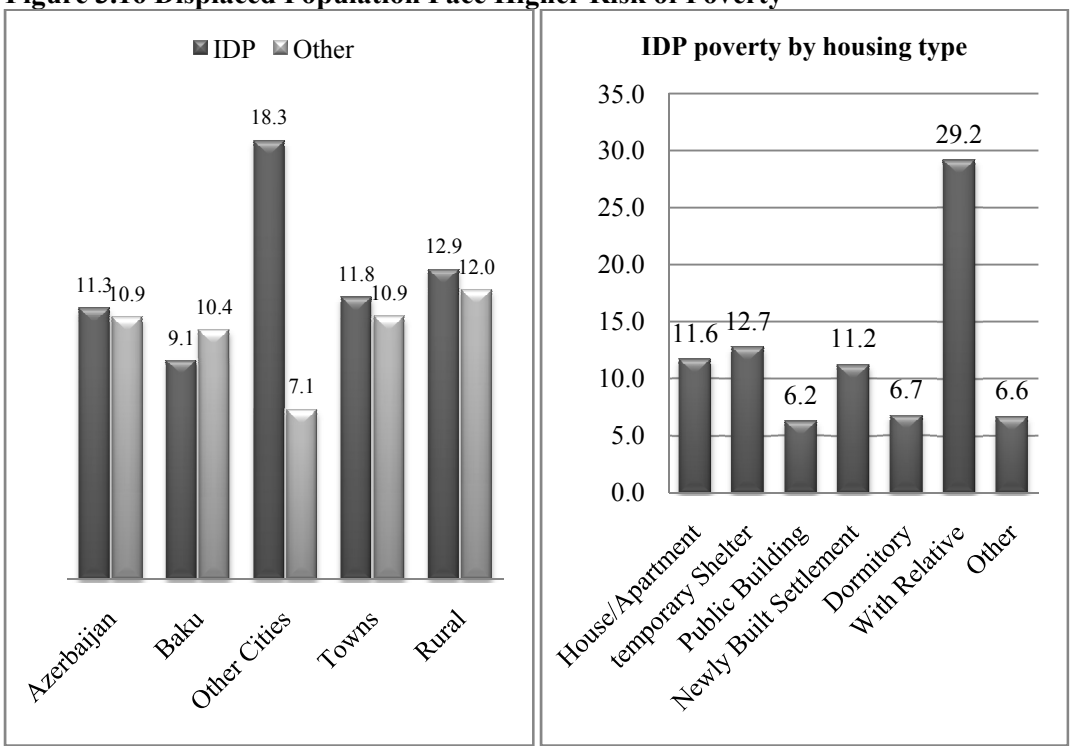


Source: 2008 LSMS

3.23 ***The incidence of poverty among IDPs is about the same as among the general population.*** A little over 11 percent of the IDPs were estimated to be poor. However, there are important differences between displaced people and the rest according to their area of settlement and housing conditions. IDP poverty is most pervasive in cities outside Baku. Indeed, living in Baku appears to decrease the likelihood of being poor for IDPs (Figure 3.16). On the other hand, living conditions for IDPs in other major regional cities (such as Ganja and Sumgait) are very difficult and vastly increase the incidence of IDP poverty. The incidence of poverty among IDPs living in other major urban areas is 18.3 percent, significantly larger than the poverty rate of Baku IDPs. IDPs living in major urban areas other than Baku account for 50 percent of poverty, despite accounting for less than one-third of the total IDPs in urban areas. These findings suggest that significant government and donor efforts to support the displaced population appear to have limited impact in cities outside Baku.

3.24 ***IDP poverty levels also vary across housing types; those who have sought their own accommodation outside government provision may be at greater risk of poverty.*** Living in a public building or dormitory appears to decrease the risk of poverty below the average poverty incidence for IDPs. This is perhaps due to these IDPs, who live in collective settlements, being the focus of targeted interventions. The risk of poverty increases significantly for IDPs living in houses and apartments and temporary shelters. Overall, these data suggest a phenomenon of "hidden" poor among the IDP population.

Figure 3.16 Displaced Population Face Higher Risk of Poverty



Source: 2008 LSMS

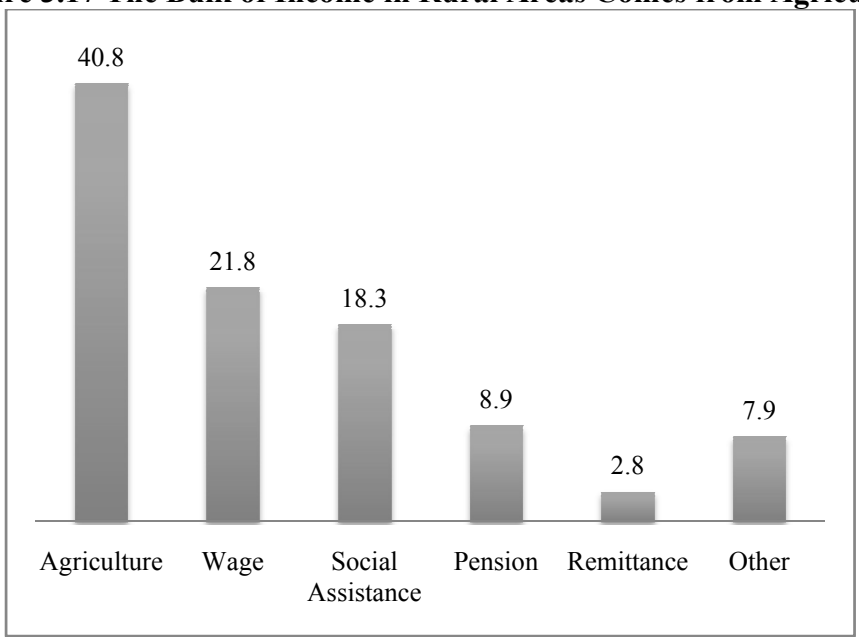
3.25 ***IDPs are more vulnerable than the resident population, as they heavily depend on sources of livelihood outside their control.*** While the bulk of income for resident population comes from their labor and employment, IDPs rely on government transfers and exemptions for more than half of their income. While the dependence of IDPs on government transfers, in the short term, could be a source of stability to their incomes, it makes the IDPs potentially vulnerable to any future changes in policy. High dependence upon government transfers and international assistance also potentially risks weakening the resolve of IDPs to strive for self-reliance. According to the 2008 LSMS, unemployment rate is higher among IDPs (13 percent) than the resident population (9.8 percent).

E. The Profile of the Rural Poor

3.26 ***About 51 percent of Azerbaijan's poor live in rural areas, despite accounting for about 45 percent of the total population.*** Compared to 2001, when only a little over 40 percent of Azerbaijan's poor population lived in rural areas, poverty in Azerbaijan has become a somewhat rural phenomenon over the 2000s. With just under half of Azerbaijan's population living in rural areas, addressing poverty conditions in these areas

will be of increasing importance to the government in light of the current global financial crisis and the volatility in global energy prices—a main contributor to Azerbaijan's GDP.

Figure 3.17 The Bulk of Income in Rural Areas Comes from Agriculture

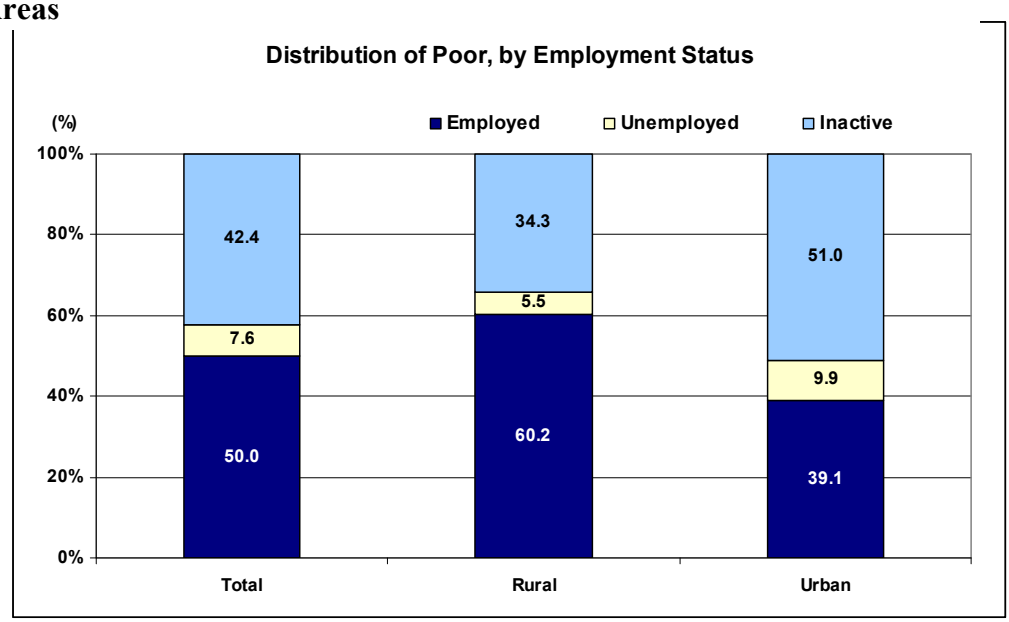


Source: 2008 LSMS

3.27 ***There is a high reliance on agriculture in rural areas.*** Any poverty reduction strategy there needs to build on agricultural growth, but should also look into the creation of off-farm employment in rural areas (Figure 3.17). The growth of non-agricultural employment in rural areas is vital for the success of the agricultural, employment, and poverty reduction strategies. Industrial food production, which used to be an export industry in Soviet times, is of particular importance. Non-agricultural rural services also provide both demand for agricultural production and employment for rural inhabitants. Recent improvements and planned ones in the supply of public services in the rural areas will also help reduce rural disparity.

3.28 ***The phenomenon of working poor is more widespread in rural areas, accounting for more than 60 percent of the rural poor, compared to 50 percent for the whole country.*** Although, overall, higher poverty rates exist among unemployed in rural areas, the unemployed account for roughly 5.5 percent of the poor in rural areas, with the remaining 34.3 percent inactive (which includes elderly and children) (Figure 3.18). Distribution of those living in extreme poverty conditions shows similar trends with 43.8 percent of those in extreme poverty being employed. Also, the working poor account for 53.2 percent of the rural poor and only 35.6 percent of the urban poor. At the household level, analysis shows that a change in employment status of the head of household from employed to unemployed will increase to probability of being in poverty by more than 40 percent.

Figure 3-18 The Phenomenon of Working Poor More Pervasive in Rural Areas



Source: 2008 LSMS

4. INEQUALITY IN AZERBAIJAN

This chapter, a first thorough study of inequality in Azerbaijan, shows that inequality there is moderate, particularly when compared to other oil-producing and Former Soviet Union countries. It declined appreciably from a Gini index of 36.5 percent in 2001 to 31 percent in 2008, a nearly 15 percent reduction. Inequality in Azerbaijan, as everywhere, increases as one moves from rural areas to towns to cities. However, mean income differences between cities, towns, and rural areas are relatively small, and most of the nationwide inequality (in an accounting sense) is explained by within-inequality (in each of the three areas).

A. Introduction

4.1 ***Azerbaijan has experienced considerable economic growth over the last several years with significant distributional implications for the different segment of its population***. The impact of these developments on distribution of wealth has so far remained largely unclear due to lack of relevant data. The Azerbaijan Household Budget Survey (HBS), which is the main source of information for poverty analysis in the country, exhibits unusually low value of inequality as measured, for example, by Gini coefficient. For example, for the last several years for which we have data (2002, 2003, 2004, and 2005), the Gini coefficients of consumption expenditures were in the range of 16—18 percent. These are among the lowest Gini coefficients ever observed in any country. It is very unlikely that Azerbaijan is the most equal country in the world for many reasons (Ersado 2007). Azerbaijan is a post-Communist country and is a large oil exporter. Both factors are generally associated with high inequality. Post-Communist countries, particularly those that were part of the Former Soviet Union (FSU), have undergone dramatic transformations in almost all economic spheres and have registered large increases in inequality.[11] Economic liberalization and privatization and the emergence of a much-better-paid part of the workforce, on the one hand, and the unemployed, on the other, have generally been associated with growing inequality (see Milanovic and Ersado 2008). Moreover, oil-producing countries generally have higher inequality.[12]

4.2 ***The objective of this chapter is to examine the level and trends in inequality in Azerbaijan***. As shown in the foregoing the empirical evidence available so far has been unable to address either the causal factors or, more important, the extent of inequality in Azerbaijan. To proceed with a substantive analysis of inequality, reasonably accurate data and a profile of inequality are needed. The 2008 Azerbaijan Living Standards

[11] The literature is voluminous. We mention only Milanovic (1998, 1999), Mitra and Yemtsov (2006), Ivashchenko (2002), Giammatteo (2006), Sukiassyan (2007), and two large World Bank reports on poverty and inequality in Europe and Central Asia (World Bank 2000 and 2005).

[12] For example, around the year 2000, Angola's Gini was 40, Gabon's 41, Nigeria's 49, and Venezuela's 48 (data from World Income Distribution database).

Measurement Study (LSMS) survey, conducted during January–April 2008, provides the best data available to date to measure an accurate picture of inequality in Azerbaijan.

B. Inequality by Geographic Location

4.3 ***The analysis of inequality is based on per capita consumption as the key welfare indicator, for two reasons***. First, consumption has generally been found in transition economies to be a more accurate indicator of welfare than income.[13] This is due principally to people being reluctant to report all sources of income, leading to an underestimation of income. This reluctance is, of course, less when revealing total consumption. Second, the use of per capita values allows us both to relate the survey data to national accounts (GDP per capita) and to compare Azerbaijani inequality with inequality in other countries in the region (since such comparisons are usually done on a per capita basis).

4.4 ***The LSMS survey data show that the countrywide Gini, using per capita consumption expenditure is 31.0***. Inequality in cities is higher (a Gini of 32.8), and as we move toward rural areas, inequality declines: it is 28.7 in towns and 27.1 in rural areas.[14] The level of per capita consumption follows the same pattern (Table 4.1). Not surprisingly, per capita consumption is highest in cities and lowest in rural areas. The differences between the means, however, are not very large: mean urban income is only 15 percent higher than the overall countrywide average, and mean rural income is only 11 percent lower than the average.

Table 4.1 Urban and Rural mean per capita Consumption and Inequality

	Population Composition	***Mean Consumption (AZN per month)***	***Mean Consumption (total=100)***	***Gini Inequality***
Cities	39.7	122.6	115	32.8
Towns	15.2	98.8	93	28.7
Rural areas	45.1	95.1	89	27.1
Azerbaijan	*100*	*106.6*	*100*	*31.0*

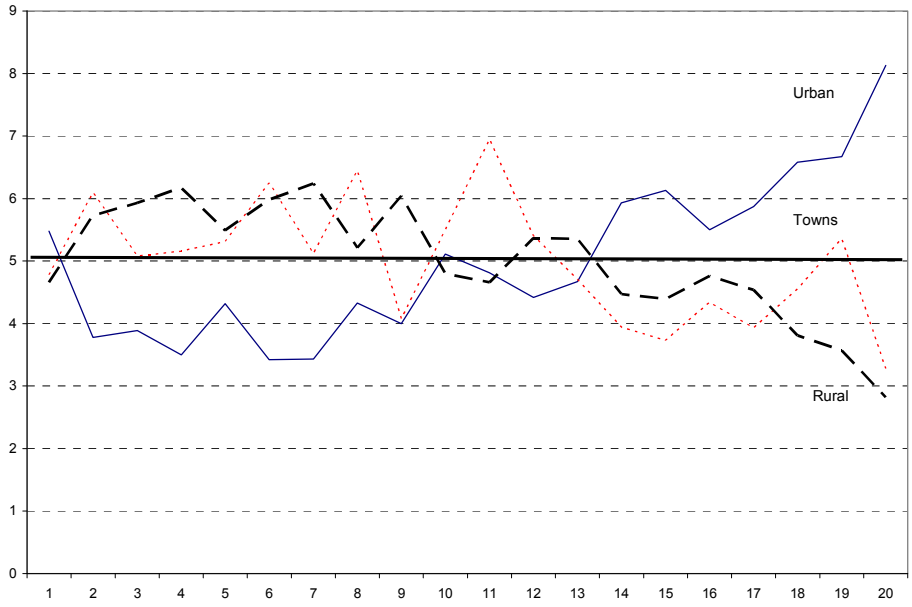
Source: 2008 LSMS

[13] Of course, in principle, consumption is always that, but income is often preferred on the grounds that it provides information on potential consumption and true economic power.

[14] Baku City, as expected, has an even higher inequality, with a Gini index is 34.1. However, compared to other urban agglomerations, this is a fairly moderate level of inequality. For example, Washington, D.C. has a Gini of 46, Buenos Aires 52, Montevideo 46, Moscow 61, Berlin 36, and Madrid 32 (data from various household surveys conducted around the year 2000).

4.5 ***Almost two-thirds of people who are in the top richest 5 percent of the population live in cities, underscoring the geographic disparity.*** Figure 4.1 shows the distribution of individuals across 20 ventiles of income distribution. If incomes and distributions in the three areas (cities, towns, and rural areas) were exactly the same, 5 percent of people from each area would be included in each ventile. As it is, urban households are underrepresented among the low ventiles (with the significant exception of the very bottom), and overrepresented in the top ventiles. Exactly the opposite is true for people from rural areas. Thus, only around 3 percent of people who live in rural areas have consumption levels that place them in the top countrywide ventile, but more than 8 percent of urban residents do.

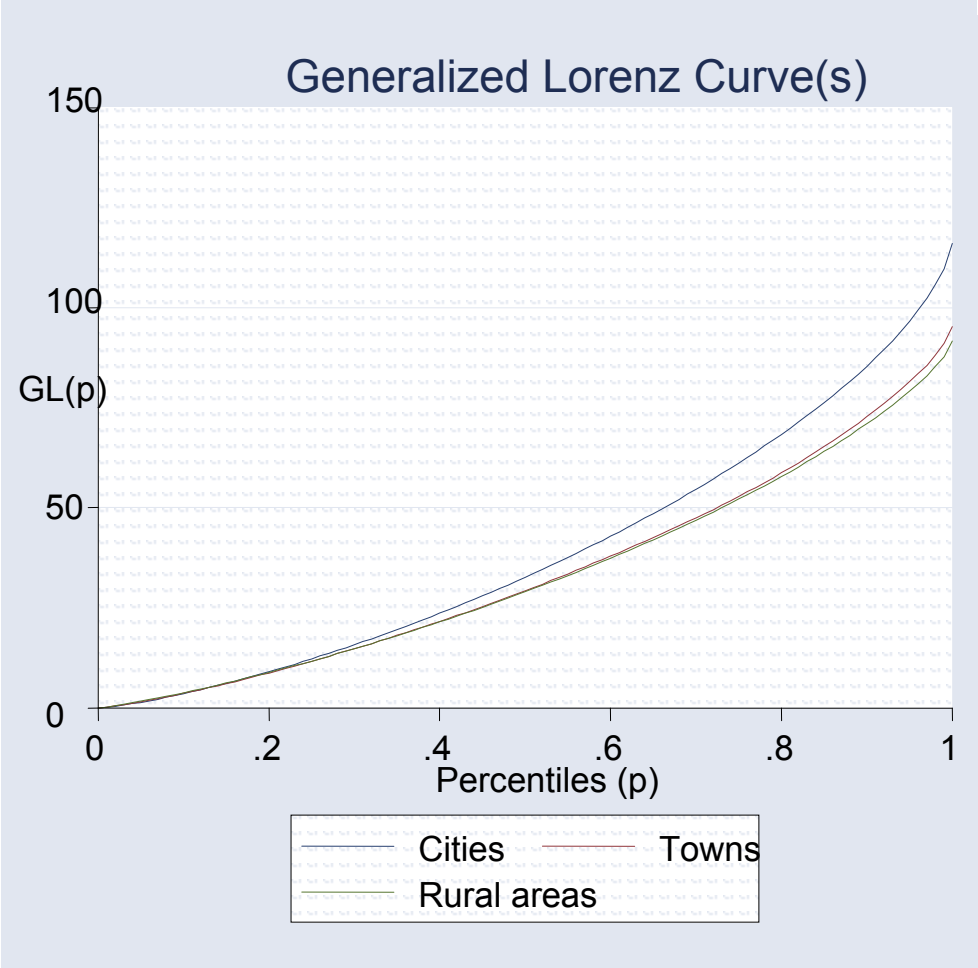
Figure 4.1 Distribution of Individuals across Twenty Ventiles of Income Distribution



Source: 2008 LSMS

4.6 ***The disparity between urban and rural areas is larger at the top of income distribution.*** This can be observed from the generalized Lorenz curves for each of the three geographic areas (Figure 4.2). The curve gives the absolute average consumption cumulated up to that fractile of consumption distribution. As can be observed, (second-order) generalized Lorenz dominance cannot be established since the curves for all three areas intersect at very low consumption fractiles (that is, among the very poor). However, from around the 40th percentile, the generalized Lorenz curve for cities easily dominates the other two. (The end points, at x = 1, give the mean consumption per capita in the three areas.) The implication is that when it comes to the very poorest, the differences between various settlements (cities, towns, and rural areas) are small. It is in the top of income distribution that cities enjoy a sizable preponderance.

Figure 4.2 Generalized Lorenz Curves for Cities, Towns and Rural Areas



Source: 2008 LSMS.

4.7 ***Decomposition of total inequality shows that 96 percent of overall Azerbaijan-wide inequality is due to inequalities within cities, towns, and rural areas.*** Table 4.2 presents the decomposition of total inequality among the three geographic areas. This allows us to see how much of total inequality is due to inequalities within each of the areas compared to inequality between the areas. We present decomposition for both Gini and Theil indexes.[15] The two decompositions yield the same result: 96 percent of overall Azerbaijan-wide inequality is due to inequalities within cities, towns, and rural areas. The differences in mean incomes among these three types of settlements contribute only 4 percent of total inequality. These results can also be interpreted to mean that were average incomes in the three types of settlements to be perfectly equalized, the effect on total inequality would be minimal: it would decrease by only 4 percent.

[15] The Theil index used here is the generalized entropy measure where the parameter = 1, that is, T(1)= $\frac{1}{N}\sum_i \frac{y_i}{\bar{y}} \ln \frac{y_i}{\bar{y}}$, where y_i = individual income, $\bar{y}$ = mean income, and N = number of individuals.

Table 4.2 Decomposition of Overall Inequality (by settlement)

	Gini	*Theil or GE(1) index*
Within component	12.0	--
Overlap	17.2	--
Total within	29.2 (96%)	16.1 (96%)
Between component	1.2 (4%)	0.7 (4%)
Total	*30.4*	*16.8*

Source: 2008 LSMS

C. Inequality by Gender

4.8 ***The welfare differences between men and women are minimal in Azerbaijan.*** The level of inequality between men and women is virtually the same at Gini coefficient of 31 percent and 30.8 percent, respectively. This may have partly due to the assumption that household members divide income (or consumption) equally and thus we do not expect to find large welfare differences between the genders. Larger differences between the genders can, however, be found if there is a sizable presence of, say single-mother households or households headed by widows, and if they are (as they tend to be) poorer, on average. This is not the case in Azerbaijan, and the results in table 4.3 confirm that welfare differences between the genders are minimal.

Table 4.3 Gender, Consumption and Inequality

	Population composition (in percent)	*Mean consumption (AZN per month)*	*Gini inequality*
Women	51.9	105.7	31.0
Men	48.1	106.3	30.8
Azerbaijan	*100*	*106.0*	*31.0*

Note: Population composition as reflected in the survey (after the application of survey weights).
Source: 2008 LSMS.

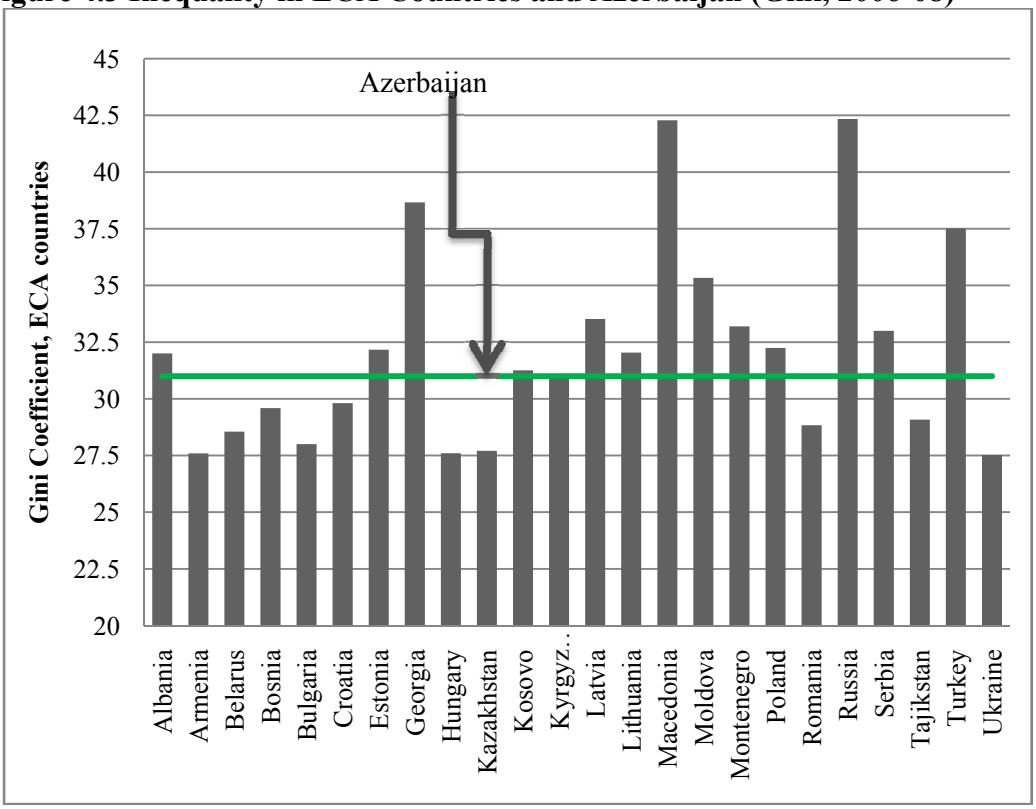
4.9 ***The divorced and widowed people in Azerbaijan are not poorer than the average population.*** This can be seen from gender equality,[16] which holds not only in terms of mean consumption (welfare) but also in terms of inequality. This is an important observation because household composition of the two genders is not exactly the same. Thus, almost 11 percent of women live in widowed households but only 1 percent of men do. Similarly, almost 3 percent of women live in divorced households but only 0.3 percent of men do. To the extent that we might expect widowed and divorced households to be less well off, we might expect women to be less well off than man (on average). But as we have seen, this is not the case in Azerbaijan.

[16] The generalized Lorenz curves for the two genders are practically indistinguishable. There is also no meaningful welfare difference between the genders in their place of residence (cities, towns, rural areas).

D. International Comparisons

4.10 ***The level of inequality in Azerbaijan is moderate compared to other transition countries.*** Figure 4.3 contrasts Azerbaijan's inequality with that of other transition countries. The latter are the "natural" comparators for Azerbaijan, and particularly the FSU countries. Azerbaijani data are unremarkable. The country's inequality is just around the mid-level of inequality in this set of countries (the average Gini for the countries shown in Figure 4.3 is 32). The data are comparable not solely because they refer to approximately the same period, but the welfare indicator is in all cases the same: consumption per capita.[17] Thus, unlike what one might have expected, Azerbaijan, due to its oil-exporter character, does not display higher inequality than, say, Romania and Serbia. Its inequality is slightly higher than Ukraine's and less than Moldova's, but the differences are minimal and not statistically significant. However, inequality in Azerbaijan appears to be significantly less than in Georgia (a Gini of 30 compared to a Gini of 40). The 10-point difference in the Ginis is sufficiently large and statistically significant.

Figure 4.3 Inequality in ECA Countries and Azerbaijan (Gini, 2006-08)



Source: 2008 LSMS; ECAPOV database.

[17] In addition, a further effort has been made within ECA to standardize, and thus make more comparable, the individual surveys.

5. EDUCATION AND POVERTY REDUCTION

This chapter highlights the linkages between education and poverty reduction and the role of education in Azerbaijan's overarching goal of broad-based, diversified, and globally competitive growth. It provides an overview of the current state of the education system, the quality of education, and the disparities in access to education by different socioeconomic groups. The report identifies areas of notable achievement in the education system, including high and very equitable enrolment rates through age 15 and high performance of Azerbaijani students on international mathematics test that rivals those of richer countries. The chapter also highlights several challenges for Azerbaijan in developing a modern education system that adequately supports a growing market economy and future poverty reduction. Enrolment rates in tertiary education are highly lopsided in favor of the rich and surprisingly low overall given the country's income level. Compared to math, Azerbaijani students' reading skills appear to be very poor, reflecting badly on the quality of education, since good reading ability is at the center of all learning.

A. Introduction

5.1 ***Azerbaijan's education system has made notable achievements.*** Attainment levels through age 15 are high relative to its income level, and enrolment rates are fairly equitable between poor and non-poor children. As in all countries, poorer children are less likely to stay in school (especially the older they get), but compared to other countries at similar income levels, Azerbaijan's performance on this front is better. In terms of the quality of education provided, there are two things to highlight: first, the average performance of Azerbaijani students in mathematics equals that of much richer countries (such as Spain and the United States) and, second, there is surprisingly little difference between children from rich and poor households in their performance on standardized tests, especially in mathematics. Azerbaijan may be among a handful of countries in the world that can boast of such an achievement.

5.2 ***However, the education system faces several challenges that need to be addressed for the system to adequately support a growing market economy and future poverty reduction.*** The education system does not appear to provide adequate environment for high quality teaching and learning, as demonstrated by low reading scores on international tests. Higher education enrolment rates are low, and large disparities exist between the poor and the non-poor. Further, there is a sizable mismatch between the training provided by the education system and the skills demanded by a dynamic and growing economy.

5.3 ***As many as 79.4 percent of Azerbaijan's 15 year olds have not attained even a minimum mastery of reading*****,** raising serious concerns about their preparedness for onward studies—whether at the upper secondary or tertiary level or in an adult learning

opportunity later in life.[18] It is a puzzle why Azerbaijani students do so well in math but so poorly in reading. The impressive math results show that Azerbaijani teachers and the education system, more broadly, can deliver high-quality education in mathematics to all students. Yet, when it comes to reading, those same teachers and schools (and the accompanying finance, autonomy, and accountability structure) seem to fail. A qualitative survey of students, teachers, and school principals conducted between December 2008 to September 2009 show that several factors could have affected student performance on reading test, including alphabet change from Cyrillic to Latin; lack of teaching resources, textbooks and trained staff; and poorly aligned learning incentives and curriculum. Although the script changed in 1993, textbooks and teaching materials in the Latin alphabet were not available until 2000-2001. This crucially affected the 2006 PISA participants, who started school in autumn 1995. The change of script negatively affected development of new teaching materials, particularly those for literature and reading. The focus groups also identified an outdated curriculum as among the major problems of national education. The old curriculum was strongly biased to teaching mathematics skills than language and literature.[19]

5.4 ***There is a large disparity in access to higher education resulting in a significant impediment to further poverty reduction in Azerbaijan.*** And the country has very low enrolment rates by Europe and Central Asia (ECA) standards and by standards of countries with a similar level of development at the tertiary education level. While access to general compulsory education appears to be nearly universal, the higher-education enrolment rate for the richest quintile is twice as high as for those in the poorest quintile. Analysis shows that Azerbaijan spends few public resources on higher education, leaving a very high burden to be carried by families. Consequently, tertiary education is prohibitively expensive for poorer households. Indeed, analysis highlights the importance of making investments in postsecondary education: Individuals who attain only compulsory education (about 18 percent of the employed population) are expected to earn wages at or below the poverty line. Indeed, the link between education and poverty in Azerbaijan becomes more tangible among those individuals and families who benefit from higher-education completion. Results indicate that returns to having attained basic and upper secondary education are not significantly different, compared to having attained elementary or no education. However, wage rates for workers with tertiary education (university or vocational) are about 45 percent higher than those for workers with elementary or no education. Furthermore, households having a head with tertiary education consume on average 25 percent more on a per capita basis than otherwise similar households having a head with at most basic education.

[18] That is, 79.4 percent of students who took the Program for International Student Assessment's (PISA's) reading test scored at the two lowest levels ("level 1" and "below level 1"). Students at these levels can only read at a very rudimentary level.

[19] See World Bank (2009) for detailed analysis of this qualitative survey implemented as part of the Azerbaijan Programmatic Poverty Assessment.

5.5 ***The Azerbaijan education system suffers from a mismatch between the training of graduates and the skills demanded by the economy.*** In professional and higher-education institutions, there is an overproduction of specialists in areas such as education, health, and manufacturing, which have relatively limited job opportunities, whereas very few graduates have been trained in agriculture and services, from where much of the new demand for employment is coming. This mismatch is recognized by employers. For instance, while small and medium enterprises find it easy to find unskilled laborers (who constitute the bulk of recruited employees), they have difficulty finding qualified crafts and related trade personnel, technicians, and managers. In fact, in recent years, job fairs in Baku have had very low levels of job placement—approximately 70 percent of the jobs offered were not filled, despite acceptable wages. Many of the available jobs had high competency requirements, including computer skills and English.

5.6 ***The government is aware of these challenges and has initiated a number of reforms.*** To strengthen the education system, the GOA is taking several measures, including the provision of pupils in public schools with free textbooks; construction of more public schools and rehabilitation of existing schools and their provision with modern educational equipment; state program(2008-2012) to upgrade educational system with information technology; state program (2006-2010) targeted at youth with special talents; state program (2006-2015) on de-institutionalization and alternative care; programs to revive preschool education. The 2005–2014 educational reform project (which is being supported by the World Bank) is intended to support the efforts of the government's Education Reform Program by improving the effectiveness of teaching and learning in general education through (a) supporting innovative curriculum design and content and the curriculum development process; (b) piloting new in-service teacher training programs and delivery mechanisms; and (c) evaluating the impact of project interventions through monitoring and evaluation of pilot teacher training institutions and pilot schools, in order to provide lessons for broader sector reform. Also needed are better coordination between the labor and education ministries, with a view to offering better information to students on recruiting sectors and wages through career counseling, and fine-tuning of the curriculums of public universities and professional schools, in close consultation with the private sector as the engine for job creation.

B. Who Provides Education and at What Cost?

5.7 ***Like in other Former Soviet Union (FSU) countries, Azerbaijan inherited a large network of education institutions at all levels and a large stock of teachers***. The vast majority of schools in Azerbaijan are public schools, with only 17 private schools operating in the country (SSC 2008). According to official data, during the 2007/08 academic year, 4,562 general education schools enrolled about 1.5 million students. Private schools enrolled less than 0.3 percent of the secondary student population. At the tertiary level, there were 47 universities, of which five were special purpose (three military academies, the Baku Police Academy, and the National Security Academy), and

15 were private. Most of these universities are located in Baku, with only nine universities in the regions outside of the capital in 2006.

5.8 ***In nominal terms, the education budget in Azerbaijan has increased significantly.*** The structure of public financing in Azerbaijan (State and Municipality) is comprised of three major components: the State Budget of the Republic of Azerbaijan (mainland); the budget of the Nakhchivan Autonomous Republic; and extra-budgetary expenditures, which are financed from mostly extra-budgetary revenues of the state-financed organizations (mainly the State Oil Fund and Local State Budgets of the districts of mainland Azerbaijan). Partly due to high oil prices, Azerbaijan has enjoyed high levels of economic growth in recent years. The real GDP growth rate was 34.5 percent in 2006, the highest in the world and about nine times higher than the world average (UNICEF 2008). Consequently, Azerbaijan's state budget has been increasing rapidly in the wake of the booming economy. This trend has been particularly visible in the last five years, during which the state budget revenues (and expenditures) increased more than six-fold in nominal terms. The increased budget was also accompanied by a significant increase in expenditures in the social sectors (health, education, and social protection). However, growth in social sector spending was relatively slower, compared to overall spending. For instance, between 2003 and 2008, while total spending grew nearly by eight-fold, health, education and social protection spending grew by less than six-fold, four-fold and three-fold, respectively.

5.9 ***Not surprisingly, the bulk of education spending in Azerbaijan goes to compulsory education*** (Table 5.1). Just under 60 percent of total public spending on education in Azerbaijan in 2006 was allocated to compulsory education (that is, elementary, lower secondary, and upper secondary schools), while only 5 percent and 9 percent was allocated to specialized secondary and higher education, respectively, in 2008. Given that the largest share of spending is concentrated on general education, there is little scope in reallocating resources away from other levels. However, as indicated in Table 5.1, expenditures on higher education, albeit low, have been increasing as a share to total education expenditures in recent years (from 7 percent in 2006 to 8.7 percent in 2008).

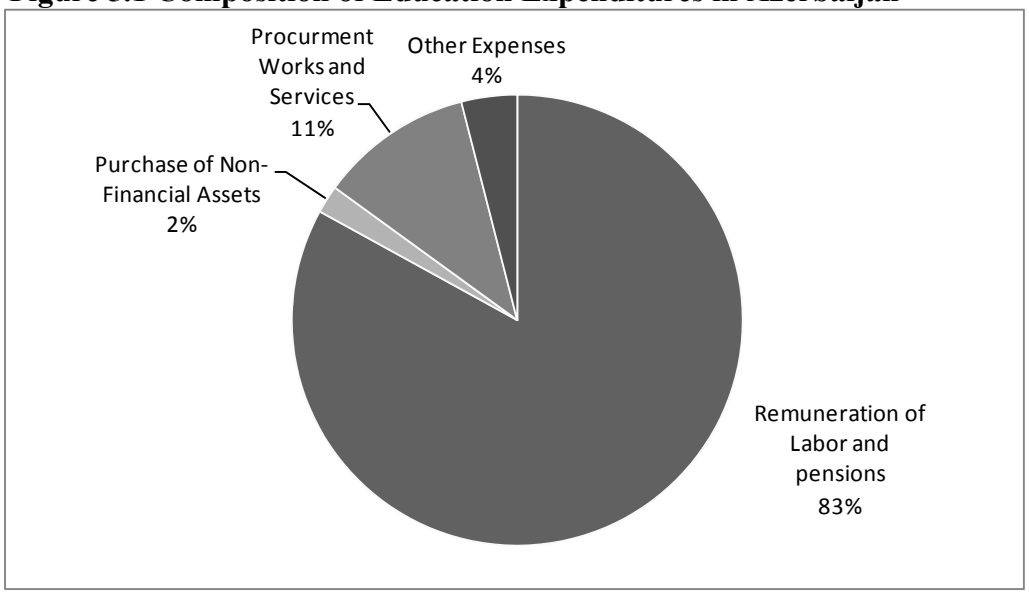
Table 5.1 Composition of Education Expenditures

Education Level	***Total Education Expenditures***		
	2006	*2007*	*2008*
% Pre-Primary and Primary	7.4	6.9	6.4
% Secondary	59.2	60.7	51.6
% VET	4.7	5.2	4.5
% Higher Education	7.0	7.9	8.7
% Other	21.7	19.3	28.7
%Total	100	100	100
Total as % of GDP	*2.66*	*2.87*	*2.81*

Source: UNICEF, 2008.

5.10 ***Most of the general education budget in Azerbaijan is spent on teacher wages and wage-related taxes, leaving very little resources for capital investments.*** The quality of the schools built during the Soviet era was generally poor. Emphasis on school maintenance was scarce, and the collapse of education spending at the beginning of the transition resulted in large capital disinvestments. More recently, investments in capital investments, books, teacher training, and school supplies have been rather low, since about 92 percent of the overall budget for general education is spent on teachers' salaries and utilities (Figure 5.1).

Figure 5.1 Composition of Education Expenditures in Azerbaijan



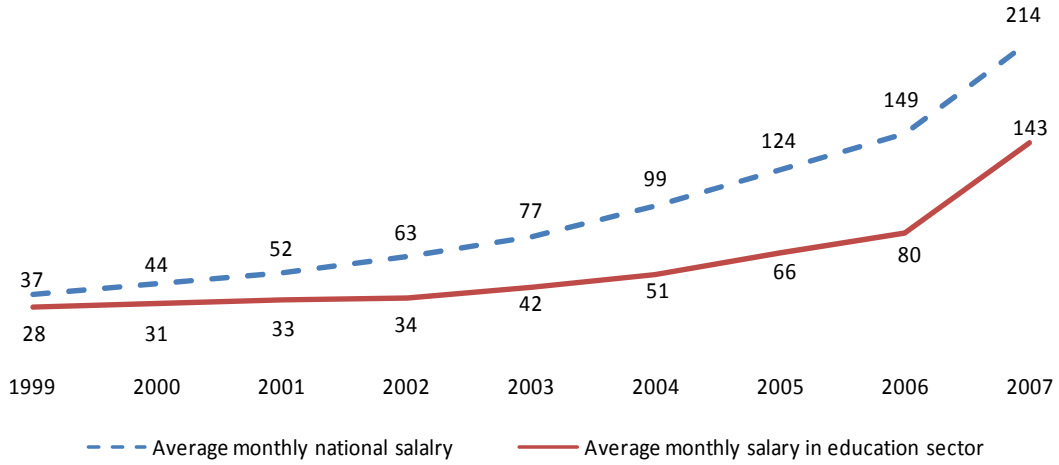
Source: State Budget Data 2005-2007

5.11 ***Yet, wages in the education sector in Azerbaijan are significantly lower than national average wages, and the gap between these two has broadened over the past several years.*** Indeed, teachers' salaries are barely enough to support a family with one dependent. As shown in Figure 5.2, the average monthly salary in 2007 was AZN 143, whereas the poverty line for a three-person household was AZN 192 per month. Low salaries may de-motivate teachers and reduce incentives for them to improve their teaching skills, which could in turn negatively affect the quality of education. Furthermore, teachers generally engage in second jobs (such as private tutoring) that could distract them from their school-related duties. Anecdotic evidence indicates that, in some cases, teachers receive money and gifts from students in return for better grades.

5.12 ***Although private spending on education (at 0.5 percent of GDP) remains low by ECA standards, it is growing rapidly—mainly among the non-poor.*** Azerbaijan's education law allows for private provision of education at all levels. However, the participation of the private sector in general secondary education remains very low, with the private sector serving less than half a percent of all students enrolled in secondary

school. The involvement of the private sector is more noticeable (and it has grown over time) at the tertiary level. Indeed, nearly one of every five students in higher education was enrolled in a private institution. In 2002, private spending on education was only a quarter of 1 percent of GDP. By 2005, it nearly doubled and reached to 0.47 percent of GDP. According to the World Bank (2007), households in the richest quintile are responsible for nearly 40 percent of all private spending. On the contrary, households in the poorest quintile account for only 10 percent of the total private spending on education. Inequality in education spending contributes to inequities in education outcomes, and these eventually translate into further inequities in income, consumption, employment, and other welfare outcomes.

Figure 5.2 Nominal Salaries in the Education Sector (AZN per month), 1999-2007



Source: State Statistics Committee, azstat.org, 2008

C. Education and Poverty Linkages

5.13 In this section, we look at the relationship among education, poverty, and labor market outcomes. Estimates using household survey data indicate that household per capita consumption is significantly affected by human capital outcomes, mainly those of the household head and spouse. It is difficult to discern the role of education in poverty reduction because of the interaction of many factors involved and the time lag in realizing many of the benefits. As such, besides providing the association between education outcomes and poverty, this section looks briefly at the labor market performance of individuals as one of the main channels through which education affects well-being.

5.14 ***There is a clear relationship between education and poverty in Azerbaijan.*** From a countrywide perspective, the lack of qualified human capital decreases Azerbaijan's competitiveness and limits the development of science and innovation that improve productivity. From an individual perspective, the lack of education is one of the main determinants of poverty. This strong link at the individual level is illustrated by observing the vast differences in consumption of groups of individuals with different educational levels. For instance, Table 5.2 shows that households having a head with tertiary education consume, on average, 25 percent more on a per capita basis, respectively, than otherwise similar households having a head with at most basic education.

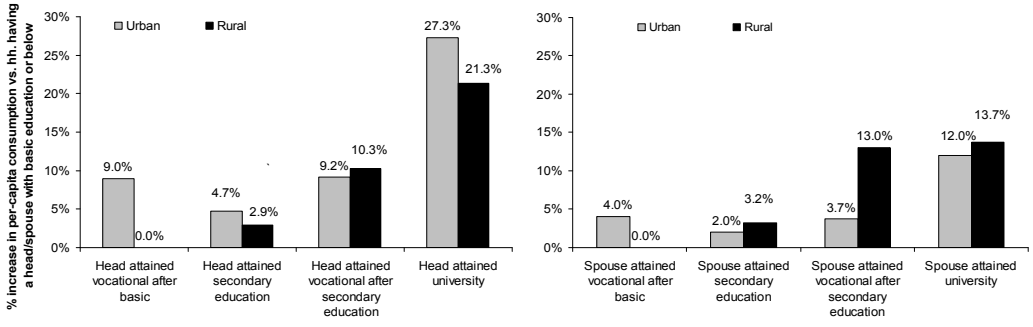
Table 5.2 Education Attainment and Household Consumption

	Percent Increase in Expected Per Capita Consumption vs. Households Having a Head with no Education	***Population Share***
Head Attained Basic Education or Below	—	23.9%
Head Attained Technical Education after Basic	4.6%	5.7%
Head Attained Upper Secondary Education	3.2%	35.2%
Head Attained Technical Education after Secondary	9.0%	18.3%
Head Attained Tertiary Education	24.7%	16.9%

Source: Azerbaijan LSLMS Survey, 2008.

5.15 ***As elsewhere in the world, the LSMS 2008 data clearly show that more educated individuals have higher incomes in Azerbaijan.*** Similarly, the education attainment of the household spouse also has a significant (albeit lower) impact on household poverty (Figure 5.3). In particular, a household with a spouse having attained tertiary education consumes, on average, 12 to 13 percent more on a per capita basis than otherwise similar households having a spouse with at most basic education.

Figure 5.3 Education Attainment of the Head Has Stronger Links to Poverty in Urban Areas



Source: LSMS 2008.

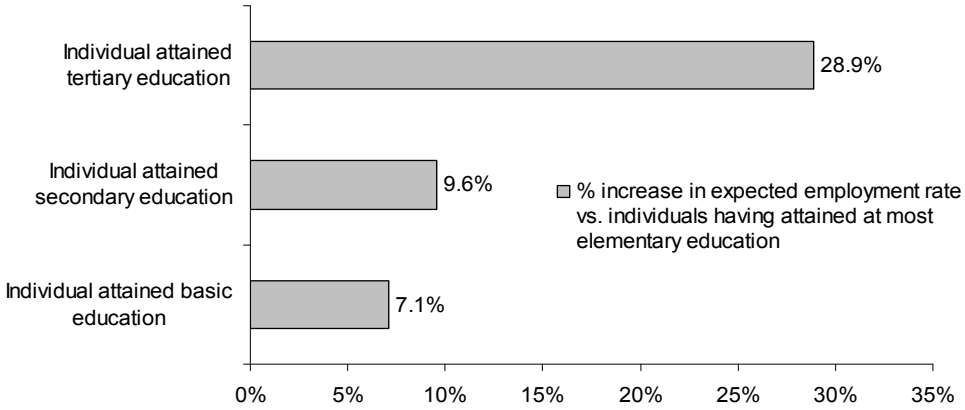
5.16 ***Besides direct linkages with poverty, education outcomes are closely linked with employment outcomes.*** Analysis indicates that individuals with low educational attainment are less likely to be employed and more likely to be unemployed. Estimates using 2008 LSMS suggest that individuals who attain higher education are 29 percent more likely to be employed than individuals who have attained at most elementary education. Indeed, the employment rate for graduates of tertiary education is markedly higher than the rate for upper secondary graduates (Table 5.3). Employment rates among working-age population with tertiary education are almost twice as high for those with primary education or less (Figure 5.4). Graduates of secondary education have the highest unemployment rates (at 12 percent). However, the unemployment rate for university graduates is only 6.5 percent. Furthermore, there is a strong association between educational attainment and labor force participation.

Table 5.3 Basic Employment Outcomes by Education Level, 2008

Education Attained	*Basic or Less*	*Secondary*	*Tertiary*
Employment rate	42.4	53.9	72.6
Unemployment rate	11.0	12.1	6.5
Labor force participation	47.6	61.3	77.7

Source: LSLMS, 2008.

Figure 5.4 Education Attainment Increases an Individual's Likelihood to be Employed



Source: Azerbaijan LSLMS Survey, 2008. Estimates come from a linear regression model and control for age, gander, and strata.

5.17 ***In Azerbaijan, investing in education is profitable for individuals.*** Analysis using the 2008 LSMS shows that individuals earn 7 to 10 percent higher wages for each additional year of schooling attained. Table 5.4 provides estimates resulting from a simple Mincer human capital model for wage earners working full time in non-agriculture activities. We run two separate models; one including years of education as the dependent variable and another one using education attainment dummies instead.

Results of the first specification indicate that every extra year of education in Azerbaijan yields an approximately 8 percent higher wage rate. Yields are slightly higher for females than for males, despite the fact that men are likely to earn hourly wages that are 44 to 47 percent higher than women (as captured by the male dummy in the first and second columns of Table 5.4). This implies that while, on average, men earn more than women, the return of an extra year of education is likely to have a greater effect on wages among women than among men.

5.18 ***But returns to basic and upper secondary education are not significantly different (compared to elementary or no education).*** On the other hand, wage rates for workers with tertiary education (university or vocational) are about 45 percent higher than those among workers with elementary or no education. These estimates are lower compared to those of other transition countries, including some of the leading reformers like Hungary and Poland (with returns to tertiary education varying between 70 and 90 percent) (see, for example, Yemtsov, Cnoblach and Mete 2006).

Table 5.4 Education Returns by Gender

Dep. Var: Natural log of hourly wages	***All Individuals***		***Male***		***Female***	
	(1)	(2)	(1)	(2)	(1)	(2)
Human Capital Covariates						
Male dummy	0.441	0.477	—	—	—	—
Years of education	0.075		0.067		0.092	—
Experience	0.016	0.015	0.045	0.045	-0.038	-0.045
Experience squared	0.00	0.00	-0.001	-0.001	0.001	0.001
Education Level attained						
Basic	—	N.S.	—	N.S.	—	N.S.
Upper secondary	—	N.S.	—	N.S.	—	N.S.
Tertiary (vocational/university)	—	0.374	—	0.418	—	0.501
Constant	-2.119	-1.291	-1.972	-1.286	-1.577	-0.553
Observations	2192	2192	1439	1439	753	753
R-squared	0.17	0.14	0.08	0.06	0.17	0.09
Returns per year of education in %	**7.79**	—	**6.93**	—	**9.64**	—
Returns to tertiary education in %	—	**45.35**	—	**51.89**	—	**65.04**

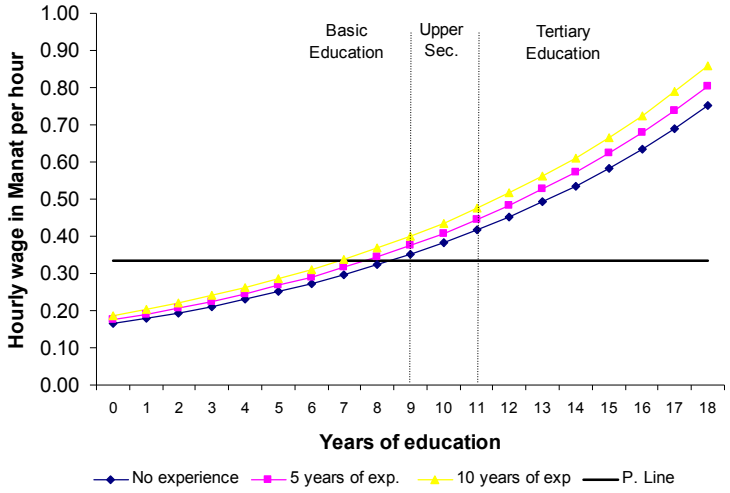
N.S. = Not significant.

Note: Sample: Individuals working full time (35 to 60 hours a week) in non-agricultural activities. Underlined coefficient is significant at a 10 percent confidence level. All other coefficients are significant at a 5 percent confidence level. Omitted categories: education: elementary or less education. To calculate the percentage change when a dummy variable takes the value 1 in a semi-logarithmic regression, we use the expression: $100\times(\exp(\beta)-1)$.

Source: 2008 LSMS.

5.19 ***Postsecondary education is a key to escaping poverty; individuals who attain only compulsory education earn wages below the poverty line.*** Using the estimates in Table 5.4, one can estimate the expected income of an individual based on his or her years of education and experience. Estimates for Azerbaijan indicate that individuals with 1, 5, and 10 years of experience need to attain, respectively, 7, 8, and 9 years of education to earn wages that would amount to the poverty line. This result implies that returns to experience among individuals with primary or incomplete secondary education are very low (5 years of experience achieve a wage gain equivalent to one extra year of education). As indicated by the shape of the curves in Figure 5.5, an extra year of education produces higher returns on wages once individuals have attained more than 11 years of education (which corresponds to the schooling necessary to complete upper secondary school). Returns to experience are also larger among individuals with postsecondary education. These findings are consistent with those in Angel-Urdinola and Laguna (2007) in the sense that the authors identify the need to invest more resources to develop "postsecondary" human capital among the less-favored segments of the population.

Figure 5.5 Post Secondary Education is Key to Poverty Reduction



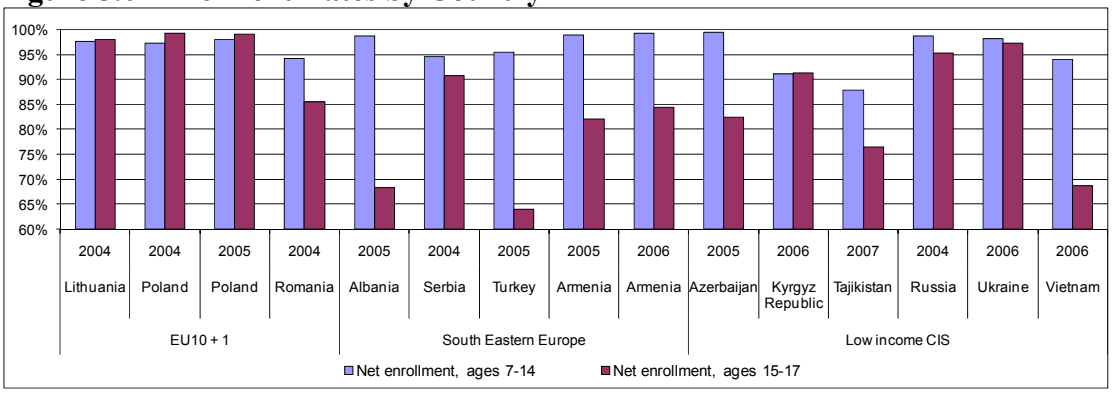
Source: LSMS 2008

D. Access to and Quality of Education in Azerbaijan

5.20 ***Regardless of income level, most Azerbaijani children generally stay in school up to upper secondary.*** In terms of learning, however, the available data show a mixed picture: for Azerbaijan's income level—a reasonable proxy for the amount of parental support each student receives at home—Azerbaijani students do far better in math, but far worse in reading. Very few students continue studying beyond the tertiary level, making Azerbaijan one of the ECA countries with the lowest tertiary enrolment and attainment rates.

5.21 ***Similar to most of the countries in Eastern ECA, access to general compulsory education in Azerbaijan is near universal and very equitable*** (Figure 5.6). In Azerbaijan, as in most of the ECA Region, (with the exception of Turkey and Albania), most children are enrolled in school through age 15. Also, as Figure 5.9 indicates, in Azerbaijan, there are relatively small differences in enrolment across different socioeconomic groups for students aged 7–15, suggesting that access to compulsory education is fairly equitable.

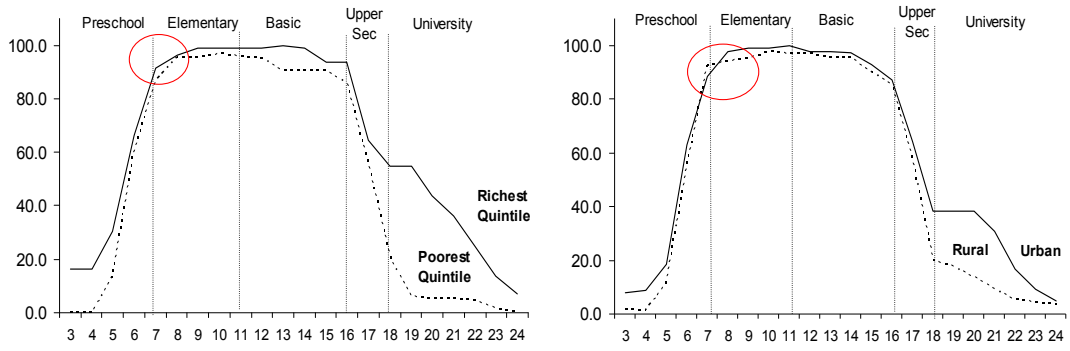
Figure 5.6 Enrolment Rates by Country



Source: 2008 LSMS for Azerbaijan

5.22 ***In Azerbaijan, the general tendency of participation in schooling in the country follows an inverted-U shape*****:** very low enrolment in preschool, followed by high enrolment rates in primary and basic secondary school, and a precipitous decline in enrolment at ages corresponding to upper secondary and higher education (Figure 5.7). Thus, Azerbaijan's continued commitment to equitable access is evident at the primary and secondary levels, but there are large disparities at the preschool and higher-education levels. Rural areas and the poor have lower access to preschool and higher education.

Figure 5.7 Rate of Enrolment by Age

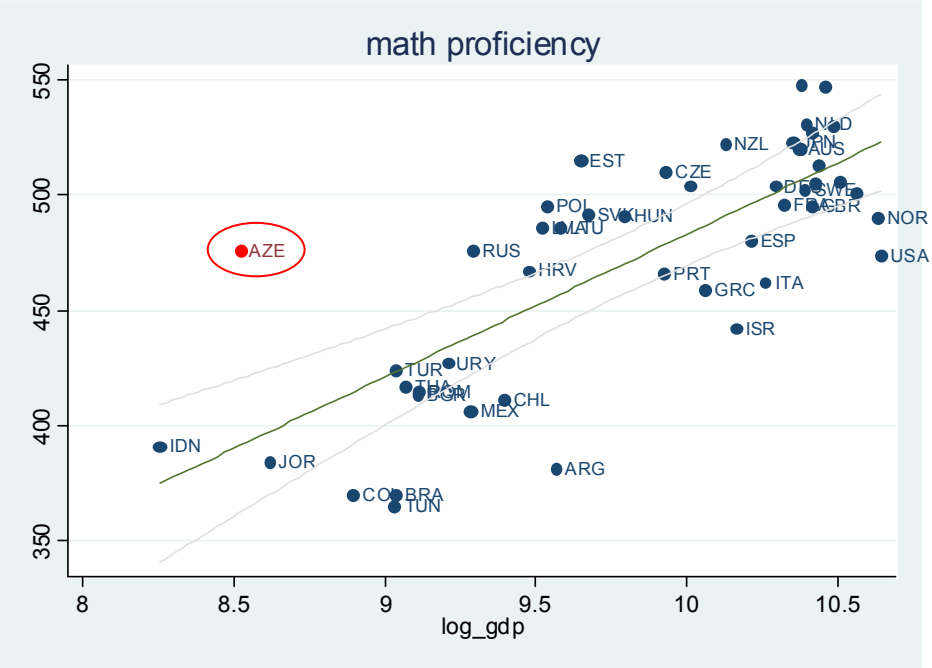


Source: LSLMS 2008.

5.23 ***Data limitations make it difficult to draw conclusions about learning outcomes.*** The shortage of information is due to the fact that the Azerbaijani education system lacks a modern national student assessment and monitoring systems. Until 2005, Azerbaijan had not assessed student performance on a systematic basis. The fact that Azerbaijan participated for the first time in the OECD Program for International Student Assessment (PISA) makes it possible (for the first time) to compare the performance of Azerbaijani students with those of other countries.

5.24 According to PISA 2006, Azerbaijan is a "super"-performer in mathematics. Indeed, Azerbaijan's performance in mathematics is similar to that of much richer countries such as the Czech Republic, Poland, Russia, and the United States (Figure 5.8).

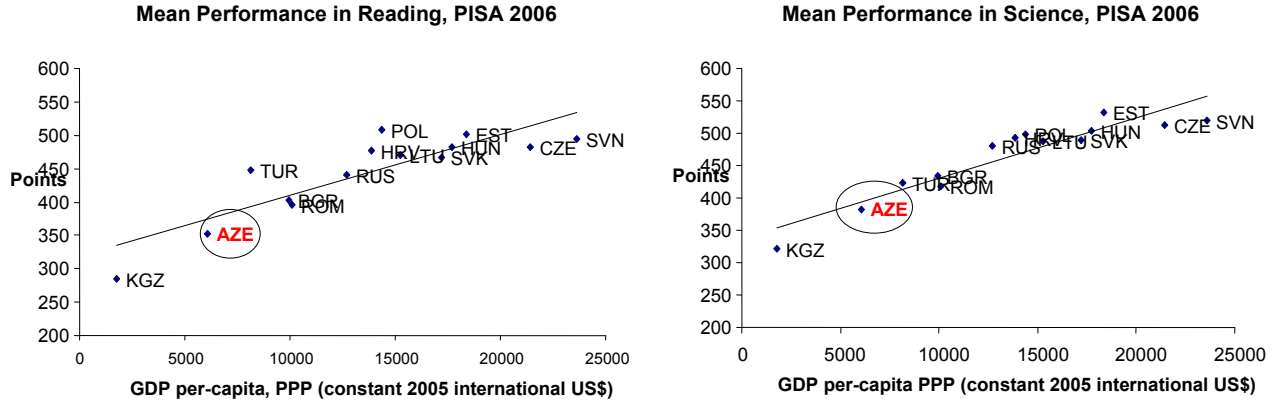
Figure 5.8 Reading Outcomes Compared to Math Outcomes in Azerbaijan



Source: PISA 2006

5.25 ***The less encouraging news is that student performance on PISA reading and science is low for its level of economic development*** (Figure 5.9). PISA tests are designed to measure how well students approaching the end of compulsory education have acquired some of the knowledge and skills essential for full participation in a knowledge society. According to the available data from PISA 2006, in the ECA context, Azerbaijani students scored very low on science and reading, surpassing only those of the Kyrgyz Republic.

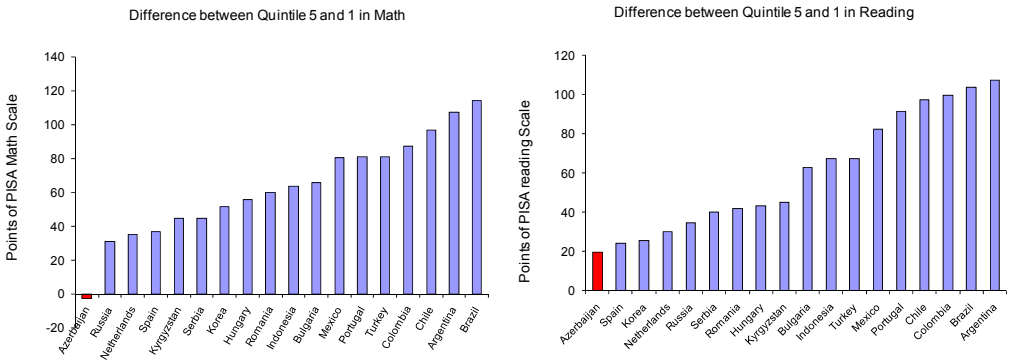
Figure 5.9 Azerbaijan has One of the Lowest Performances in Science and Reading



Source: PISA 2006.

5.26 ***There is little disparity in the performance of poor and non-poor children in reading and mathematics.*** Azerbaijan displays one of the most equitable student performances in reading and mathematics among all countries participating in PISA 2006. As illustrated in Figure 5.10, differences between poor and the non-poor students are rather low in reading and almost nonexistent in mathematics. In mathematics, there was no significant difference between students from the highest wealth group and those from income-poor backgrounds. Equal performance, on average, between rich and poor children is somewhat unique to Azerbaijan, since in all participant countries, students from well-off households generally tend to do better than those of poorer means.[20]

Figure 5.10 There is Very Little Difference in Math and Science Performance by Wealth Status in Azerbaijan

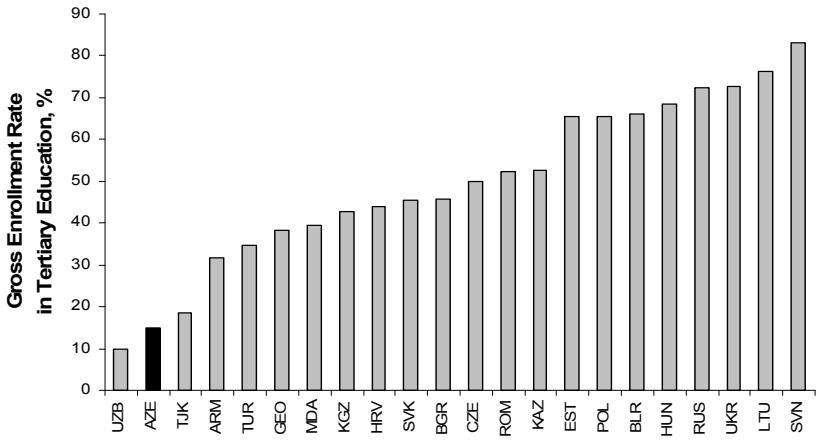


Source: PISA 2006.

[20] PISA administrators construct a wealth index based on students' responses to questions about household possessions. To construct the index, a type of Rasche model is used where, instead of estimating the difficulty of a test item, the "expense" of a household possession is estimated. This method is explained in more detail in OECD (2002).

5.27 ***Finally, enrolment rates in tertiary education are low in Azerbaijan.*** Enrolment significantly drops after compulsory education (at the age corresponding to entry into tertiary education). The enrolment rate in tertiary education in Azerbaijan is the second lowest in ECA (Figure 5.11). Furthermore, large inequities in gross and net tertiary enrolment rates exist between rich and poor individuals. For instance, net enrolment rates in university are roughly 70 percent for individuals in the richest quintile compared to 35 percent for individuals in the poorest quintile, and gross enrolment rates in university are roughly 16 percent for individuals in the richest quintile compared to 3 percent for individuals in the poorest quintile. Even among the richest individuals, enrolment rates in higher education are rather low. Enrolment rates in postsecondary education are also slightly higher among boys than among girls—which are not the case during the compulsory education cycle (see Table 5.4).

Figure 5.11 Azerbaijan has second lowest gross enrolment rate in tertiary education in ECA



Source: 2008 LSMS for Azerbaijan and Edstats for the rest.

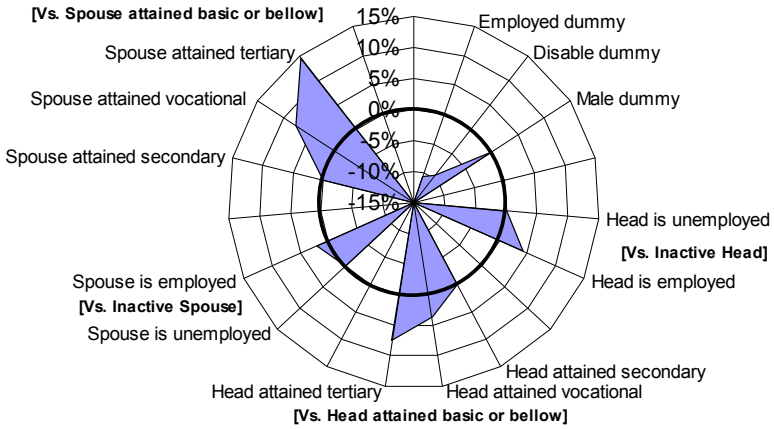
5.28 ***We infer that poor enrolment rates in tertiary education are likely to be explained by high private cost of attending higher-education institutions.*** Inequities in tertiary enrolment patterns are embedded in large disparities across regions, with Baku outperforming the rest on the country. In particular, Baku, Absheron, and Nakhchivan, the richer economic regions, display the higher gross enrolment rates in postsecondary education (Table 5.5). Other disadvantaged economic regions, such as Daghlyg Shirvan, Aran, and Yukhari-Karabakh display very low enrolment rates. And Baku City enjoys by far the highest enrolment rates in higher education. Indeed, one World Bank (2007) report argued that despite significant improvement in enrolment outcomes in most economic regions between 2002 and 2005, the enrolment gap in postsecondary education between Baku and the national average continued to widen. Thus, investments targeted to improving access to higher education in the least-advantaged economic regions could help improve access to and enrolment in tertiary education.

Table 5.5 Baku City has the Highest Enrolment Rate in Postsecondary Education

	Upper Secondary	*University*	*Upper Secondary*	*University*
	Net Enrolment Rates (%)		*Gross Enrolment Rates (%)*	
Daghlyg Shirvan	31.5	40.9	25.6	7.9
Aran	54.8	45.7	54.1	10.1
Yukhari-Karabakh	58.8	49.1	54.9	11.0
Quba-Khachmaz	52.9	56.4	38.3	7.9
Ganja-Qazakh	51.5	57.1	52.2	10.2
Absheron	44.2	60.1	55.2	25.7
Lankaran	59.4	65.0	45.7	9.0
Shaki-Zaqatala	55.8	65.0	44.7	11.2
Baku City	54.7	71.1	64.4	29.7

Source: 2008 LSMS

Figure 5.12 The Probability of an Individual Aged 16–22 Being Enrolled Given Observable Characteristics



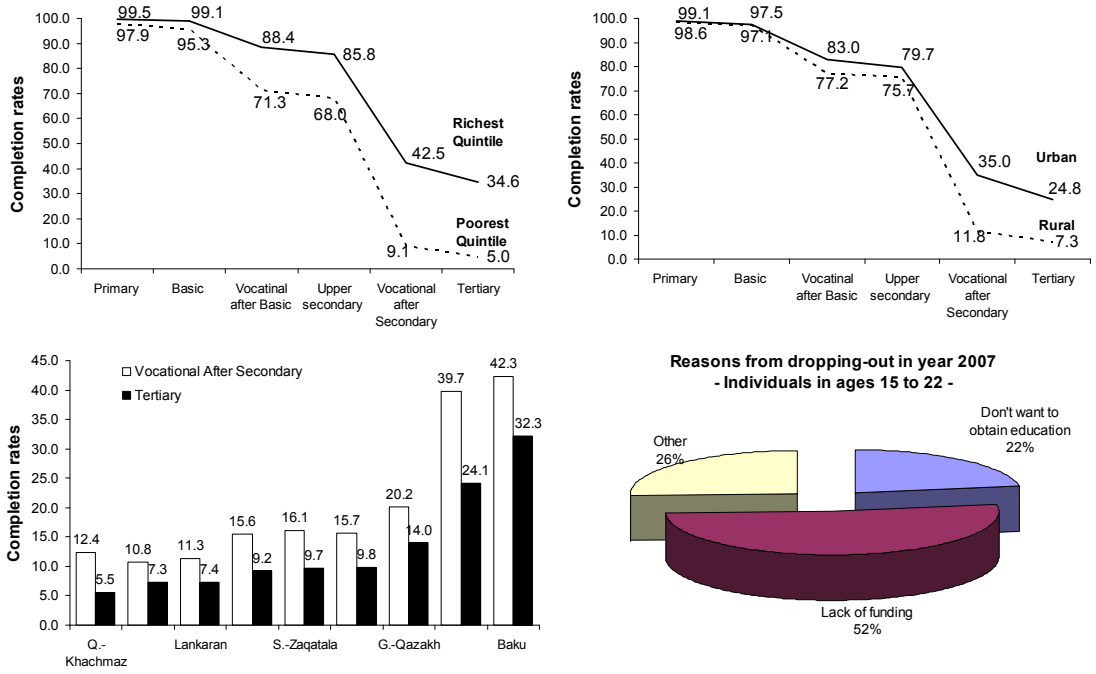
Source: 2008 LSMS

5.29 ***Inequities in access to tertiary education seem to be intergenerational.*** There is a strong relationship between the likelihood of individuals being at school after age 16 and their parents' level of education, suggesting strong intergenerational links in access to higher education. Figure 5.12 illustrates the conditional probability (as estimated by a simple probit regression model) of being enrolled in school for individuals aged 16–22. The bold circle represents the "zero" effect line. Characteristics associated with a higher probability of individuals being enrolled are plotted above the "zero" effect line, and characteristics associated with a lower probability of individuals being enrolled are plotted below the "zero" effect line. As in any probit model, the conditional probability of a given characteristic is evaluated at the mean of the characteristic's distribution and interpreted relative to an omitted variable, as specified by the category in brackets in Figure 5.12. Estimates indicate that—controlling for other characteristics—employment

and education characteristics of the household head and spouse seem to be strongly associated with the probability of individuals being enrolled after age 16. In particular, having a head or a spouse with tertiary education increases the probability of an individual being enrolled in postsecondary education by 10 to 15 percent. Thus, parents' higher-education attainment is a highly significant predictor of their children's higher-educational attainment.

5.30 ***Affordability constraints are the main reason for dropping out after compulsory education, even among non-poor individuals.*** Figure 5.13 plots attainment rates for individuals aged 16–29. While attainment rates are quite high up to basic secondary education (oscillating between 95 and 99 percent), students drop out rapidly afterward, especially in rural areas and from poor families. Attainment rates for upper secondary education are 80 percent on average and 70 percent among individuals in the poorest consumption quintiles. After upper secondary education, dropouts are massive, both among poor and non-poor individuals (but larger for rural and poor students). Even among individuals in the highest consumption quintile, in urban areas, and in Baku City, enrolment in postsecondary education reaches a maximum of only 40 percent. In rural areas, in less-developed regions, and among the poor, postsecondary attainment rates are below 11 percent. As illustrated in the bottom-right panel of Figure 5.15, lack of funding is the main reason the majority of individuals (52 percent) drop out after completing compulsory education, followed by lack of interest in pursuing further education and other reasons.

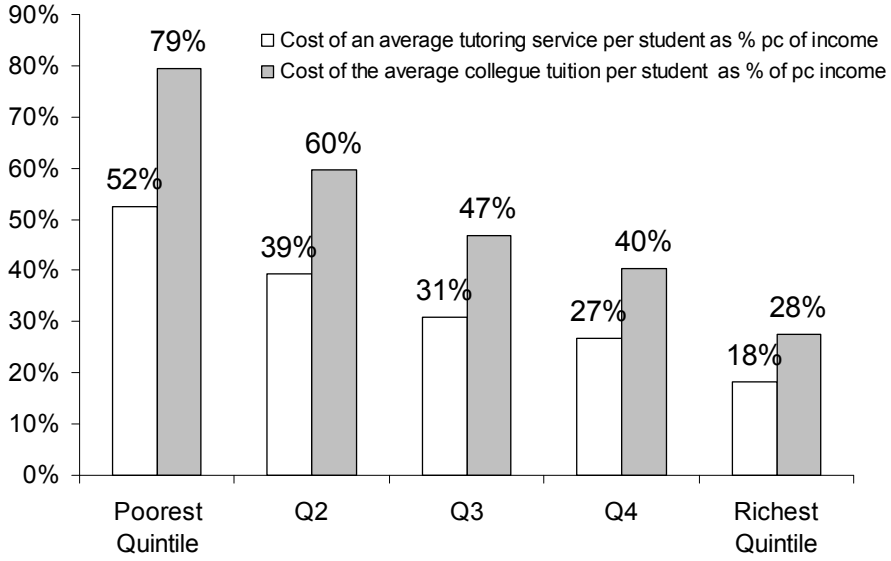
Figure 5.13 Dropouts after Compulsory Education are High, Especially among the Poor



Source: 2008 LSMS.

5.31 ***Indeed, some of the costs necessary to access postsecondary education (mainly tuition and tutoring) are not affordable for the poor.*** The 2008 LSMS collected information on education expenditures. Using these data, we calculated the average spending for private tutors per student among those enrolled in upper secondary education and the average spending on tuition paid among those enrolled in tertiary education. Tutors in Azerbaijan play an important role preparing students for university entry examinations. Indeed, students generally use private tutoring as "an enrichment strategy" to perform better on examinations that are required to access higher education. However, private tutoring may exacerbate the disparities, and poor students for whom a private tutor is out of reach may not do well on university entrance examinations. To pay for an average tutoring service for their children, a household in the bottom three quintiles would have to allocate 30 to 50 percent of their per capita income. The poor, thus, cannot afford tutoring services for their children. Estimates in Figure 5.14 indicate that the average college tuition in Azerbaijan is also prohibitively high for the poor. It amounts to 47 to 80 percent of the per capita income of the bottom quintile. This may explain why, even among the rich, postsecondary attainment rates remain low.

Figure 5.14 A Poor Household would need to Allocate between 60 and 80 Percent of its Income to Afford Average College Tuition in Azerbaijan



Source: 2008 LSMS

E. Conclusions and Recommendations

5.32 ***There are important linkages between education and poverty reduction in Azerbaijan***. This chapter analyzed poverty and education outcomes in relation to access and quality using data from the 2008 LSLMS survey and PISA 2006. Analysis highlights the importance of investments in postsecondary education: Individuals who attain only compulsory education (about 18 percent of the employed population) are expected to earn wages below the poverty line. Individuals earn 7 to 10 percent higher wages for each additional year of schooling received.

5.33 ***Azerbaijan's education system has several noteworthy achievements, but many challenges remain to make the country truly diversified and a knowledge-based market economy***. In terms of achievements, attainment levels through age 15 are high relative to Azerbaijan's income level, and enrolment rates are fairly equitable. In terms of the quality of the education provided, there are two things to celebrate: first, the average performance of Azerbaijani students in mathematics equals that of much richer countries (for example, Spain and the United States) and, second, there is surprisingly little difference between children from rich and poor households in their performance on standardize.

5.34 ***Notwithstanding these achievements, there are challenges and deficiencies that need to be addressed to transform Azerbaijan into a knowledge-based economy.*** First, most of the general education budget in Azerbaijan is spent on wages and social security contributions for teachers, leaving very little for much-needed capital investments. Secondly, student performance in reading and science in Azerbaijan is below that expected given its level of economic development. Third, enrolment rates in tertiary education are low given Azerbaijan's income level and high graduation rates from the upper secondary level. Finally, there is large disparity in tertiary enrolment between the poor and the rich and between rural and urban areas.

5.35 ***A number of policy options are presented that help address the issues highlighted above*:**

- The government could consider promoting incentives for private sector provision of educational services, especially at the preschool and higher-education levels. Azerbaijan's education system is, for the most part, publicly financed and operated.
- To contain the large, postsecondary education drop-out rates among the poor, the government could consider targeted programs that focus on the demand side of human capital accumulation among the young as a means of breaking the intergenerational transfer of poverty.
- The government could consider improving access to financing (and scholarship programs) targeted to individuals from less fortunate socioeconomic groups to reduce affordability constraints of tuition and non-tuition costs for tertiary education.

- Access (and options) to Vocational Education and Training could also be broadened as an alternative career path for those high-school graduates that cannot make it to tertiary education. International evidence indicates that investments on VET individuals to get formal (good quality) jobs, and promotes gender equality in earnings and labor market opportunities.
- To close quality gaps between poor and non-poor children and to help poor children have a greater opportunity to access tertiary education, the government could invest in supplementary education services in rural areas and in regions with a high incidence of poverty and/or a high concentration of special needs children.
- Participation in international assessments of student achievement (such as PISA), along with a more frequent national assessments, are key to monitor progress in educational achievement.
- The government could consider investing more in physical infrastructure, especially of higher-education institutions, to assure a better learning environment that promotes attendance and quality of teaching.

6. HEALTH AND POVERTY LINKAGES

This chapter looks at issues of poverty and inequality as they relate to Azerbaijan's health sector. Health is a prominent concern in the lives of the poor in Azerbaijan and one of their top priorities for government investment. Key findings include substantial inequality in health status and healthcare use between the rich and poor and a lack of financial protection from high out-of-pocket expenditures. The incidence of impoverishing and catastrophic health payments is among the highest in the world. These findings suggest an important policy agenda. Implications are discussed for, among other issues, the design of a basic benefits package, investments in health facilities, and the level and targeting of government health expenditures.

A. Introduction

6.1 ***Health issues loom large in the lives of Azerbaijan's poor.*** About three-quarters of the poor (and 70 percent of all households) reported experiencing difficulties in covering health expenses. About one-quarter of the poor attributed their economic hardship in part to the illness of a family member (Figure 6.1). When the Life in Transition Survey (LiTS) asked Azerbaijani households to name the top two priorities for government investment, the health sector was by far the most common answer, especially among the poor (Figure 6.2). Health should thus be front and center in discussions about the scope for public policy to improve the lives of the poor in Azerbaijan.

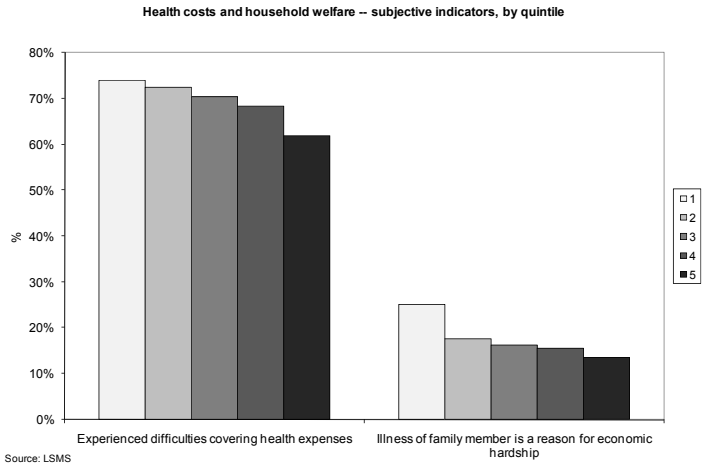
6.2 ***The relationship between health and poverty is varied and complex.*** Poverty makes people more vulnerable to ill health and leaves them less able to cope and get better if they do fall sick. Causality also runs in the opposite direction, since poor health can lead to impoverishment if it causes loss of income or high medical bills. This chapter will focus on issues related to two objectives: (a) improving the level and distribution of health outcomes among the population, especially the vulnerable; and (b) improving financial protection (preventing poverty due to ill health).[21] Policy issues related to both will also be discussed with a focus on the forthcoming health reforms.

6.3 ***In general, the chapter offers a "baseline snapshot" of health and poverty in Azerbaijan in 2008.*** It is a "snapshot" because it draws largely on the 2008 Living Standards Measurement Study (LSMS) conducted during January–April 2008. In the absence of longitudinal data, it is not possible to disaggregate nationwide trends in recent years by socioeconomic status. It is a "baseline" because the timing of the survey implies that it captures a period before significant reforms are undertaken in the area of health finance and provision, as will be described further in the next section. As the new

[21] These correspond to the first two strategic objectives identified in the World Bank's recently updated Health, Nutrition, and Population Strategy (World Bank 2007).

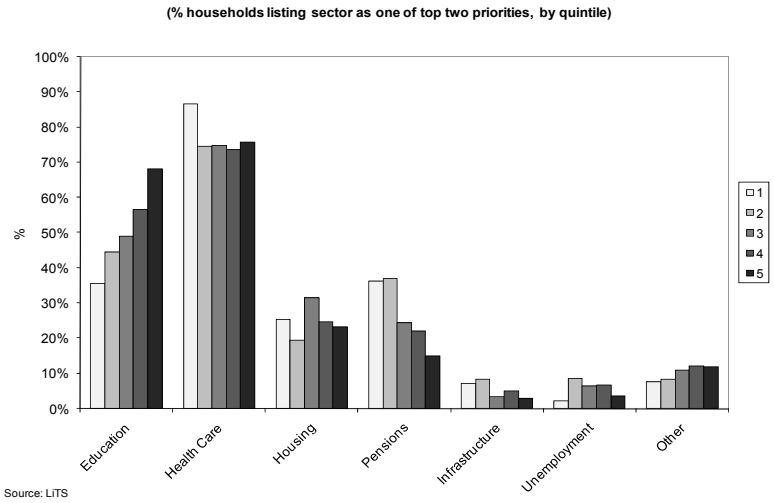
measures take effect, updated data can be compared to the present baseline to evaluate the impact of the reforms on key indicators related to health and poverty in Azerbaijan.

Figure 6.1 Impact of Health on Household Welfare



6.4 This chapter is structured as follows. Section B provides an overview of recent trends in health outcomes in Azerbaijan in an international context and a summary of the reforms to the health sector currently being launched in the country. Section C focuses on the distribution of health outcomes and their determinants among the poor and non-poor, including indicators related to self-assessed health status, access, utilization, and satisfaction with health services. Section D takes a closer look at financial protection, and in particular the link between out-of-pocket spending and poverty. Section E summarizes the chapter and discusses policy issues.

Figure 6.2 Top Priorities for Government Investment Identified by Azeri Households



B. Recent Trends and Reform Initiatives

6.5 ***Recent trends in Azerbaijan's health indicators point to gradual progress but also to scope for significant improvement.*** Life expectancy has edged upward while infant and maternal mortality rates have declined, although these rates remain quite high (the rates shown are based on international definitions).

6.6 ***Although the international focus is on maternal and child health and the Millennium Development Goals (MDGs), about 83 percent of mortality in Azerbaijan is due to non-communicable diseases and injuries.*** Cardiovascular disease is by far the leading cause of death. Important risk factors include high blood pressure, tobacco use, and high body mass index. Cardiovascular disease is also the leading cause of "excess deaths"—that is, deaths that could be averted if Azerbaijan achieved the same mortality rates that currently prevail in the world's richest countries. This provides a strong indication of where the major gains in health status are to be found in Azerbaijan.

6.7 ***Azerbaijan's health outcome indicators suggest a mixed performance relative to those prevailing elsewhere in the Commonwealth of Independent States (CIS) and the new European Union (EU) member states.*** Table 6.1 compares health outcomes and health system performance indicators in Azerbaijan and other European countries, based on international definitions. Infant and maternal mortality are significantly higher than in the CIS and other regions, while cardiovascular disease mortality falls in between the CIS and EU-12 regions. Health system indicators lag well behind all regions. Box 6.1 compares patterns of health and healthcare satisfaction in Azerbaijan and the region.

Table 6.1 Selected Health Indicators, Latest Available Year

Indicator		***Azerbaijan***	***EU-15 (W. Europe)***	***EU-12 (E. Europe)***	***CIS***
Health outcome indicators	Life expectancy	**65.5**	79.4	73.9	65.8
	Infant mortality rate (per 1,000 live births)	**43****	4.2	9.2	26.3
	Maternal mortality (per 100,000 live births)	**82**	5.6	7.3	27.4
	Mortality due to diseases of the circulatory system (age-standardized, per 100,000)	**551.6**	197.0	467.9	766.8
Health system indicators	Outpatient contacts (per capita per year)	**2.2***	6.5	7.7	8.7
	Out-of-pocket payment on health (percent of total health expenditure)	**73.3***	15.0	25.3	38.1

Source: WHO/Europe Health for All database except *=Azerbaijan LSMS 2008 and **=DHS 2006

Recent Reform Initiatives

6.8 ***Since the end of the Soviet Semashko model[22] of state healthcare in the early 1990s, and, until recently, the Azerbaijani health sector remained largely unreformed and fragmented.*** Healthcare providers are funded on the basis of inputs instead of services, and thus there are few incentives to improve efficiency and quality; and out-of-pocket (OOP) spending is the predominant form of health finance. On the provision side, the system has been plagued by an excessive but deteriorating infrastructure, outdated equipment, limited provider autonomy, and an inadequate mix of skilled health providers. The concept of preventive primary healthcare has remained underdeveloped, while the large hospital infrastructure has poor efficiency indicators. At the policy level, the public stewardship function has been weak.

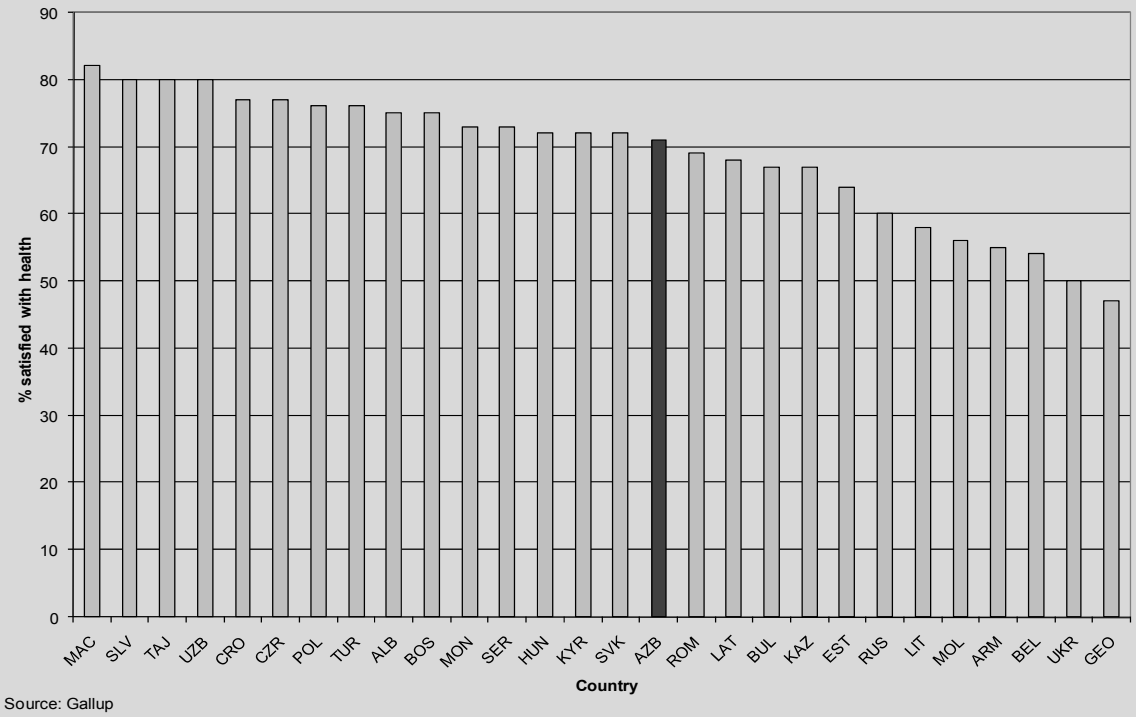
6.9 ***An ambitious health reform plan was embarked upon in 2007–08.*** In January 2008, the President of Azerbaijan signed the National Concept on Health Financing Reform. Along with other subsequently released documents, this framework entailed several major steps, including: (a) the establishment of an Agency for Compulsory Medical Insurance (ACMI); (b) the introduction of the concept of a state-guaranteed basic benefits package (BBP); (c) a new resource allocation and provider payment mechanism under which the ACMI would sign contracts with providers and discontinue input-based funding; and (d) the abolishment of formal charges (albeit low) for healthcare in state facilities (although most medicines will remain subject to patient OOP).

Box 6-1: Health Satisfaction in Europe and Central Asia (ECA) Region

The Gallup polling company regularly undertakes representative surveys in over 100 countries worldwide on a range of topics including satisfaction with health and health services. The graphs below indicate that Azerbaijan, at 71 percent, is near the average within the ECA region when individuals are asked whether they are satisfied with their health. However, when asked whether they are satisfied with the availability and quality of healthcare, only 40 percent agree, which is lower than the regional average.

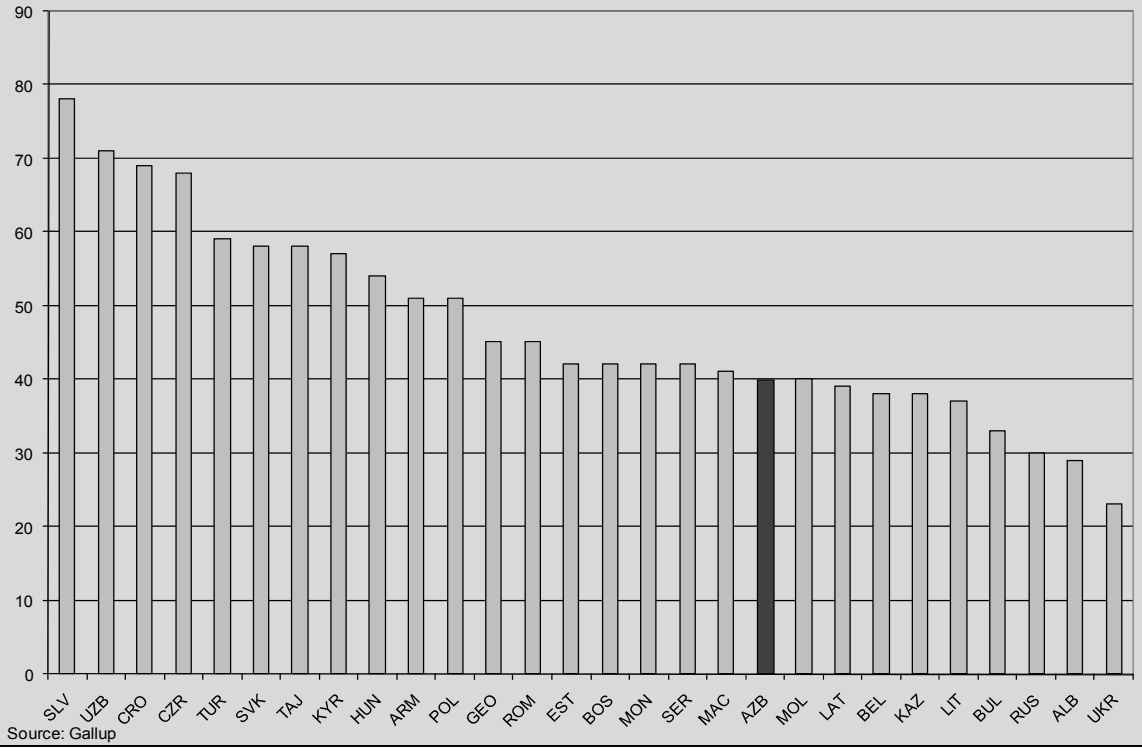
Health Satisfaction in the ECA Region

[22] Nikolai Aleksandrovich Semashko was a member of the Russian Bolshevik Party who became the People's Commissar of Public Health in 1918. He devised a system of healthcare, known as the *Semashko* model, in which health services were centralized and funded by the state budget.



Source: Gallup

Satisfaction with the Availability of Quality Healthcare in the ECA Region



Source: Gallup

6.10 ***However, as of early 2009, these steps have yet to be fully operationalized, and many details remain to be worked out.*** These include the approval of a BBP including its precise definition and cost; the funding mechanism and amount of financing for the ACMI; and whether the additional financing will be adequate to pay for the BBP without the need for patient OOP. The inclusion of drugs in the BBP (or at least their partial inclusion in the form of an outpatient drug benefit) is a particularly important issue from both the fiscal and poverty perspectives, and will be discussed further below. A strategy for pharmaceutical policy in general is currently under development. Despite the continued uncertainties in the reform process, the prospect of a single active purchaser of health services in Azerbaijan that is a separate legal entity, pools resources, and allocates funds strategically represents an important step forward.

6.11 ***Reforms to healthcare provision are also under way.*** A master plan has been developed that lays out a framework and norms for the optimization of both hospital and primary care systems. In pilot regions, these networks will undergo upgrades to infrastructure through civil works and equipment investments, providers will receive retraining, and managerial reforms will be implemented. The establishment of the ACMI and its provider contracts will represent a significant step toward the creation of a purchaser/provider split and hence the introduction of a measure of autonomy for providers.

6.12 ***A wide array of other reform initiatives is also being pursued.*** Many are being undertaken in the context of the World Bank-funded Health Sector Reform Project. These include the creation of a health policy and planning unit inside the Ministry of Health, measures to improve accreditation and licensing procedures, the improvement of information systems for health, and reforms to medical education.

6.13 ***In sum, Azerbaijan is embarking on a period of significant health sector reform.*** It is too early to reach any clear verdict on this ongoing process, but it will clearly have important implications for poverty and health. Careful implementation of safeguards to protect equity, and close monitoring of results, will improve chances for success.

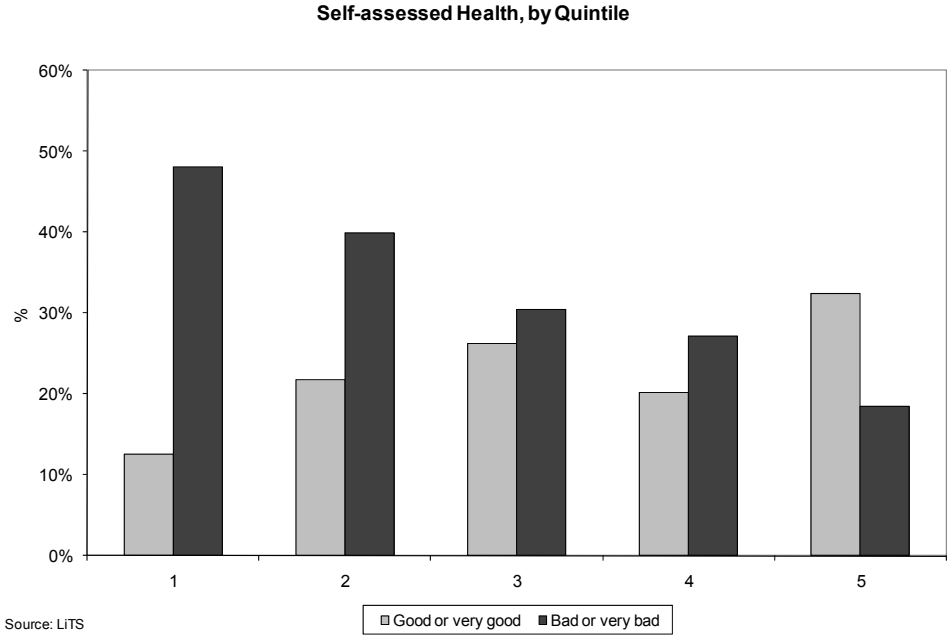
C. Health Outcomes

6.14 ***The main objective of any health system is to improve health outcomes among the population, and since we are interested in equity, this means not only the level but also the distribution of those outcomes.*** Health outcomes can of course be measured in many ways. The previous section showed recent trends in infant and maternal mortality (both MDGs), but these are relatively rare events and are thus difficult to analyze through an equity lens. There are several other indicators of both morbidity and mortality that offer evidence of a clear health gradient in Azerbaijan. This section offers a snapshot of equity in health outcomes and their determinants.

6.15 ***There are stark differences in self-assessed general health status by rich and poor in Azerbaijan*** (Figure 6.3). Respondents in the richest quintile are over 2.5 times more likely to report being in good health than those in the poorest quintile, while the poor are conversely 2.5 times more likely to report bad health than the rich. These responses reflect subjective perceptions of well-being, and while they may include some bias, the health literature suggests that this is a significant predictor of mortality and a more reliable metric for gauging health status than current morbidity or the use of medical care (Gertler and others 2000). The DHS identified a significant gradient with respect to more objective indicators of health status, including anemia among women and children and low child height-for-age indicators (DHS 2006). These results point to an important area for improvement in Azerbaijan's health sector.

6.16 ***Identifying the causes underlying these inequalities in health status can provide important information to inform policies.*** Untangling the "health production function" is complicated, however, because in addition to socioeconomic status, health outcomes can reflect a wide array of determinants including genetics, behavior, education levels, exposure to pollution, access to medical care (physical and financial), utilization of services, the quality of care received (clinical and non-clinical), and others. In the absence of detailed data on each of these factors, here we can provide only some broad evidence of the relative importance of various factors in determining these inequities.

Figure 6.3 Self-assessed Health Status, by Consumption Quintile



6.17 ***Behavioral issues such as tobacco use and diet can have an important impact on health equity outcomes independent of health system performance.*** Tobacco use is a key risk factor in Azerbaijan's disease burden, particularly for men. Figure 6.4 shows adult smoking prevalence by quintile, indicating that tobacco use is more common among the poor. There is also a mild gradient whereby hypertension is more prevalent among the poor, while the opposite is true with respect to being overweight or obese. In addition to the health implications of smoking, household budget data indicate that tobacco expenditures account for about 16 percent of non-food spending among the poorest quintile.

6.18 ***With respect to the equity of healthcare provision, there is strong evidence that the poor are much less likely to use health services than the non-poor.*** This applies to both outpatient and inpatient care. Table 6.2 shows annual utilization rates per capita for outpatient and inpatient care by quintile. On average, an individual in the poorest quintile consults an outpatient provider only just over once per year. Figure 6.5 shows that the richest quintile accounts for about one-third of total utilization, while the poorest quintile accounts for just over 10 percent. Even this picture understates the extent of inequality, since in view of the generally better state of health of the non-poor noted above; an "equal" pattern of healthcare utilization *conditional on need* would entail significantly higher rates of utilization by the poor. This pattern is confirmed by data indicating that the richest quintile is over 50 percent more likely to seek care in the event of (self-identified) illness or an accident than the poorest quintile (not shown). These unequal patterns of utilization extend to priority maternal and child health services such as prenatal care by a skilled provider and full childhood vaccinations.

Figure 6.4 Risk Factor Indicators, by Asset Quintile

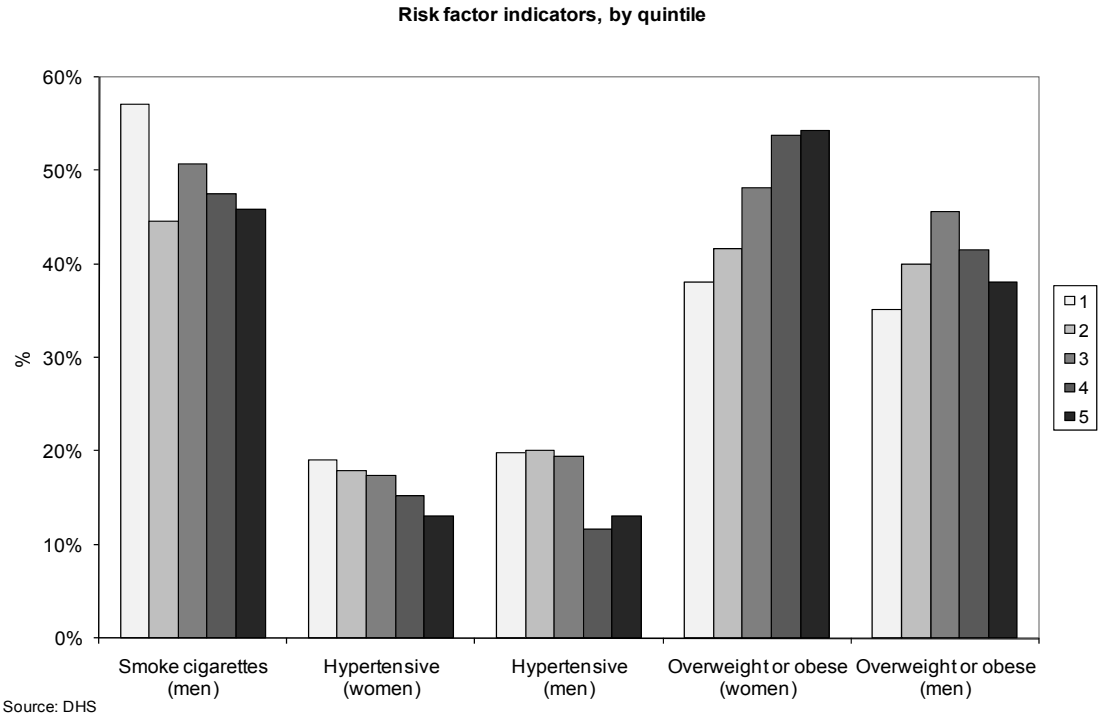


Table 6.2 Annual Utilization Rates per Capita, by Consumption Quintile

Quintile	*Annual Outpatient Contacts Per Capita*	*Annual Inpatient Admissions Per Capita*
1	1.15	0.056
2	1.57	0.064
3	1.95	0.068
4	2.51	0.083
5	4.01	0.108
All	2.24	0.076

6.19 ***There is some evidence that physical access (proximity) to care is one explanation for lower utilization of services by the poor.*** While there is little variation across quintiles with respect to the share of the population within 30 minutes' travel time to the nearest medical facility (ranging from 87 percent to 94 percent between the poorest and richest quintile) (2008 LSMS), 67 percent of women in the poorest quintile reported distance to a health facility as a problem in accessing healthcare compared to just 14 percent in the richest quintile (2006 DHS). Utilization is higher in Baku and other urban areas than in rural areas (Table 6.3).

Figure 6.5 Utilization Shares

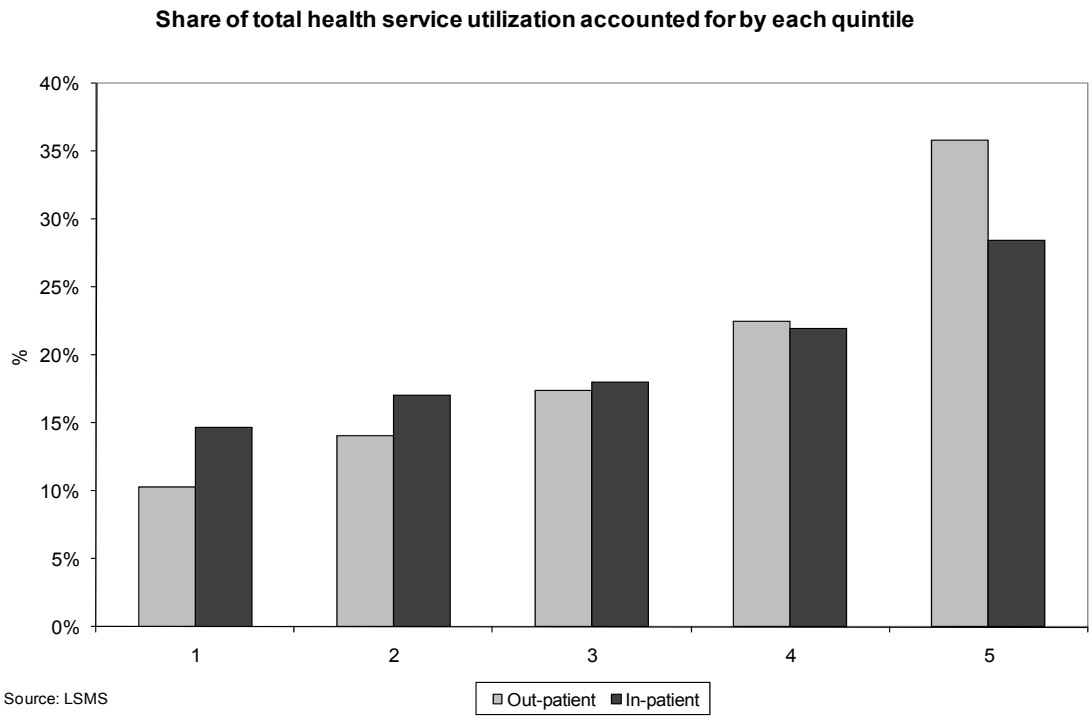


Table 6.3 Urban-Rural Patterns of Utilization

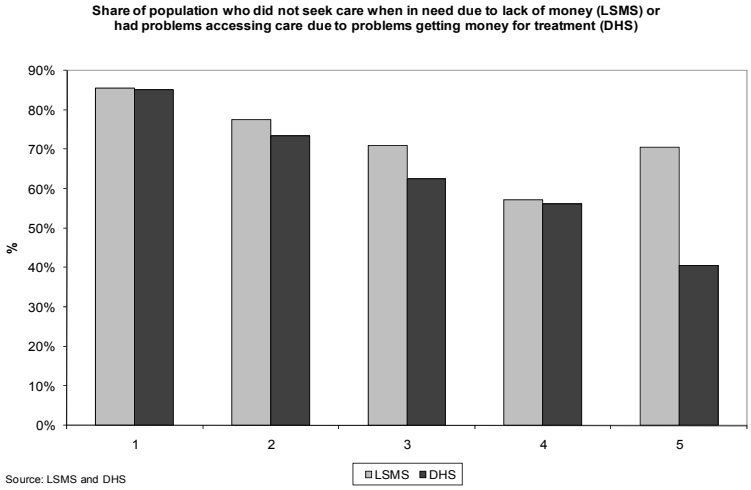
	Out-patient use (annual contacts per capita)	In-patient use (annual admissions per capita)
Baku	2.78	0.084
Other urban	2.22	0.073
Rural	1.94	0.073
All	2.24	0.076

Source: LSMS 2008

6.20 ***There is stronger evidence that financial access is a key hindrance to utilization of health services by the poor.*** The previous section noted that high OOP payments for healthcare are perhaps the most important reform challenge for the health sector in Azerbaijan. The next section will look more closely at financial protection as an objective of the health system in its own right, but in this section financial access is highlighted as a key obstacle to better health outcomes. Figure 6.6 shows the relative importance of financial barriers to utilization across quintiles.[23] However, it should also be noted that among those who do use care, informal payments to providers are more common (and larger) among the better-off than among the poor.

[23] Note that the figure combines consumption quintiles of the LSMS with asset quintiles of the DHS.

Figure 6.6 Financial Barriers to Healthcare Utilization



6.21 ***Finally, there is little inequality reflected in indicators of satisfaction with care and perceived quality of care*** (Figures 6.7 and 6.8). This may be as much a reflection of the non-clinical aspects of using services (for example, waiting times, provider attitudes, and so forth) as the quality of clinical care. The results suggest that the poor are not systematically discriminated against by providers, as is the case in some other countries. However, despite the absence of a gradient for this indicator, there is a widespread perception that quality is either "average" or "bad" (only about 25 percent classify it as "good"), and this may also explain relatively low levels of utilization and the propensity to self-treat at pharmacies instead of consulting a healthcare provider.

Figure 6.7 Satisfaction with Care, by Consumption Quintile

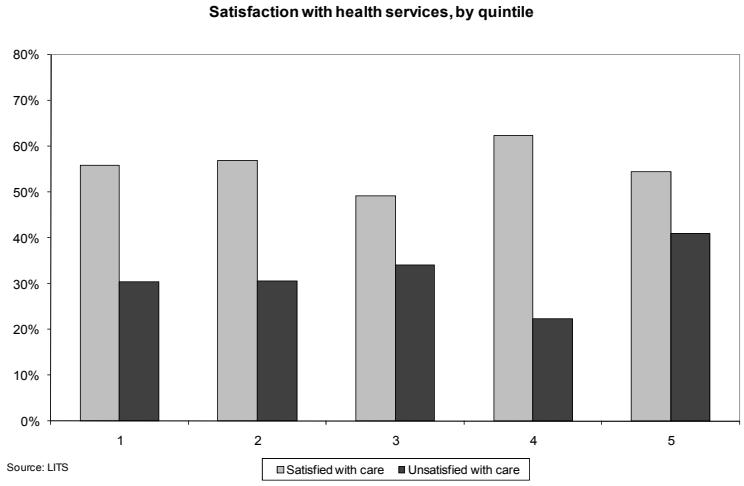
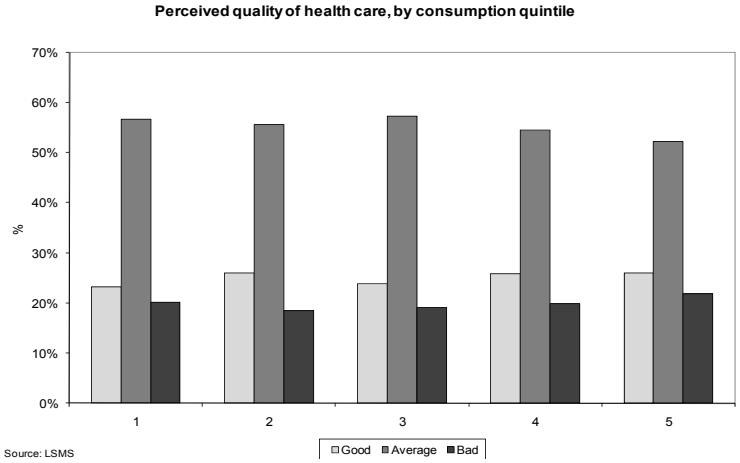


Figure 6.8 Perceived Quality of Health Care, by Consumption Quintile



6.22 ***In sum, there is evidence of significant inequality in health outcomes between the rich and poor in Azerbaijan.*** The factors that play a role in the "health production function" are complex, but the evidence suggests that a significant component of this inequality can be attributed to differences in utilization of care and the underlying financial access considerations. Proximity to care appears to play a lesser role. Other factors, such as satisfaction and perceived quality of care, do not appear to reflect significant inequality. It will be important to continue to monitor these indicators as reforms to Azerbaijan's health sector are implemented.

D. Financial Protection and Out-of-Pocket Payments for Health

6.23 ***While health system objectives typically emphasize improving health, the topic of the previous section, another important objective is financial protection.*** The need for healthcare is often unpredictable and costly, and public policy has a potentially important role to play in improving household welfare in the face of this uncertainty. Unfortunately, it often does not live up to this potential. This section looks at Azerbaijan's record in providing financial protection in health, with special reference to the poor.

6.24 ***A key reason for emphasizing financial protection is that health expenditures are qualitatively different from most other items in a household consumption basket.*** This is because the spending is usually not voluntary (for example, if arising due to an unwanted health shock), and may not be associated with an improvement in household well-being to the same extent as the purchase of other items. A household forced to make high health expenditures would not have these resources available to spend on necessities such as food and shelter. Also, the uncertainty and potentially high cost associated with health expenditures make them amenable to prepayment and risk-pooling arrangements. For all these reasons, a more desirable counterfactual to high OOP spending on health would be some form of prepayment mechanism (whether through general taxes or a

contributory insurance scheme) to provide financial protection against health shocks. This has been achieved in many countries, but not yet in Azerbaijan.

6.25 ***The main indicator used to evaluate financial protection in health is out-of-pocket payments (OOP), and in Azerbaijan these are quite significant by any metric.*** Although estimates vary across different surveys (see Box 6.2), they are clearly substantial both as a share of total household consumption (about 10 percent) and by international standards. LSMS results combined with other data suggest that OOP represented about 73 percent of total health expenditure in Azerbaijan in 2008, which would rank third highest out of 53 European countries according to the most recently available international data (only Georgia and Tajikistan are higher).[24]

Box 6.2: Measuring OOP: How High is Out-of-pocket Spending on Healthcare in Azerbaijan?

Estimating healthcare utilization and out-of-pocket (OOP) payments through household surveys can be challenging. A common approach is to ask individuals about their last visit to a healthcare provider, often restricted to a certain time frame such as the past month. However, those who are sick, especially with a serious and/or chronic illness, may make several visits during that period, and often to more than one provider. The survey results in this case will tend to underestimate both utilization and expenditures. Moreover, rare events such as hospitalizations are more easily captured through longer recall periods, whereas more "regular" occurrences such as drug purchases or clinic visits are better addressed over shorter periods to reduce recall bias. For these reasons, guidelines for health modules tend to recommend more thorough survey instruments to capture all visits and multiple recall periods depending on the type of service (for example, one month for outpatient care and 12 months for inpatient care) (Gertler and others 2000). But an extensive health module may not be feasible in the context of a general consumption expenditure survey.

A range of different survey questionnaires has been used to estimate health spending in Azerbaijan. The regular Household Budget Survey (HBS) does not have a question with which to accurately estimate utilization. Health expenditures are captured using a three-month recall period. The LSMS used a four-week recall period for utilization and expenditures on outpatient care, and a 12-month recall period for inpatient care. Other surveys have used alternative methods.

As a result, there is considerable variation across surveys in their estimates of OOP spending for health in Azerbaijan. A comprehensive healthcare financing survey of over 6,000 individuals nationwide conducted by G&G Consulting in 2004 estimated that annual per capita OOP was about 480,000 old manat (US$96), about *five times* higher than the result in the 2003 HBS. A baseline survey conducted in 2006 in the focal districts of the World Bank Health Sector Reform Project estimated annual per capita OOP in these areas (which are poorer than the national average) to be about 274,000 old manat (US$65), nearly twice as high as the HBS results for the corresponding year. The LSMS estimates annual per capita OOP of about US$125. Although the true figure is unknown, it is likely that the HBS results are significantly underestimated. Future survey work should be mindful of these measurement issues.

[24] WHO-Europe Health for All database.

6.26 ***A decomposition of OOP into subcategories provides useful insights.*** Tables 6-4 and 6-5 show the breakdown by quintile and urban/rural residence. Total OOP in absolute terms is much higher among the non-poor. Across all quintiles, medicines account for about three-quarters of total OOP. As a proportion of each quintile's total OOP, however, a much larger share of the drug purchases of the poor are from a pharmacy without consultation, whereas the non-poor tend to purchase medicines in association with a visit to an outpatient provider. A smaller share of total OOP by the poor is spent on outpatient consultations compared to the non-poor. The pattern of self-treatment by the poor is a reflection of the financial barriers noted in the previous section and raises important concerns about a lack of quality medical advice. Inpatient consultations and drugs do not represent the largest share of OOP for any quintile, but there are indications that a significant share of inpatient spending (about one-quarter) is for informal payments to providers. In view of the difficulty of accurately distinguishing and measuring informal payments, however, this result should be viewed with some caution. Finally, there is little difference in OOP levels between internally displaced persons and the general population.

Table 6.4 Composition of OOP by Consumption Quintile (AZN per capita per year)

	Outpatient Consultation	*Outpatient Drugs*	*Inpatient Consultation*	*Inpatient Drugs*	*Pharmacy (no consultation)*	*Total*
1	3.3	14.3	3.8	3.1	8.8	33.2
2	8.8	29.9	6.1	6.2	11.2	62.5
3	17.3	49.1	8.4	8.0	13.0	95.7
4	27.8	85.7	11.5	12.8	26.2	163.9
5	91.3	217.0	27.3	32.8	43.3	411.7
All	29.7	79.2	11.4	12.6	20.5	153.3

Source: 2008 LSMS

Table 6.5 Urban-Rural Patterns of Out-of-Pocket Expenditure

	Baku	*Other Urban*	*Rural*
Out-of-pocket Spending (AZN per capita per year)	184.4	143.8	141.1

Source: 2008 LSMS

6.27 ***A common approach for evaluating OOP expenses for health is to measure the extent to which they are "impoverishing."*** That is, if a household has total consumption expenditures (pre-OOP) above the national poverty line, but their total non-medical spending (post-OOP) is below the poverty line, they could be considered to have suffered impoverishment due to OOP expenses for health. Whether this is an accurate way to evaluate the true poverty impact of OOP is a matter for debate and is discussed in Box 6.3. For now, impoverishment due to OOP for health in Azerbaijan is illustrated graphically in Figure 6.9. Households are ranked along the horizontal axis by total consumption. The vertical "drip" lines represent OOP for health, and the per-adult-equivalent poverty line is indicated by the horizontal line at AZN 86.3. When total household consumption places a household above the poverty line but health OOP drops

them below, it can be argued that impoverishment due to health spending has occurred. Although the thickness of the vertical lines may exaggerate the incidence of impoverishment, it is nevertheless a frequent occurrence.

Box 6.3: Issues in Measuring Financial Protection in Health

The discussion in this section about impoverishing and catastrophic OOP expenses for health raises several issues that warrant closer scrutiny.[a] On one level they may *underestimate* the disruptive impact of illness on households. Most obviously, they do not account for income losses arising from a health shock (for example, time away from work), which in some contexts has been shown to be even more important than the direct impact of medical bills (Gertler and Gruber 2002). However, this is arguably an issue to be addressed by the social protection system more broadly, not just by health financing arrangements. Moreover, a full analysis of this would require more sophisticated survey instruments than those currently available for Azerbaijan. A second reason is that high OOP at the point of service may oblige families to forego necessary treatment altogether, and this would not be captured in the data discussed in this section. While such a scenario is indeed worrisome, it concerns financial access as an *instrument* to achieve better health outcomes (as discussed in the previous section), rather than considering financial protection as an important *objective* of the healthcare system itself, as is addressed here.

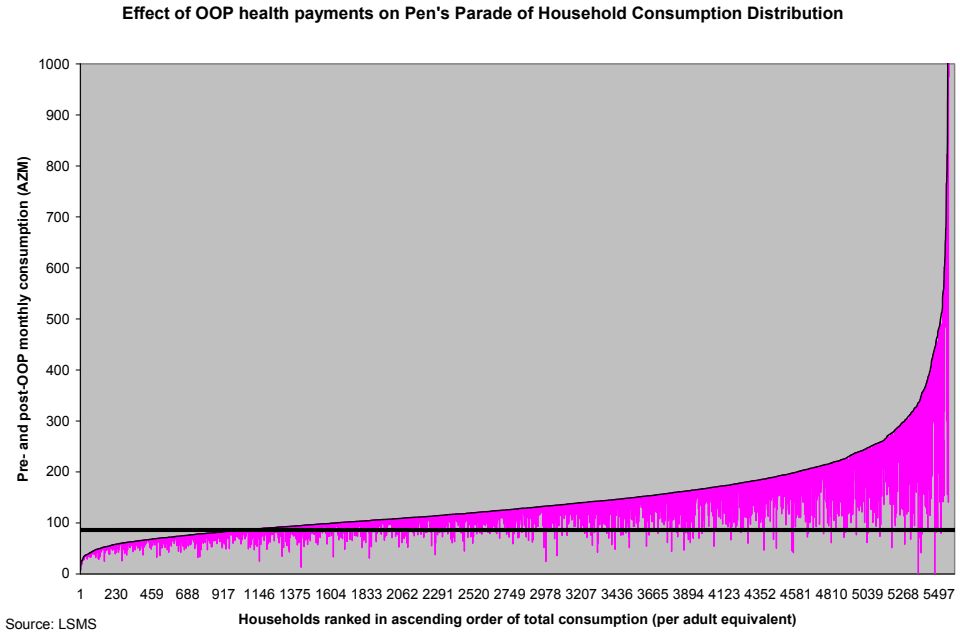
On the other hand, the approach discussed here may also overestimate the disruptive impact of OOP. First, it presumes OOP is involuntary. In some instances this is surely not the case, but to assume the opposite, that health spending is entirely discretionary, seems even less plausible, so as a first approximation this seems reasonable. Second, and more important, the discussion ignores the issue of how households actually cope with high OOP. We have assumed that in the absence of OOP, total consumption would have been the same, but the household could have afforded spending on "better" things. In reality, households are likely to draw on several possible coping mechanisms that would allow for consumption smoothing, such as drawing down savings, borrowing, or selling assets. It has been assumed here that a costly illness episode in one period has an immediate and commensurate impact on total consumption in the same period, which is surely not right. However, a full analysis of this would require detailed longitudinal surveys on illness episodes, health spending, and other household decisions, which are not currently available. Although coping mechanisms allow for the possibility of a "softer landing" in the aftermath of a health shock than the results here suggest, recourse to these channels still implies a significant negative impact on intertemporal well-being, and is therefore less desirable than the existence of appropriate prepayment and risk-pooling mechanisms that would truly provide financial protection to the population. In sum, while not perfect instruments for measuring financial protection, the approaches used in this section provide important insights into the impact of health spending on poverty in Azerbaijan, particularly in the context of international benchmarking.

a. The discussion here draws on Wagstaff (2008).

6.28 ***High OOP for healthcare has a significant impact on poverty among Azerbaijani households.*** Using the concept of impoverishment we can recalculate key poverty indicators in Azerbaijan by "netting out" OOP. Indeed, because health spending does not necessarily capture an increase in household welfare in the same manner as other goods, a case is sometimes made to exclude it altogether from the consumption

aggregate and thus from calculations of poverty statistics (Deaton and Zaidi 2002). As presented earlier in this report, the poverty headcount in Azerbaijan is 20.2 percent, a figure that is based on a consumption aggregate that includes OOP for health. If we calculate the poverty headcount without OOP, it rises to 27.9 percent. Thus, an additional 7.7 percent of Azerbaijani households are classified as poor if we subtract their (potentially involuntary and non-welfare improving) health expenditures. The incidence of poverty does not capture the severity, and thus we can make the same adjustment for calculating the poverty gap. This rises from 4.4 percent to 6.6 percent of the poverty line when we account for OOP.

Figure 6.9 Impoverishing Effect of OOP for Health



Source: LSMS

6.29 ***Azerbaijan fares poorly relative to other countries in terms of providing financial protection against impoverishment due to OOP.*** Table 6.6 compares Azerbaijan with several Asian countries, both low and middle income, for which similar measures have been calculated. Azerbaijan has by far the highest indicators of any country in the table, reflecting in part its rare status as a middle-income country with very low public spending on healthcare, as well as a large share of households situated just above the poverty line.

6.30 ***An alternative approach for highlighting the impact of OOP on households is to measure the extent to which they are "catastrophic."*** Impoverishing OOP puts the emphasis on crossing the poverty line irrespective of the size of payments. Catastrophic health expenditures occur when they exceed some threshold of either total or non-food expenditure. The choice of threshold is somewhat arbitrary, but here we will follow a

common practice in recent literature and use 10 percent of total consumption expenditure and 25 percent of non-food expenditure. Again, the idea is that these expenditures displace spending on other goods and services, and would not be incurred if appropriate prepayment mechanisms were in place. The extent to which this metric accurately captures the disruptive nature of high OOP is also a subject of debate, as discussed in Box 6.3.

Table 6.6 Impact of Health OOP on Poverty Indicators, Selected Countries

Country	*Percentage Change in Poverty Headcount Due to OOP (%)*	*Percentage Change in (normalized) Poverty Gap Due to OOP (%)*
Azerbaijan	**38.1**	**50.0**
Bangladesh	4.9	9.4
China	4.1	7.1
Georgia	12.7	16.1
India	2.6	6.0
Indonesia	2.9	4.7
Kyrgyz Republic	6.0	8.0
Malaysia	2.1	3.0
Nepal	1.6	3.4
Philippines	2.1	2.8
Sri Lanka	4.3	5.3
Thailand	2.8	4.2
Vietnam	12.1	18.3

Note: Based on national poverty line of Azerbaijan, US$2/day elsewhere. Cross-country comparisons are indicative only, as survey modules for health and estimation approaches for welfare aggregates may differ.
Source: Azerbaijan 2008 LSMS; Georgia LSMS; and van Doorslaer and others (2006).

6.31 ***The incidence of catastrophic OOP for health in Azerbaijan is also high relative to other countries.*** The share of households with OOP exceeding 10 percent of total expenditure is estimated to be 33.2 percent in Azerbaijan. The share of households for which OOP exceeds 25 percent of non-food expenditure is 33.5 percent. For comparison purposes, these rates exceed any of those that prevail in 14 Asian countries (Table 6.7). An alternative definition of catastrophic OOP, 40 percent of "capacity to pay," was used to calculate results for 59 other countries, and Azerbaijan has the highest incidence in the table (several other ECA countries are shown).

6.32 ***The characteristics of households that incur high OOP health bills also reveal important information with regard to vulnerability.*** A regression of the probability of households suffering catastrophic OOP (whether defined as exceeding 10 percent of total consumption or 25 percent of non-food consumption) on various household characteristics suggests that the most vulnerable are those with a larger share of members below age 5 or above age 65, and those with household heads who are either unemployed or female. Thus, children, the elderly, unemployed, and women are among those who

face the greatest risk due to the absence of an adequate safety net for addressing the uncertain costs of healthcare.

Table 6.7 Households Experiencing Catastrophic OOP, Selected Countries

Country	*10% of Total*	*25% of Non-food*	*Country*	*40% of Capacity to Pay*
Azerbaijan	**33.2%**	**33.5%**	**Azerbaijan**	**10.1%**
Bangladesh	15.6%	14.7%	Bulgaria	2.0%
China	12.6%	11.2%	Croatia	0.2%
Georgia	17.6%	25.7%	Czech Rep.	0.0%
Hong Kong	5.9%	2.4%	Estonia	0.3%
India	10.8%	9.8%	Georgia	5.1%
Indonesia	4.4%	4.4%	Hungary	0.2%
Korea	10.4%	4.8%	Kyrgyz Republic	0.6%
Kyrgyz Republic	5.8%	9.3%	Latvia	2.7%
Malaysia	2.0%	0.8%	Lithuania	1.3%
Nepal	5.9%	9.2%	Romania	0.1%
Philippines	4.6%	3.8%	Slovakia	0.0%
Sri Lanka	3.0%	3.4%	Slovenia	0.1%
Taiwan	6.4%	1.5%	Ukraine	3.9%
Thailand	3.5%	1.8%	West. Europe avg	0.6%
Vietnam	15.1%	15.1%		

Source: Author calculation for Azerbaijan (LSMS); van Doorslaer and others (2007); Xu and others (2003).

6.33 ***In sum, although more ideal indicators of the disruptive impact of OOP on households are elusive, there is strong evidence pointing to a lack of financial protection in health in Azerbaijan.*** OOP for health is high whether measured relative to total consumption or by international standards. The next section considers some related policy issues.

E. Summary and Policy Issues

6.34 ***The preceding sections identified significant inequalities in Azerbaijan's health sector.*** Key findings include substantial inequality in health status and healthcare use between the rich and poor, and a lack of financial protection from high out-of-pocket (OOP) expenditures. The incidence of impoverishing and catastrophic health payments is among the highest in the world. These findings suggest an important policy agenda, and indeed the policy environment is rapidly evolving—a new benefits package is still being developed and the scale of new revenue streams has not yet been finalized, among other pending issues. More time and data will be required to reach clear conclusions about policy directions and their implications. Here we provide only some initial discussion on key issues.

6.35 ***A reduction of OOP spending should be a key objective of the new health financing reforms, and will require substantially more revenues coming into the sector.*** Health financing embraces three distinct functions—revenue collection, pooling, and purchasing. New institutional arrangements for pooling and purchasing are unlikely to achieve significant reductions in OOP payments without accompanying increases in health spending. A complementary option for confronting high OOP (since budget increases alone will not be sufficient to fully address the issue) would be to introduce a formal co-payment that makes the point-of-service cost of seeking healthcare more predictable and transparent.

6.36 ***International evidence from other low- and middle-income countries provides a mixed picture with respect to the impact of introducing insurance on the incidence of catastrophic health expenditures.*** While such comparisons can only be indicative given wide cross-country variation in pre-reform (if any) and post-reform benefits packages, significant declines in OOP spending following insurance expansion cannot be guaranteed. For example, while programs to improve coverage in Mexico and Thailand in 2001 did help reduce the incidence of catastrophic health spending, reforms in China and Vietnam had more mixed results.[25] The reasons why insurance reforms may not reduce the frequency of high OOP vary, but often arise due to increased utilization coupled with less than full coverage of services. Supplier response can also play a role.

6.37 ***The results have implications for the definition of the basic benefits package.*** As noted, a key step in operationalizing the new insurance agency will be decisions with regard to what is included in this package. The LSMS results indicate that about three-quarters of OOP spending, irrespective of quintile, is for drugs; thus, any benefits package without significant coverage of medicines could have an accordingly diminished impact on improving financial protection. A proposal to develop an outpatient drug benefit of approximately AZN 5 per capita appears to be small compared with the current magnitude of OOP for drugs.

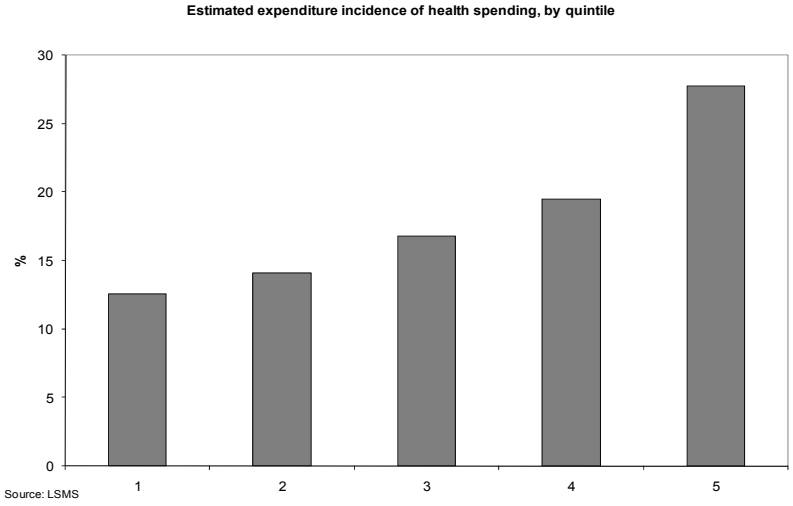
6.38 ***In addition to financial protection considerations, the inclusion of drugs in the benefits package would also be important for improving health outcomes.*** This is particularly true with regard to addressing risk factors for cardiovascular disease (the largest source of the disease burden in Azerbaijan). Of course, expanding the benefits package to include medication would have a significant impact on overall budget needs and therefore fiscal sustainability. Partial drug coverage (possibly with co-payment rates) could help balance these objectives. The high level of expenditure on drugs also points to the priority that should be accorded to the ongoing process of developing a new pharmaceutical policy, since lower prices would improve the OOP picture even in the absence of budget increases and major health financing reform.

6.39 ***While an increase in the level of public spending on health is important, its impact on poverty can be enhanced through improved targeting of these expenditures.***

[25] These examples are cited in Wagstaff (2008).

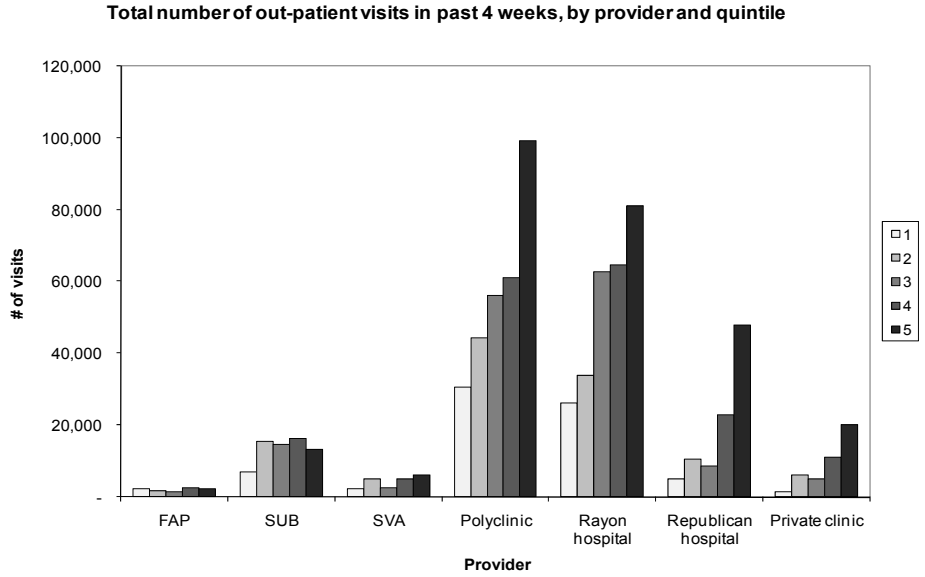
Figure 6.11 provides an estimate of the expenditure incidence of current public spending on health in Azerbaijan. This shows the share of public spending that is "captured" by different socioeconomic groups as a result of utilization patterns and budget allocations. It indicates that the richest quintile captures a much bigger share of the state budget for health (over twice as large) than the poorest quintile. One option used elsewhere in the region (for example, Georgia) to improve this picture would be to use eligibility for targeted social assistance as a mechanism for extending a more generous package of health services to the poor. The strong targeting performance of Azerbaijan's cash benefit to the poor (as discussed in Chapter 4 of this report) suggests that this would be an effective way to make health spending more pro-poor.

Figure 6.10 Expenditure Incidence



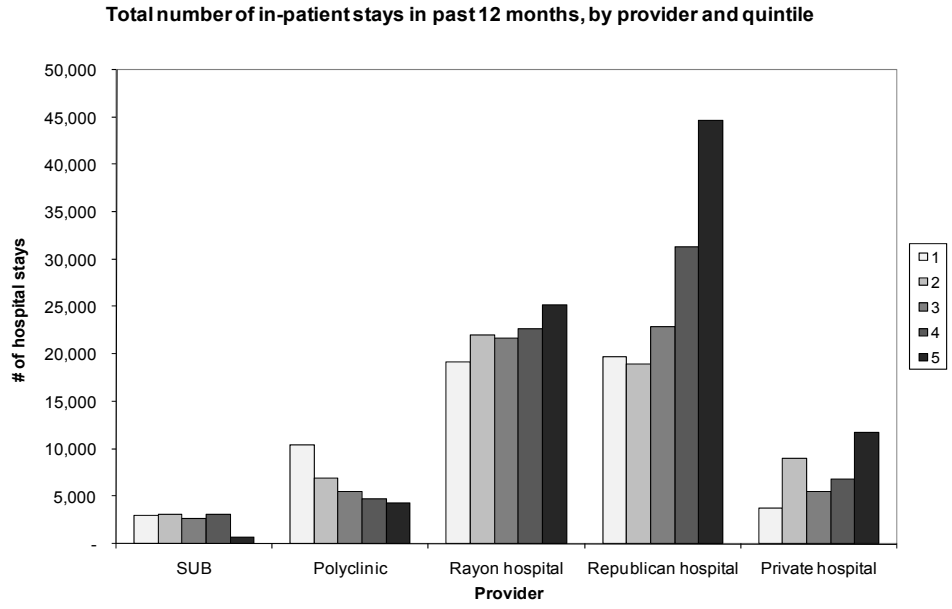
6.40 ***On the provision side, data on provider choice points to the continued imperative to shift utilization patterns toward lower levels of care.*** Figures 6-10 and 6-11 show the details. Nearly half of all outpatient visits in the public sector are to either a *rayon* or republican hospital. Non-hospital outpatient utilization is concentrated at the level of polyclinics instead of family medicine units. Inpatient care is more frequently delivered at tertiary republican hospitals than at *rayon* hospitals. The richest quintile accounts for by far the largest share of admissions to republican hospitals. Excessive referrals to higher levels of care need to be addressed through strengthening capacity and quality at gatekeeper facilities. Coupled with efforts to lower OOP, quality improvements would also help reduce the tendency to self-treat at pharmacies instead of consulting a healthcare provider.

Figure 6.11 Out-patient Utilization by Provider and Consumption Quintile



Source: 2008 LSMS

Figure 6.12 In-patient Utilization by Provider and Consumption Quintile



Source: 2008 LSMS

6.41 ***Finally, ongoing monitoring of the impact of reforms would be greatly enhanced through regular data collection on healthcare utilization and expenditure trends.*** The Household Budget Survey (HBS) is the ideal instrument for doing so. However, the health module suffers from certain shortcomings in its current form that result in a significant underestimation of health use and OOP spending. Efforts to improve this module would reap significant benefits in the monitoring and evaluation of reform.

6.42 ***In sum, the evolving policy environment in Azerbaijan offers the potential to address some of the inequalities in the health sector identified here.*** However, much remains to be done. As noted at the outset, the health sector was identified by Azerbaijani households as the top priority for government investment. Progress on the current reform agenda would make a significant contribution to responding to this call.

7. DEVELOPMENTS IN THE LABOR MARKET AND LABOR POLICIES

The labor market is a key factor that influences growth, competitiveness, and poverty reduction. Realizing this, the Government of Azerbaijan has taken several steps aimed at job creation and growth through the promotion of private investment, the entry of new firms, the growth of small enterprises, and putting in place supportive policies and a regulatory framework. One of the most welcome outcomes has been a large increase in female employment rate. However, other labor market indicators show only a modest improvement. Small-scale agriculture is still the dominant economic activity and comprises 40 percent of total employment. The sectors that generate much of the GDP (and growth) are not the same ones that generate employment. In 2007, for example, the mining sector generated about 53 percent of GDP but only 1 percent of total employment, where as agriculture accounted for 40 percent of total employment but generated only 6 percent of GDP. Thus, more efforts are needed to position Azerbaijan as a diversified and knowledge-based economy with a skilled labor force and flexible labor market.

A. Main Characteristics of the Labor Market

7.1 ***Despite Azerbaijan's economy expanding at a high pace in recent years, key labor market indicators show only a modest improvement.*** According to the 2008 Living Standards Measurement Study (LSMS) and following an internationally accepted ILO methodology and definition, only 57 percent of the working-age population (aged 15–64) is employed and the unemployment rate is about 10 percent (Table 7.1). While the employment rate is comparable or slightly better than that of its immediate neighbors (that is, Georgia and Armenia), it is much less than in most successful transition economies such as Estonia (68 percent) and the Czech Republic (65 percent).[26]

Table 7.1 Main Indicators of the Labor Market, 2008

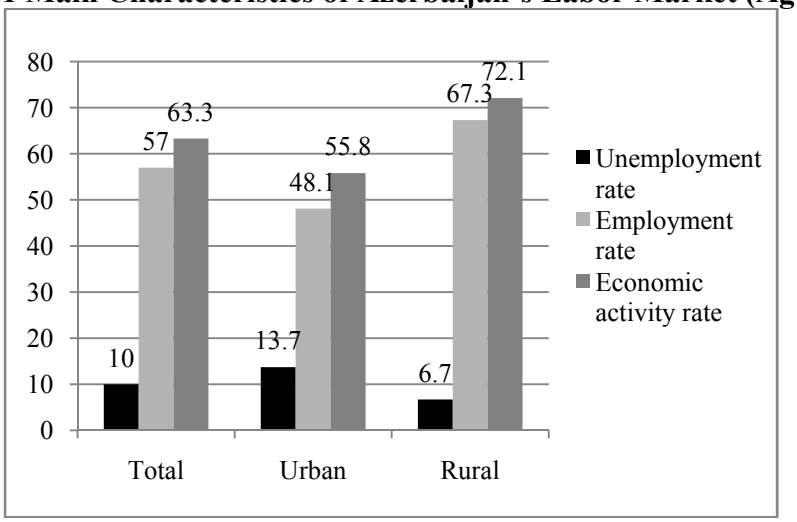
Unemployment rate	9.9
Employment-to-working-age-population ratio	56.7
Working-age Population as a Fraction of total population	69.2

Source: 2008 LSMS

[26] The 2008 Household Survey was conducted off-season, predominantly during January–March, which had an impact on labor force participation rates. According to the 2006 labor force survey conducted during May–June, the employment rate was 63.7 percent, the unemployment rate was 7.1 percent, and the economic activity rate was 68.6 percent (ages 15–64).

7.2 ***The urban unemployment rate was significantly higher than the rural unemployment rate*****,** at 13.0 percent and 6.6 percent, respectively. For the working-age population (aged 15–64), the employment rate of the rural population at 67.3 percent was 19 percentage points higher than the employment rate for the urban population, at only 48.1 percent (Figure 7.1). Although, formally, rural areas have better employment and unemployment rates, the jobs are mostly low paying and seasonal. Median earnings per employed person were AZN 120 per month in urban areas and for non-agricultural work, compared to only AZN 75 in rural areas. For agricultural work, earnings are even less—on average only AZN 51 per capita per month.

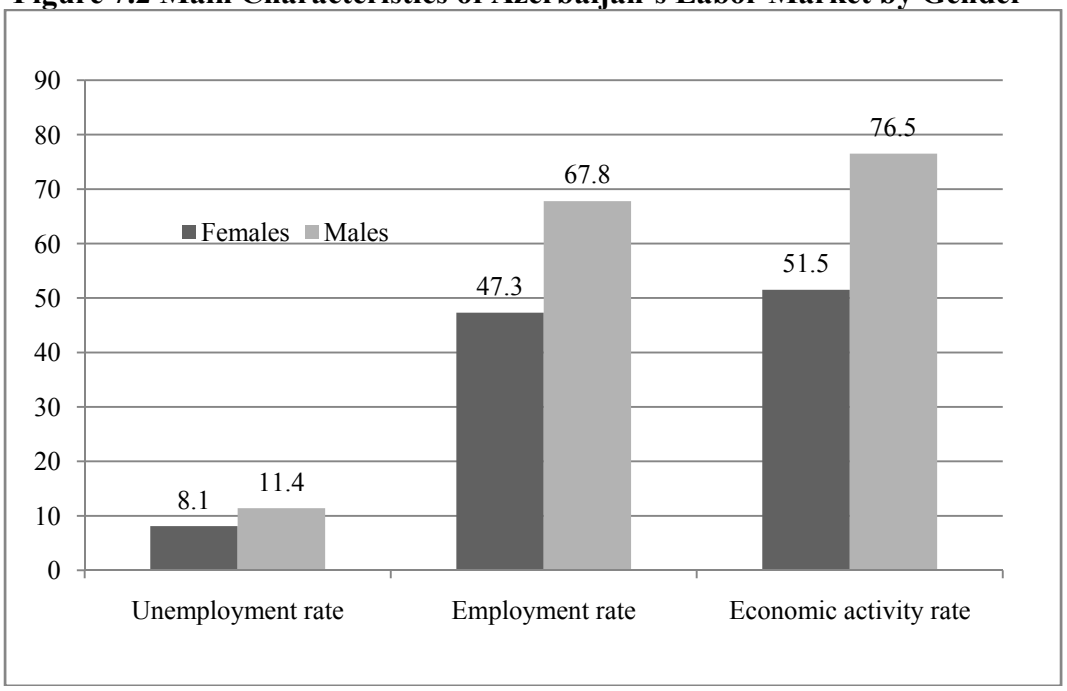
Figure 7.1 Main Characteristics of Azerbaijan's Labor Market (Ages 15-64)



Source: 2008 LSMS

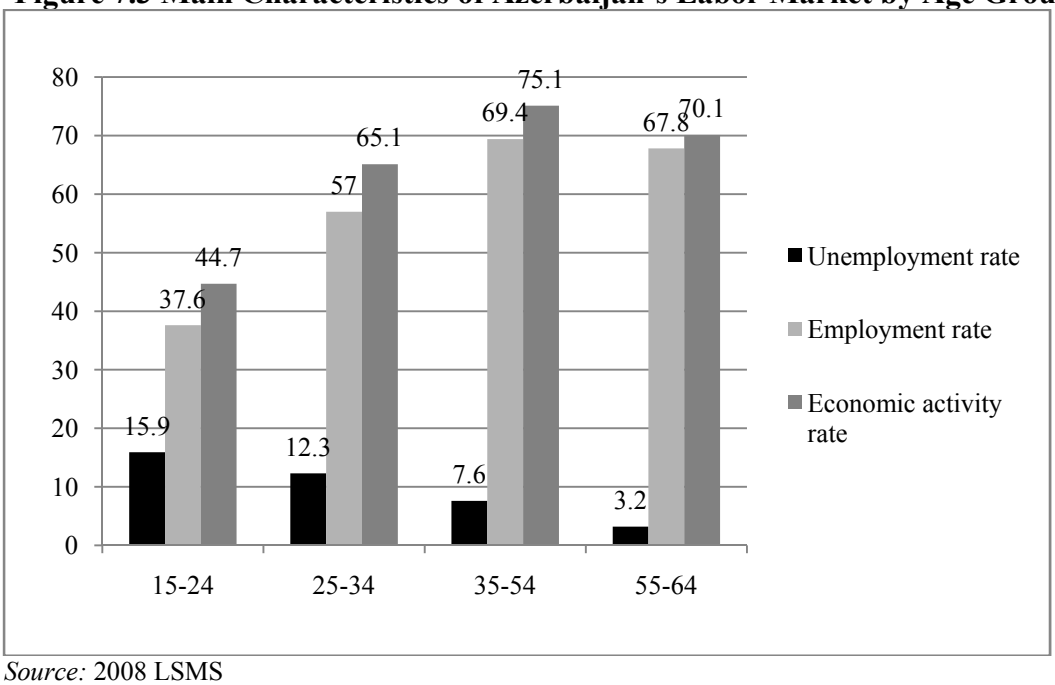
7.3 ***One of the most welcome developments in the Azerbaijani labor market, according to the 2008 LSMS, and supported by the earlier Labor Force Survey (LFS) in 2003 and 2006, is the large increase in female employment rate.*** This has happened while employment rates among males have remained flat. However, most of the employment growth among females is in the informal sector, especially in subsistence agriculture. But there are still significant gender differences in the participation of males and females in the labor force, which reflects the duality of the labor market. According to 2008 LSMS, the employment rate of females aged 15–64 is 47.3 percent compared to 67.8 percent for males; the unemployment rate is lower for females—8.1 percent compared to 11.4 percent for males—suggesting that more women are economically inactive and not actively participating in the labor market (Figure 7.2). Moreover, Azerbaijan's social model based on males as breadwinners may have contributed to the discrepancy in the male and female labor force participation rates. The poverty profile showed gender disparity in poverty levels, with females facing greater risk of falling below the poverty threshold.

Figure 7.2 Main Characteristics of Azerbaijan's Labor Market by Gender



Source: 2008 LSMS

Figure 7.3 Main Characteristics of Azerbaijan's Labor Market by Age Group

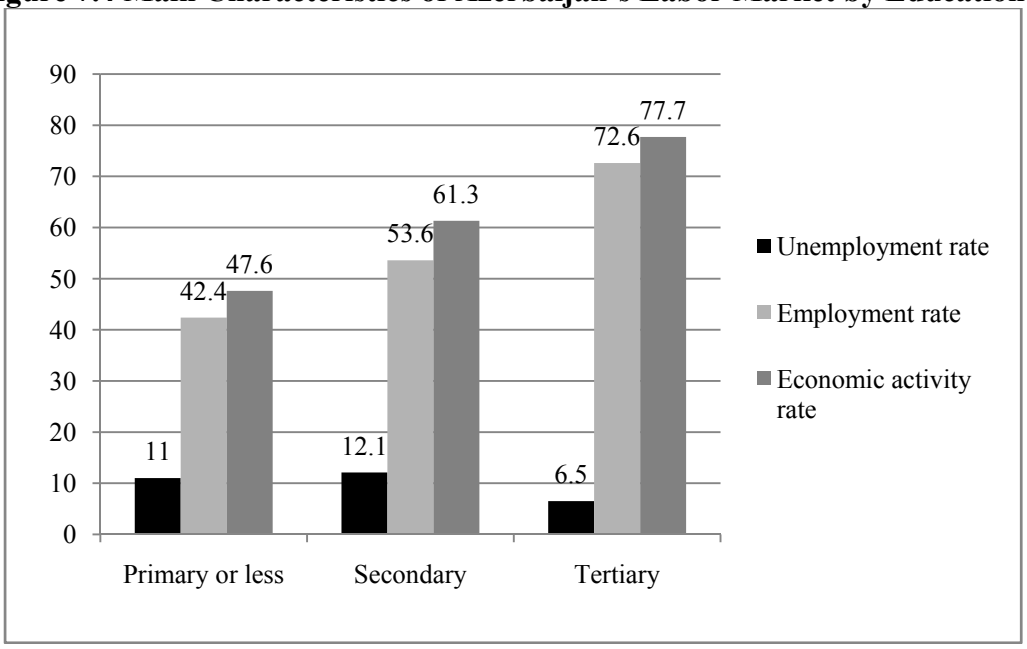


Source: 2008 LSMS

7.4 ***According to 2008 LSMS, youth aged 15–24 have the lowest participation rates and highest unemployment rates.*** More specifically, 16 percent of youth aged 15–24 in the labor force are unemployed compared to only 3.2 percent of people aged 55–64 (Figure 7.3). Nevertheless, youth unemployment rates tend to be lower than for the same groups in the European Union (EU)-15 and successful transition countries. Typical of other Trans-Caucasus countries, in Azerbaijan participation rates of older workers (aged 55–64 but also 65 and over) are higher than in most other transition countries. This is attributed to high involvement of older members of the population in subsistence agriculture.

7.5 ***Better-educated workers have more favorable employment outcomes.*** Those with low educational attainment are both less likely to be labor force participants and more likely to be unemployed (Figure 7.4). The employment rate for graduates of tertiary education is markedly higher than the rate for secondary graduates, by one-fourth, and more than 70 percent higher than for those with basic secondary education or lower. Moreover, the employed with higher education had earnings that were, on average, twice that for employed with secondary education and below. This is largely explained by the fact that employed with lower education levels are largely concentrated in rural areas, predominantly in agriculture. Graduates of secondary general education have the highest unemployment rates, suggesting poor quality and excess supply of general education skills. And the lack of vocational/technical and higher-education skills continues to be a constraint in finding employment (Table 7.2).

Figure 7.4 Main Characteristics of Azerbaijan's Labor Market by Education



Source: 2008 LSMS

7.6 ***Many young people entering the labor market often have only general education or skills for which there is little demand.*** This suggests a misalignment between the education and skills of the labor force and the demands of a growing and modernizing market economy. Also, the bulk (over 70 percent) of the labor force with higher skills (tertiary education) is employed by the public sector, despite lower salaries than in the private sector (medium and large enterprises). This confirms that the restructuring of employment toward a reallocation of the skilled labor force away from the public sector has been very slow. Given that people generally make well-informed labor decisions, one has to believe that public employment is competitive and that there are incentives other than mere wages that justify these decisions (ETF 2006). These may include job security and pensions associated with working in the public sector.

Table 7.2 Distribution of the Employed by Level of Education and Earnings

Level of Education	*Employment Rate*	*Group Share among Employed*	*Median Earnings, AZN*	*Low Earnings Rate*
Below primary	39.5	1.1	66	63.7
Primary	49.9	1.4	60	61.7
Basic	42.0	12.5	58	62.5
Vocational/technicum after basic	63.8	4.2	100	42.6
Secondary general	53.2	47.6	80	52.8
College/technicum after secondary	73.7	15.3	108	39.1
Higher	71.8	17.9	160	22.7
Total	57.0	100	100	46.4

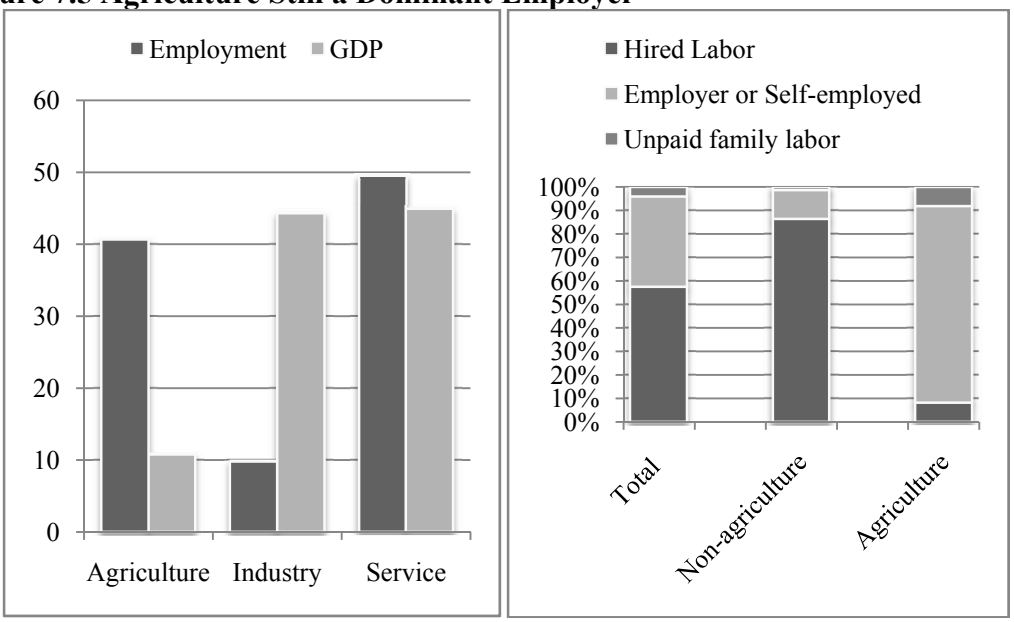
Source: 2008 LSMS

B. Sector of Employment

7.7 ***Agriculture is still the dominant economic activity in Azerbaijan and comprises 40 percent of total employment, despite contributing only about 10 percent to the GDP*** (Figure 7.5). Over 83 percent of those engaged in agriculture are self-employed, mostly in rural areas. Hired labor accounts for less than 8 percent in the agricultural sector. On the other hand, the industrial sector, including the oil subsector, contributes only less than 10 percent of employment. The non-agricultural sectors account for the bulk of hired labor employment. Therefore, agriculture and associated food-processing activities could be one of the key areas for government interventions for spurring growth and job creation. An often-cited bottleneck to achieving job creation is a lack of well-functioning land markets. Considerable progress is being made, particularly in the allocation of farmland and the issuance of land titles to new farm families. By early 2002, some 838,000 land titles had been issued to rural families, 96 percent of the families in rural settlements.[27]

[27] There are nine climatic zones in Azerbaijan and due to that, income from land depends not only on the size of land the household owns or uses, but also on the quality of soil. For example, the farmers in

Figure 7.5 Agriculture Still a Dominant Employer



Source: 2008 LSMS

7.8 ***While the Azerbaijani economy grew by leaps and bounds, growth in productivity was rather limited to the oil and gas sector.*** During 2004–07, the period that saw large start-up investments in oil and gas, productivity growth averaged 14 percent a year, with the oil and gas sector contributing much of it. During the same period, the productivity growth per year in agriculture, services, and non-oil industry were zero percent, 5 percent, and 6 percent, respectively. The contribution of investment to productivity growth in these three sectors has been -6 percent, -0.3 percent, and 0.1 percent a year, respectively (World Bank 2009c). This trend of poor investment in agriculture and other non-oil sectors can hardly make Azerbaijan's economy sustainable and competitive in the long run.

7.9 ***In Azerbaijan, the sectors that generate much of the GDP (and growth) are not the same ones that generate employment.*** The distorted nature of the labor market can be judged from Table 7.38, which shows the contrast in employment, wages, and productivity between the oil and non-oil sectors. While 53 percent of GDP is generated by the mining sector (which provides 1 percent of employment), 39 percent of overall employment and 50 percent of the rural employment is in agriculture (but generated a mere 6 percent of GDP in 2007). Value added generated by one worker in agriculture is less than one-fourth of that in manufacturing, one-tenth of that in construction, and less than 1 percent of value added produced by one employee in oil and gas extracting

Lankaran *rayon*, which is a subtropical zone and in which almost all households have less than 1 hectare of land, earn much more than the farmers in Kurdemir, Yevlakh, or Gobustan *rayons*, where the average size of privatized land per family is 2.59, 2.48, and 4.98 hectare, respectively.

industries. Only 45,000 workers and employees gain access to high-productivity, high-wage jobs in the oil sector.

Table 7.3 Sectors and their Share of GDP and Employment, 2008

	Share in GDP, %	*Value Added per Employee, AZN*	*Total Employment, 1,000'*	*Share in Total Employment, Percent*	*Average Wages per Month, AZN*
Agriculture, Forestry, Fishing	6.2	743	1560.3	38.9	87.3
Manufacturing	6.2	4874	198.4	4.9	212.1
Mining and Quarrying	52.9	269962	45.0	1.1	846.0
Electricity, Gas, and Water Supply and Distribution	0.9	2092	40.2	1.0	195.0
Construction	6.5	6536	225.6	5.6	475.0
Transport, Storage, and Communication	6.0	6986	206.8	5.1	424.6
Other Sectors	21.3	…	1737.8	43.4	…

Source: SSC (http://www.azstat.org)

7.10 ***The informal employment sector is sizable in Azerbaijan and appears to be growing.*** According to the LFS data, between 2003 and 2006, the share of workers employed without an employment contract increased from 45.3 percent to 59.5 percent (Table 7.4). There is a sizable informal employment within the formal sector, as well. The Ministry of Labor and Social Protection of the Population estimates that, for example, out of 226,000 employed in construction, only one-fourth of the workforce in the sector has a written labor contract with their employer. Also, the proportion of people in various forms of self-employment is very high, confirming the importance of unprotected forms of labor, informal labor, and work under precarious conditions. But the share of high-producing self-employment linked with new and high technologies and businesses is very low. There are some highly skilled individuals working as freelancers or own-account employees in interpretation and translation, training, and expertise and consulting services, but their share is not representative.

Table 7.4 Structure of Employment Population by Employment Status

	With Employment Contract		*Without Employment Contract*	
	2003	***2006***	***2003***	***2006***
Total	54.7	40.5	45.3	59.5
Including:				
Males	56.2	47.8	43.8	52.2
Females	52.6	32.4	47.4	67.6
Urban	81.9	60.9	18.1	39.1
Rural	26.7	29.1	69.4	70.9

Source: LFS 2003 and 2006

7.11 ***Since the transition, there has been a shift from stable salaried jobs to casual and less-formal jobs and self-employment.*** As noted, quite a significant portion of labor is engaged in subsistence agriculture and self-employment—around 60 percent of total employment—but even among hired labor, a significant portion of employed have unstable employment status and only two-thirds have open-ended labor contracts. However, between 2003 and 2006, the share of hired employees with open-ended contracts increased significantly, and the share of participants in temporary contracts declined (Table 7.5).

Table 7.5 Types of Contracts for Hired Labor

Type of Contract	*Total*		*Males*		*Females*	
	2003	*2006*	*2003*		*2003*	*2006*
Total	100(%)	100(%)	100(%)	Total	100(%)	100(%)
Including:						
Open-ended	55.4	67.3	50.0	61.3	63.6	77.1
Seasonal	4.4	4.4	5.0	5.5	3.5	2.7
Temporary	21.2	9.2	24.2	11.4	16.6	5.6
Casual	11.0	3.4	10.6	4.5	11.6	1.5
Fixed-term	3.7	13.0	4.4	13.5	2.5	12.1
One-time for specific job assignment	4.4	2.7	5.8	3.8	0.2	0.9

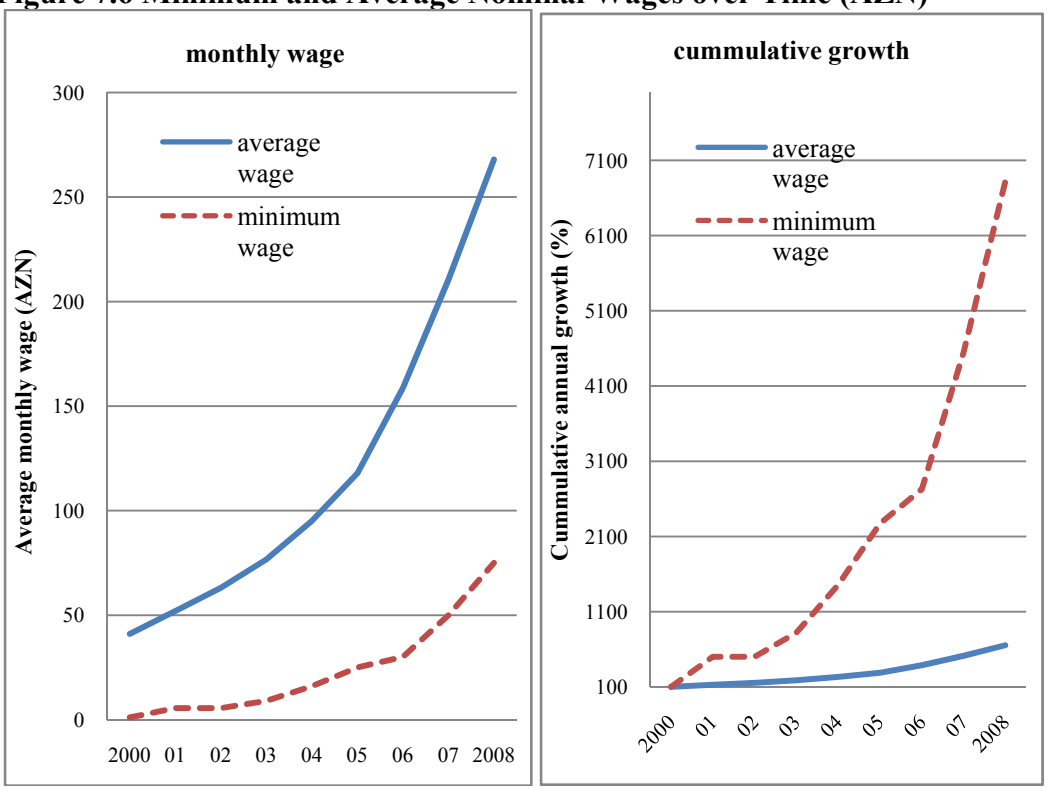
Source: LFS 2003 and 2006

C. Wages

7.12 ***The Government of Azerbaijan sets the minimum wages and salary levels for public sector employees and decides on direct taxes and social contributions.*** In Azerbaijan, minimum wages were kept low for a long time. Since 2001, minimum-wage levels have grown substantially. Between 2000 and 2008, they grew by more 5,400 percent, from only AZN 1.1 to AZN 60, and increased to AZN 75 in September 2008. Nevertheless, they are still only about 28 percent of the average wage, which itself grew by over 650 percent between 2000 and 2008 (Figure 7.6). According to a wage survey conducted in November 2007, only 2.9 percent of full-time employees earned salaries below the minimum-wage level of AZN 50 for that period. Therefore, the level is too low to be binding, that is, to affect wage and employment decisions.

7.13 ***In recent years, average real wages are increasing at double-digit rates, by over 20 percent in 2003 and 2004, to by 11 to 13 percent in 2005 and 2006.*** According to official statistics, in 2008, the nominal average wage reached AZN 268 compared to AZN 41 in 2000, an increase of over 650 percent. In 2008, due to high inflation, the growth of real wages slowed but still increased by another 5 percent in real terms.

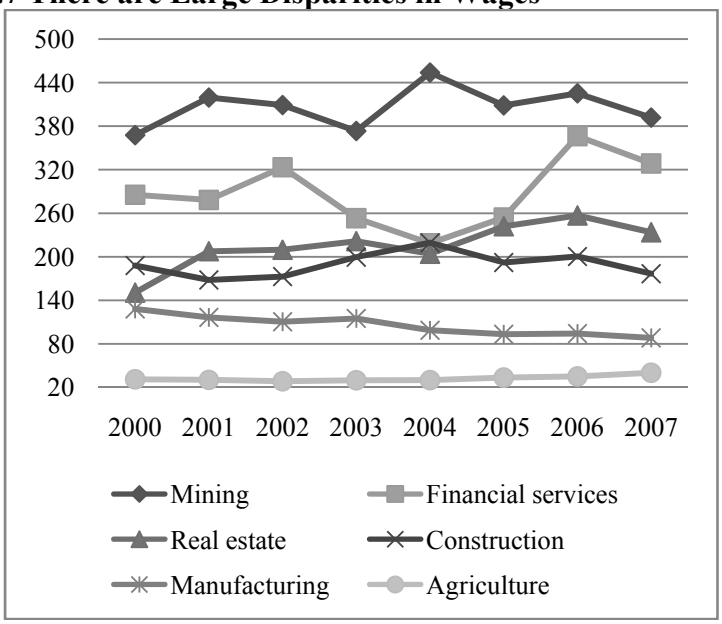
Figure 7.6 Minimum and Average Nominal Wages over Time (AZN)



Source: SSC 2009

7.14 ***There are large disparities in wages.*** Agriculture is one of the lowest paying sectors of the economy (Figure 7.7), followed health and education. The mining and financial services sectors pay as much as four times that of agriculture. The disparity among wages in different sectors further widens depending on employer. In the private mining and quarrying sector, wage levels exceeded AZN 1,437 in 2007, being on average 10 to 16 times higher than in the lowest-paid sectors of agriculture, public health, social work, and education (Table 7.6). However, quite a significant portion of "top-ups" in these sectors are not reported to authorities.

Figure 7.7 There are Large Disparities in Wages



Source: SSC, 2008

Table 7.6 Wages in the Private and Public Sectors in 2007

	Public Sector	***Private Sector***
Agriculture, Hunting, and Forestry	85.8	90.9
Fishing	88.9	71.0
Health and Social Work	89.9	169.8
Education	142.4	187.8
Wholesale and Retail Trade	178.9	173.5
Manufacturing	220.0	205.6
Electricity, Gas, and Water Supply	210.7	195.0
Public Administration and Defense	246.0	82.6
Hotels and Restaurants	169.0	214.7
Transport, Storage, and Communications	216.0	424.6
Construction	286.2	475.0
Real Estate	211.1	1063.8
Financial Intermediation	334.2	839.5
Mining and Quarrying	514.7	1437.3
Overall	**171.2**	**324.9**

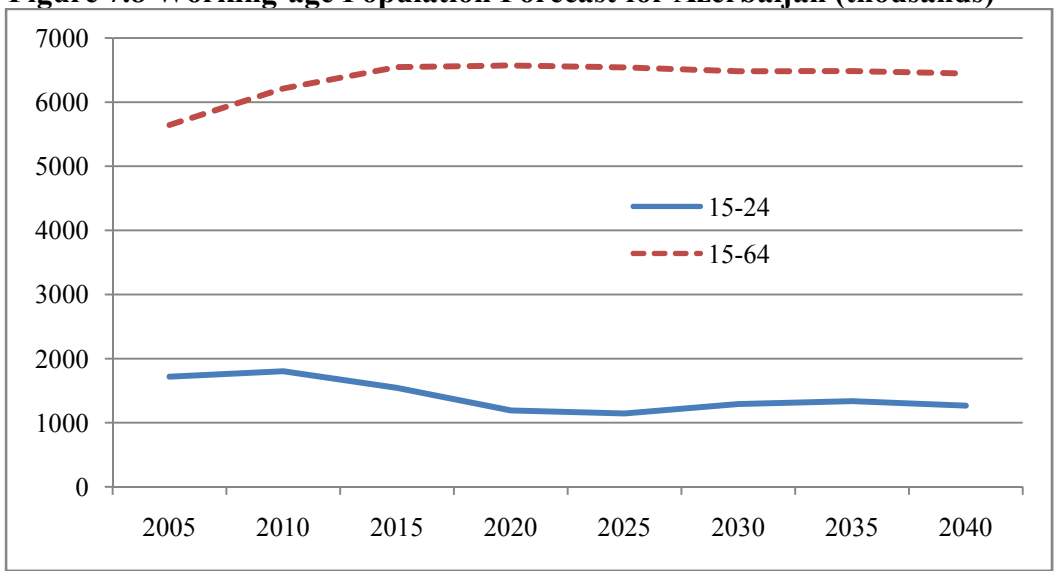
Source: SSC, 2008

D. Labor supply

7.15 ***Azerbaijan belongs to the CIS group of countries with a growing population.*** This is due to many positive demographic factors. Although total fertility rate (live births per woman aged 15–49) has declined from 2.90 in the late 1980s to 2.33 in 2006, it is still

among the highest in the region. By comparison, in Russia and Ukraine, total fertility rate equals 1.30, in Armenia 1.35, and in Georgia 1.40 (UNICEF 2008). Age structure of the population in Azerbaijan is also very favorable for population growth. The country has one of the lowest burdens of old-age dependency among the CIS: the ratio of population aged 60 and over to population aged 15–59 is only around 13 percent (2007) compared to 25 percent in Russia, 31 percent in Ukraine, 19 percent in Armenia, and 28 percent in Georgia.

Figure 7.8 Working-age Population Forecast for Azerbaijan (thousands)



Note: Based on medium scenario of the UN population forecast.
Source: UN.

7.16 ***Thus, due to relatively high fertility rates in the past and a favorable age structure of the population, the number of working-age population (15–64) in Azerbaijan is rapidly increasing—***from 4.986 million in 1999 (population census data) to 5.965 million in 2008, a growth of over 20 percent. During the next decade, the number of able-bodied population aged 15–64 will increase further to 6.550 million in 2015 (according to the medium-term scenario of the UN population forecast). As a result, it is anticipated that competition for jobs and employment will increase. The country's economy, therefore, needs to create jobs to meet growing demand. On the other hand, while the generation of youth born in the 1990s, when birthrates declined rapidly, will enter the labor force, their number (aged 15–24) will shrink from 1.740 million in 2006 to 1.540 million in 2015 and to 1.190 million in 2020 (Figure 7.8), with implications for the aging of the labor force.

7.17 ***Current estimates indicate that about 120,000 to 130,000 people with secondary, technical-vocational, specialized secondary, and higher education enter the labor market each year,*** of which about 20 percent have higher education, 12 percent have specialized secondary, 10 percent have technical-vocational, more than 50 percent have

secondary general education, and approximately 5 percent have only basic education (Nazarov and Dayiyev 2008). Analysis of those who exit the labor market reveals that approximately 25,000 to 30,000 workers leave the labor market each year. New entrants into the labor market find it difficult to find a job in the high-productivity, high-wage oil sector that creates very few jobs, and are squeezed into either unemployment or low productivity work in non-oil sectors. Therefore, given the age structure of the population, the Azerbaijani economy needs to grow in more broad-based and diversified fashion with a strong focus on job creation and competitiveness to absorb the anticipated increase in labor supply.

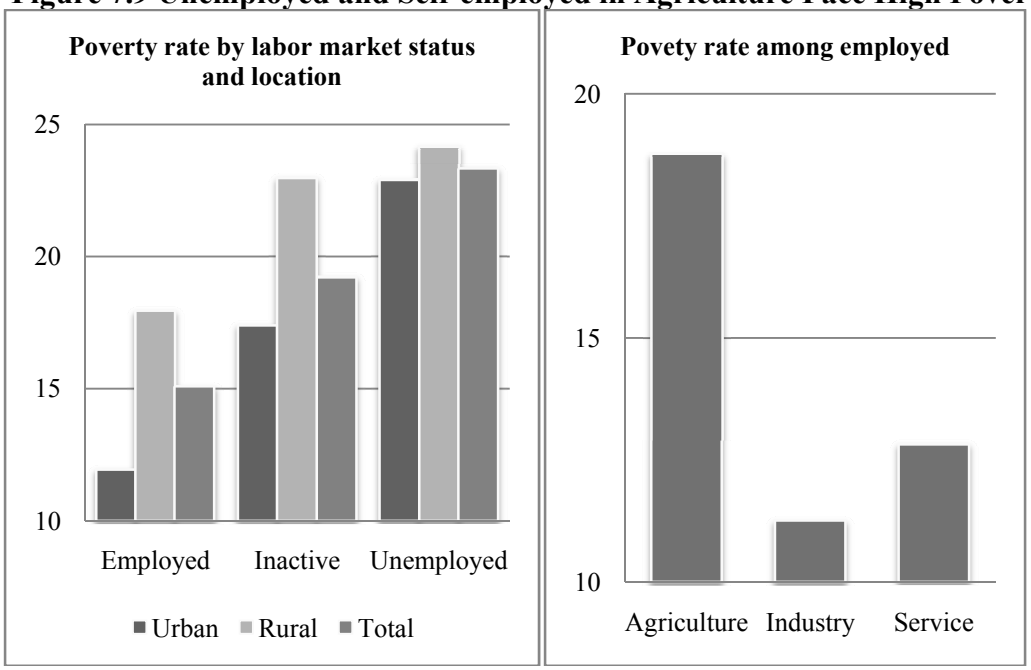
E. Poverty and Labor Market Participation

7.18 ***The agricultural labor force is much poorer than those in industry and services.*** While labor force participation and employment rates in rural areas are more favorable than in urban areas, they do not translate into better earnings there. Regardless of employment status, rural areas face a higher risk of poverty. The incidence of poverty among unemployed is highest, implying that gainful employment is the key means to escape poverty (Figure 7.9).

7.19 ***Azerbaijan's unemployment is of long-term duration—two-thirds of job seekers are on the roster for more than 10 months.***[28] Only 6 percent of the unemployed were registered with the state employment agency. A high incidence of long-term unemployment and inactivity in able-bodied age groups is a symptom of a stagnant (formal) labor market. The skills and work habits of many of the long-term unemployed have eroded and to a large extent their reintegration into the labor market is complicated, at least without an upgrade of their human capital. In general, unemployment rates are disproportionately high among the young, in urban areas, for less educated, and the poor (Figure 7.10). Long-term unemployment constitutes an additional burden on the social funds and the families of the affected.

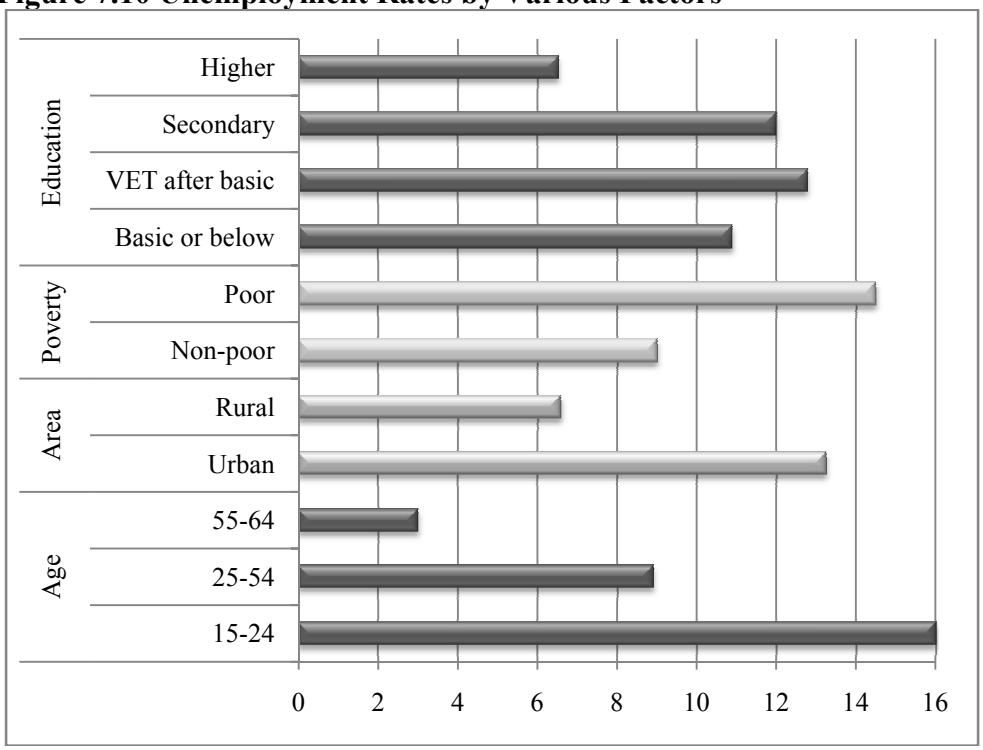
[28] According to the survey data, only 15 percent of the unemployed were searching for a job for more than 12 months, indicating that many long-term job seekers dropped out of the labor force or became discouraged unemployed. Out of 50,700 registered unemployed in 2007 (1.2 percent of the economically active population), 64 percent were out of work for more than 12 months. (See http://www.azstat.org/statinfo/labour/en/033.shtml#s1 for more info.)

Figure 7.9 Unemployed and Self-employed in Agriculture Face High Poverty



Source: 2008 LSMS

Figure 7.10 Unemployment Rates by Various Factors



Source: 2008 LSMS

F. Conclusions and Policy Recommendations

7.20 ***A comprehensive approach to improving employment requires efforts in a number of areas that encompass sound economic and regulatory policies, an attractive investment climate, efficient labor market regulations and institutions, education and training systems that develop relevant and high-quality skills, and a social safety net that offers protection while encouraging employability***. There is a potential for employment growth through various labor market policy measures that the government can undertake, in addition to facilitating the general macroeconomic and business environment. The policies should include measures on both the demand and supply side that ultimately lead to an increase in the employment rate.[29] Following are critical policy options in the field of education and training and labor market institutions.

7.21 ***Investment in human capital is the critical factor to affect the employment prospects of the population.*** This mostly concerns reforms of the education and training systems. Linking education with labor market needs and reducing early school leaving have been commonly recognized as key challenges to reduce youth unemployment. Education, or rather the lack of it, plays a key role in this. Young people with low educational attainment are much more likely to be affected by (long-term) unemployment, inactivity, or difficult school-to-work transitions than youth with upper secondary or university education.

7.22 ***There is a serious mismatch between the structure of graduates of professional education establishments, on the supply side, and the structure of the economy, on the demand side.*** There seems to be an overproduction of specialists in areas such as education, health, and manufacturing, which provide relatively limited job opportunities, while very few graduates are specializing in services sectors and agriculture (Table 7.7). Also, the "excess supply" of workers with general secondary education and no vocational skills is the most important factor behind the education mismatch in Azerbaijan. The proportion of jobs requiring general secondary education is substantially lower than the proportion of the unemployed.

[29] Labor market programs (LMPs) are essentially public interventions in the labor market that are targeted at particular groups in the labor market. In this respect, they differ from general employment policies which, by definition, are not targeted at any particular group. Therefore, certain important policies, such as measures that lower labor costs, for example, through non-targeted reductions in taxes and/or social security contributions, are not considered LMPs but fall into the category of "general" employment policies.

Table 7.7 Structure of Graduates of Secondary Specialized and Higher Education

Economic Activity	*Secondary Specialized Education*	*Higher Education*	*Structure of Employment*
Total	100.0	100.0	100.0
Including:			
Industry and construction	20.9	19.1	7.0
Transport and communication	3.8	1.7*	5.1
Agriculture	11.6	1.8	39.0
Economics	9.9	15.9	—
Health and sports	20.8	7.4	4.5**
Education	26.2	50.5	8.6
Art and cinematography	6.8	3.4	—
Other	—	—	35.8

* Transport only; ** Health and social services.
Source: SSC 2007

7.23 ***In addition to the structural mismatch in the supply of labor, the quality of labor supplied by education establishments is of utmost importance.*** The vocational education and training (VET) available is based on outdated curriculums and of narrow specialization and, as a result, does not cover the range of jobs available. A tracer study of VET graduates (years of graduation: 2000–02) carried out by the European Training Foundation (ETF) in 2004 indicated that VET graduates were not well positioned in the labor market: 65 percent of the respondents declared that they were not employed, only 6 percent were undertaking further studies, and only 28 percent said they had a job. The highest employment rates were recorded among the VET graduates of professions, such as consumer services, sports, and tourism, at 43 percent, and the lowest, 22 percent, among VET graduates who studied culture, education, and arts (Table 7.8). Also, a large majority (59 percent) of the employed respondents worked in functions or jobs that were completely unrelated to the vocational qualification they obtained; only 29 percent of employed graduates had a direct match between the job profile and their VET qualification, and 12 percent had only a partial match (Castel-Branco 2007).

Table 7.8 Employment Status of the VET Graduates

Occupational Groups	*Employed*	*Unemployed*	*Student*	*Other*
Technical, mechanical	33.6	57.6	6.7	2.1
Economy, management, law	24.1	68.7	6.7	0.6
Chemical, technological	25.6	69.8	4.7	—
Culture, education, arts	22.2	72.1	5.2	0.4
Consumer services, sports, tourism	42.9	53.6	3.6	—
Total	28.0	64.9	6.1	1.0

— = .; * Years of graduation: 2000–02.
Source: Castel-Branco 2007 based on ETF Tracer Study 2004.

7.24 ***There is limited access to reliable information about labor market demand by the youth, and weak cooperation among government agencies, especially between the labor and education ministries.*** One of the measures to address this could be to develop career counseling services, including free-of-charge vocational guidance and career counseling services. Career guidance counseling aimed at improving the efficiency of students' choices of specializations, to inform students of the employment prospects associated with alternative specializations, and to inform their eventual labor market choices. Currently, the choice of specialization in education establishments is mainly based on the interest of young people in a given specialty (and in many cases the lack of alternative options or financial means also play a role), rather than on labor market considerations. Upgrading of the skill of the labor force—through continuing vocational training, distance education, and other formal and informal methods—would help improve overall labor productivity and the ability of labor to move from low-productivity to high-productivity jobs. There also needs to be a better coordination between the employers and the various government agencies to gradually transform employment agencies into a genuine service enterprise.

8. SOCIAL PROTECTION IN AZERBAIJAN

This chapter provides an assessment of the effectiveness of Azerbaijan's social protection programs in general and the Targeted Social Assistance (TSA) program in particular. It does this by seeking evidence on their coverage, adequacy, and targeting of the intended beneficiaries, and their impact on poverty. The chapter shows that social protection programs in Azerbaijan play a key role in poverty reduction and that TSA at inception was well targeted and can be easily scaled-up to mitigate the impact of current and future economic shocks.

A. Introduction

8.1 ***Azerbaijan's oil and gas boom presents a tremendous opportunity not only to put the country's economy on a solid growth path but also to provide adequate care and support for the elderly, disabled, poor, and vulnerable among its population***. Azerbaijan has both contributory and non-contributory social protection programs, including: (a) pensions, (b) passive and active labor market programs, and (c) social safety net and social service programs. Since 2003, the government has placed significant emphasis on increasing public spending on these programs. In July 2006, the government launched the Targeted Social Assistance (TSA) program, which provides monetary transfers to low-income families. TSA is now the main non-contributory safety net program and is the only means-tested program in the country based on both income and assets. As such, it plays an important role in helping families cope with income shocks, including the likely adverse impact of the current global financial crisis.

8.2 This chapter assesses the effectiveness of Azerbaijani social protection programs in general and the TSA in particular. It does this by seeking evidence on their coverage, adequacy, and targeting of the intended beneficiaries, and their ultimate impact on poverty. The TSA, because of its targeted nature, is amenable to objective assessment of its impact on poverty and vulnerability. The chapter attempts to provide a broad picture of the program and its coverage, targeting effectiveness, adequacy, and poverty impact using data from the 2008 Living Standards Measurement Study (LSMS) survey.[30] This is the first attempt to evaluate the program nationally; it thus establishes the baseline for future evaluations.[31] The current global financial crisis has increased the value added of

[30] The 2008 LSMS, conducted during January–April 2008, had an extensive module specifically on the TSA program. Data on expenditures on social insurance and other social transfers are, respectively, from administrative statistics of the State Social Protection Fund (SSPF) and the Ministry of Labor and Social Protection of the Population.

[31] To our knowledge, there has been no a national evaluation of the program. There was one study carried out by Economic Research Centre (ERC) based on a survey of TSA beneficiaries and non-beneficiaries in Mingechevir City during October–December 2007 (Oxfam 2008).

having adequate and effective social assistance programs and better understanding of their working, not only to ensure that limited resources are spent well and reach those who need them, but also to minimize the potential disincentives for active labor market participation and reduce future dependency on public transfers.

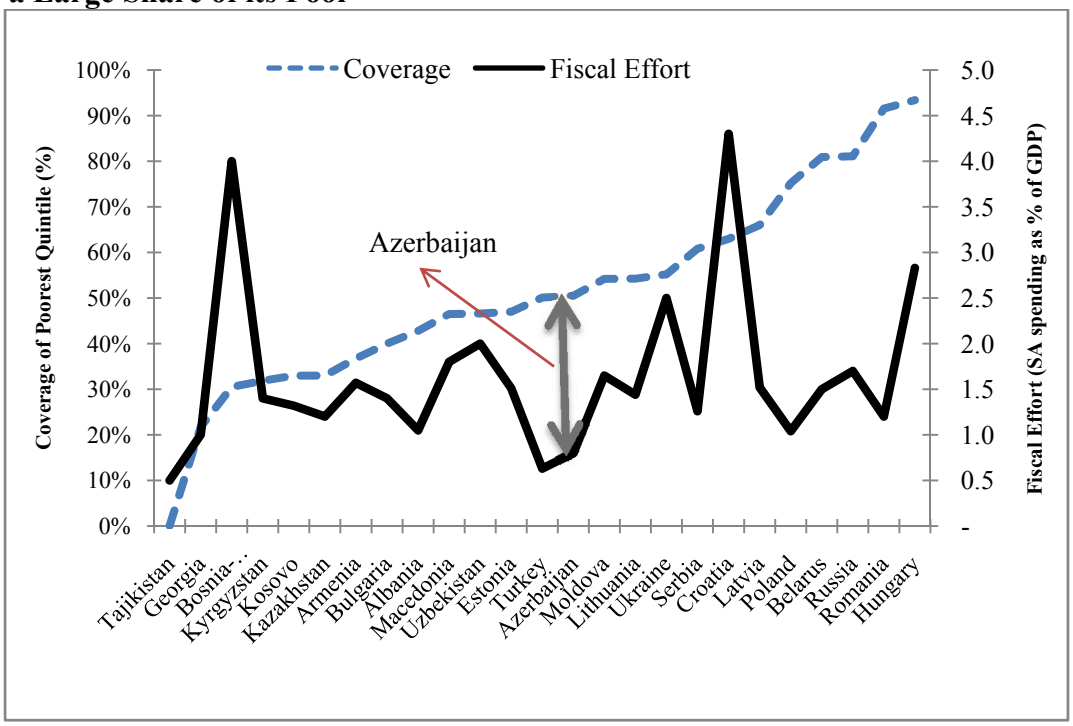
B. Social Protection Programs

8.3 ***In 2008, social transfers reached 63.2 percent of the population, either directly or indirectly, through the sharing of benefits within the family.*** Social transfers include both *contributory social-insurance-based transfers* such as old-age, disability, and survivors' pensions temporary sick leave compensation and unemployment assistance, and non-contributory social assistance transfers, including benefits to war veterans, targeted social assistance, assistance to children and adults with disabilities social pensions for those not covered by social insurance, and allowances for families with children. In 2008, Azerbaijan allocated an estimated 4.8 percent of gross domestic product (GDP)[32] to all social transfers. In the regional context, Azerbaijan's spending on social protection is similar to that of Georgia which, in 2008, spent 4.9 percent of GDP on such programs. Relative to the fiscal effort (expressed as a percent of GDP), Azerbaijan's social assistance programs perform remarkably well in terms of coverage of the poor compared to other similar programs in the ECA Region (Figure 8.1).

8.4 ***In terms of programs, administrative capacity, and poverty reduction performance (see discussion below), social transfers in Azerbaijan are well placed to play a significant role in mitigating the impact of the current global economic crisis.*** In this regard, two programs are particularly important: targeted social assistance and a basic pension. Targeted social assistance (TSA) is empirically found to perform well in reaching the very poor and poor, since 49 percent of its beneficiaries, receiving 51 percent of TSA resources, are from the bottom decile of the population. Most of the TSA beneficiaries (86 percent), receiving almost 90 percent of TSA resources, belong to the bottom 40 percent of the population. In other words, a very small fraction of TSA beneficiaries receiving about 10 percent of resources comes from the better-off population. TSA has a well functioning administration with fully automated business processes, covering much of the country, except for a few regions. It could easily be scaled-up if the global crisis becomes deeper and more protracted. The basic pension plays a role of a minimum income guarantee for the recipients of social insurance benefits. It constitutes almost 80 percent of the average pension, thus contributing critically to the observed moderately pro-poor (progressive) distribution of pensions and to their very important role in poverty reduction in Azerbaijan. Here, a key policy to mitigate the impact of the crisis would be not to allow the basic pension to slide down in real terms, thus protecting the incomes of the old, disabled, and those receiving a survivors' pension.

[32] 2008 GDP is estimated at AZN 35.5 billion.

Figure 8.1 Despite Relatively Low Fiscal Effort, Azerbaijan Manages to Cover a Large Share of its Poor



Source: MLSPP data for Azerbaijan; various World Bank Public Expenditure Reviews

8.5 ***Pensions are the largest social transfer in Azerbaijan.*** Seventy-five percent of public spending on social transfers is allocated to pensions, which are received by close to 1.3 million individuals. Of all individuals in Azerbaijan, 45.3 percent reported living in households where at least one member received a pension. Pensions in Azerbaijan are contributory and are delivered within the system of social insurance. Although not targeted at poor population, the coverage of the poor was significantly higher than the coverage of the non-poor: 63.4 and 37.8 percent, respectively. In January 2009, the average pension amounted to AZN 96 per month (about US$83),[33] a 52 percent increase in nominal terms—25 percent in real terms—relative to January 2008. Almost 80 percent of the average pension is made up of a basic pension (AZN 75 per month), which is a minimum income guarantee for all pension system beneficiaries.

8.6 ***Non-contributory social transfers reach 30.5 percent of the population in Azerbaijan, with the coverage of the poor much higher than that of the non-poor: 47.2 compared to 24.7 percent.*** They comprise merit-based benefits, such as those to war veterans, and social assistance benefits targeted at the poor and vulnerable population. The latter includes income support to very poor households/TSA, social pensions, allowances to children with disabilities, orphans, families with children, newborn

[33] This would result in an average replacement rate of about 30 percent. The indexation of pensions in Azerbaijan is done in an ad hoc fashion, so the replacement rate fluctuates considerably.

allowance, and others. The majority of social assistance benefits use categorical targeting; the only means-tested benefit is TSA. Overall, approximately 0.8 percent of GDP was spent on various non-contributory transfers in 2008. The benefits have been regularly increased over the years to at least compensate for inflation.

8.7 ***TSA is aimed at providing income support and consumption smoothing among the very poor households in Azerbaijan.*** TSA was launched in mid-2006, after almost two years of intense preparation, including developing a means-testing targeting mechanism, designing administrative procedures, passing a corresponding law, and approving a range of administrative acts, hiring and training of staff, refurbishing facilities, developing an automated management information system (MIS) to manage a household registry, designing and implementing an intense public information campaign, and screening more than 60,000 households that had applied for the assistance at the launch of the program. TSA replaced several child-related benefits that were targeted using an income-based method and whose targeting performance was empirically found deficient. All households, including households of internally displaced persons (IDPs), and households of legal immigrants, are entitled to apply for TSA. They qualify for the benefit if their estimated per capita family income from all sources, including production for own consumption, is below a predetermined threshold (currently AZN 60 per month—about 20 percent of the average wage). The benefit is calculated as a difference between the estimated per capita family income and the threshold. Since its inception, TSA has been expanded significantly in terms of both coverage and the benefit amount. The coverage was more than doubled in the second half of 2008, so that at the beginning of 2009, 165,461 households with almost 760,000 members (9.2 percent of the population) received TSA, and the average monthly TSA amount per recipient household was AZN 100.3. In 2008, the budget allocated to TSA was AZN 127 million, or 0.36 percent of GDP. The 2009 budget has increased to AZN 210 million.

8.8 ***TSA is expected to gradually replace some of the categorical benefits.*** TSA replaced three types of benefits to families with children, with an expectation that some other social assistance benefits would be gradually consolidated into TSA. This has proven to be quite challenging because of complex political economy considerations. While the current global environment does not certainly provide the best of times to pursue this consolidation, it should remain on the government's agenda, particularly taking into account the good targeting performance exhibited by TSA and potential efficiency gains.

8.9 This chapter is divided into five sections. In addition to introductory section A and section B, which provided an overview of the performance of the social transfers and a short description of the key programs, section C provides details about coverage of social transfer programs, section D provides information about the targeting of social transfers, section E discusses the poverty impact of transfers, and section F provides conclusions and recommendations. Annex A discusses the 2008 LSMS and Annex B describes the methodology used to measure and analyze poverty in Azerbaijan.

C. Coverage: How Many People Receive Social Protection Benefits?

8.10 ***Social transfers reach a majority of the population in Azerbaijan. Almost two-thirds of the population (63.2 percent) report living in households receiving at least one social transfer.*** Pensions reach 45.3 percent while non-contributory transfers reach 30.5 percent. At the time of fielding of the 2008 LSMS (that is, January–April 2008), about 16.6 percent of the population reported living in a household receiving at least one disability-related benefit. Only 4.1 percent of the population reported receiving TSA. Table 8.1 presents estimated coverage of the population by various types of social transfers.

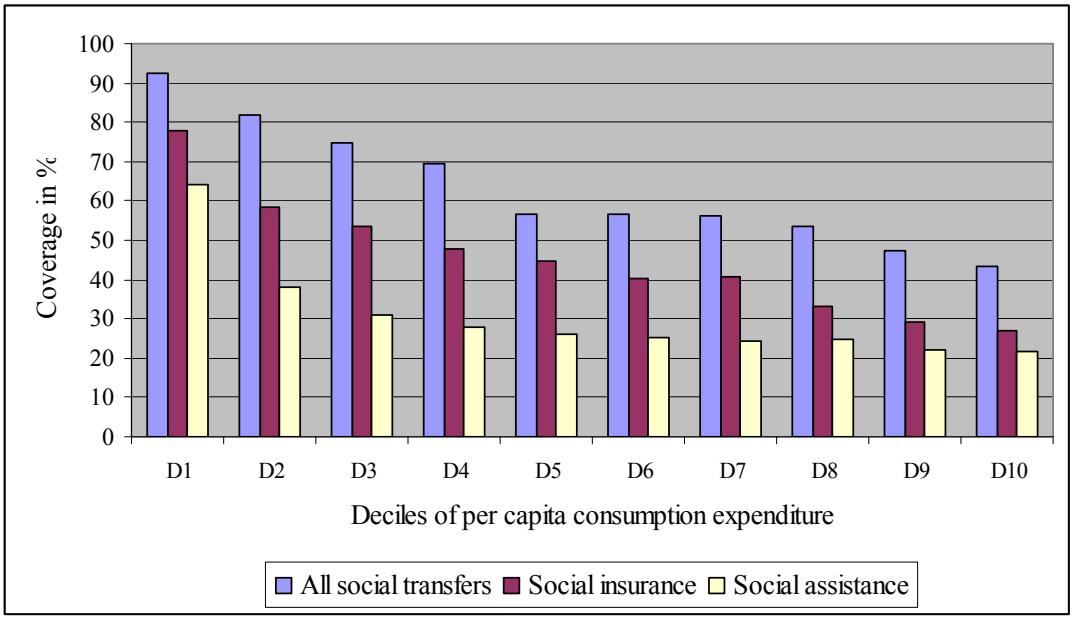
Table 8.1 Coverage of the Population by Various Social Transfers (Percent, total population)

Program	*Overall Coverage (%)*	*Coverage of Poor Population (%)*	*Coverage of Non-poor Population (%)*
All Social Transfers:	**63.2**	**81.2**	**54.2**
Social insurance	45.3	63.6	37.8
Pensions	45.3	63.4	37.8
Unemployment benefit	0.4	1.4	0.2
All social assistance:	30.5	47.2	24.7
Disability related	16.6	47.2	24.7
Child related	2.3	4.2	1.7
TSA	4.1	12.4	1.7
Other	14.6	23.6	11.9

Source: 2008 LSMS.

8.11 ***A larger share of the poorer population is covered by social protection programs than the richer population.*** Looking across the population deciles ranked by per capita consumption expenditure, it is observed that the lower the decile, the higher the coverage. This applies to all programs. The poorest 10 percent of the population report the highest coverage by social transfers (92.6 percent), followed by the second decile, whose coverage is estimated at 81.8 percent (Figure 8.2). In contrast, the coverage of the top decile is estimated at 43.5 percent. Given that the poverty rate almost overlaps with the two bottom deciles, 81.2 percent of the poor report living in a household receiving at least one type of social transfer. In the case of the non-poor, the coverage is 54.2 percent.

Figure 8.2 Coverage of the Population by Social Transfers by Consumption Decile

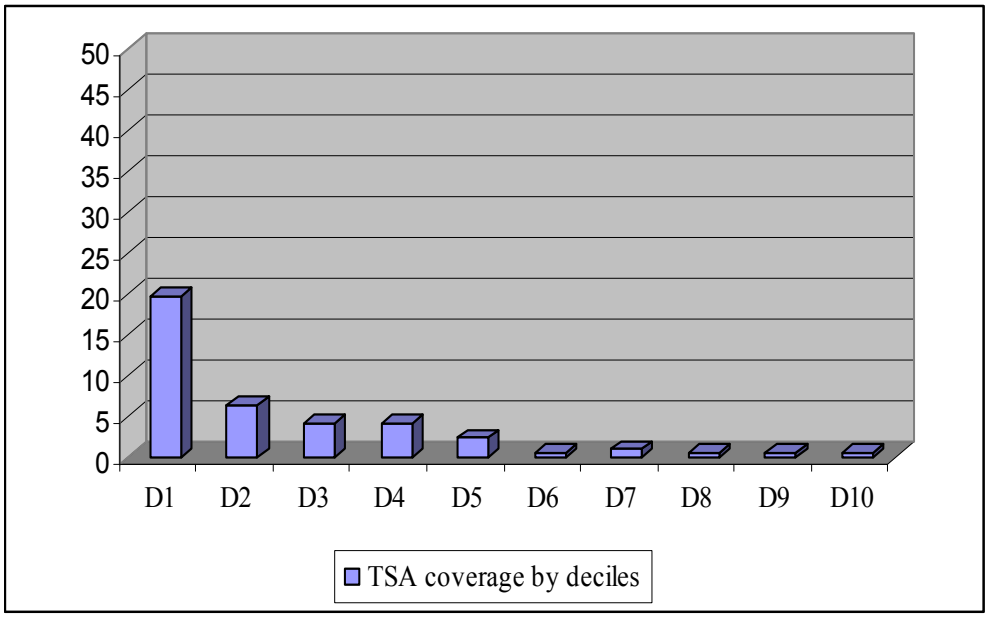


Source: 2008 LSMS.

8.12 ***TSA coverage is limited.*** Relative to pensions, TSA covers a much smaller number of individuals—4.1 percent[34] compared to 45.3 percent in the case of pensions. Looking across consumption deciles, TSA covers 20 percent of the bottom decile and 6.4 percent of the second decile (Figure 8.3). The program is, however, very well targeted, since 69 percent of its recipients are pre-TSA consumption poor. In other words, the error of inclusion is 31 percent. Moreover, as already pointed out, almost half of the TSA beneficiaries were from the bottom consumption decile and as many as 86 percent were from the bottom 40 percent of the population. Thus, only 14 percent of beneficiaries are estimated to belong to better-off households.

[34] The LSMS is based on the sample of families who received TSA benefits at inception in 2006. Since then, the number of TSA benefit recipients has considerably increased and more than doubled to nearly 10 percent of all families in Azerbaijan.

Figure 8.3 TSA Coverage by Consumption Decile



Source: 2008 LSMS

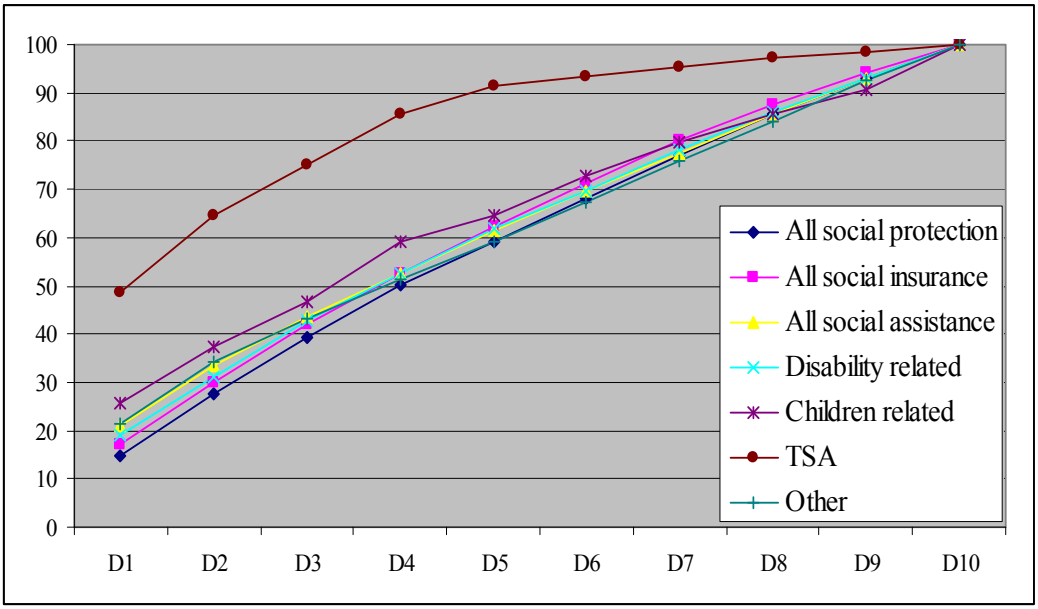
D. Targeting Accuracy: What Share of the Benefits Reach the Poor?

8.13 ***Across all social transfers, 23.0 percent of program benefits are received by the bottom 10 percent of the population, while 7.3 percent of transfers are received by the top 10 percent of the population.*** For pensions, respective percentages are 21.5 and 10.7; for unemployment benefits they are 60.8 and 0.0, for all social assistance they are 33.0 and 7.6, and for TSA they are 50.9 and 0.8 percent. Overall, 35.2 percent of all social transfers accrue to the bottom 20 percent of the population. This percentage reaches 55 percent among the bottom 40 percent of the population.

8.14 ***In terms of targeting accuracy, TSA outperforms all social protection programs in Azerbaijan.*** TSA distribution is strongly pro-poor and performs much better than any other social transfer in Azerbaijan (Figure 8.4). This is evident from the cumulative distribution of beneficiaries of the key social transfers that show TSA dominates all other social transfers. Two-thirds of TSA resources accrue to the bottom 20 percent of the population, resulting in a ratio between the population quintile and its share in the distribution of the TSA resources of almost 3.3, which is one of the highest among similar programs. This ratio is even higher for the bottom 10 percent of the population, at 5.0. The cumulative TSA distribution share reaches 85 percent for the bottom 40 percent of the population, indicating that the so called "leakage" of the program resources to better-off population is only 15 percent. Consequently, the TSA concentration index is negative and fairly high (-0.6328), indicating strong progressivity.

8.15 ***Distribution of other social transfers is less pro-poor, with child-related benefits and other social assistance programs (including social pensions) performing better than other benefits.*** Pensions are only moderately pro-poor, with negative, but lowest concentration index relative to other transfers (-0.1720). The bottom pre-social assistance quintile gets 42 percent of resources allocated to child-related benefits. As far as distribution of pensions is concerned, respective bottom quintile shares are 32 and 52 percent. As already explained, the pro-poor distribution of pensions is mostly driven by the basic pension.

Figure 8.4 Cumulative Distribution of Beneficiaries Show TSA's Dominance



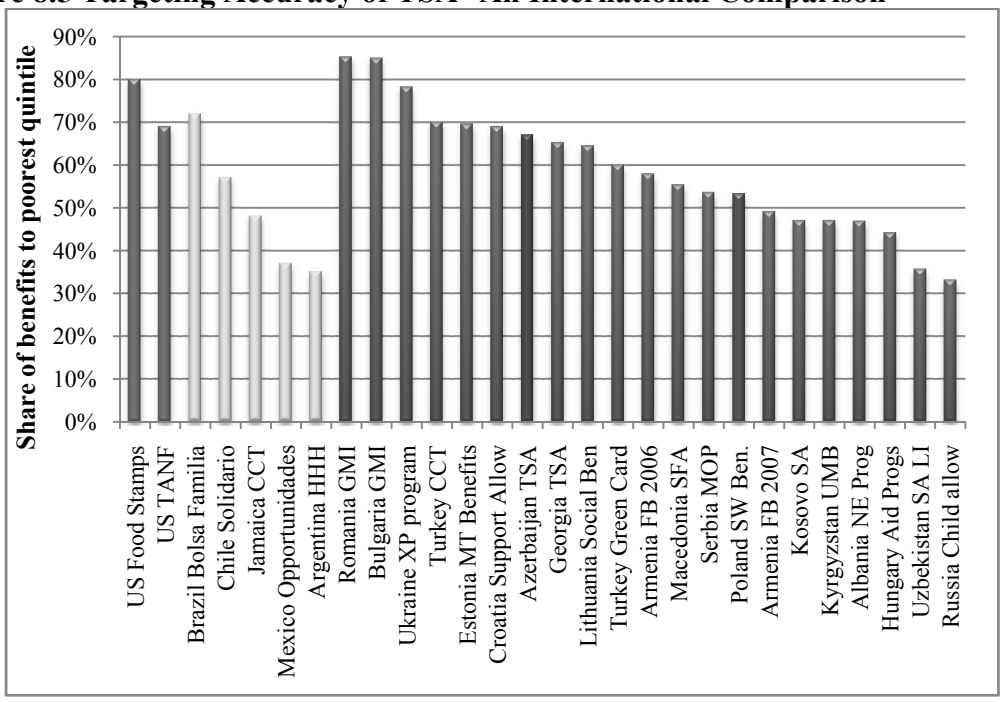
Source: 2008 LSMS.

8.16 ***Azerbaijan's TSA, a means-test program, performs well compared to similar programs in both developed and developing countries*** (Figure 8.5). This is so despite widespread poor performance by means-tested programs in many countries. In most circumstances, the proxy means-tested programs are preferred over means-tested programs for targeting the poor. Means tests are criticized for many reasons, not least for generating high leakage due to underreported income and other hard-to-verify income such as income from agricultural production and remittances.

8.17 ***The pro-poor distribution of social transfers makes them an important source of livelihood for the poor.*** Social transfers are an important source of income for the population in Azerbaijan, and in particular the poor and vulnerable. As indicated by data presented in Table 8.2, they constitute 45 percent of the income of the bottom 20 percent of the population. This share remains relatively high even in the case of the better-off, constituting one-fourth of the reported income in the top consumption quintile. TSA comprises more than half of the income of the poorest 20 percent, thus highlighting the

importance of TSA for the poorest segments of society. In terms of consumption, TSA benefits comprise about 55 percent of the consumption expenditures of the poorest 10 percent of the TSA beneficiaries and about 50 percent of the consumption expenditures of the bottom 20 percent of the TSA beneficiaries.

Figure 8.5 Targeting Accuracy of TSA--An International Comparison



Source: LSMS 2008 for Azerbaijan; ECA Household Survey Database

Table 8.2 Social Transfers as a Share of Household Income

	Income Quintiles				
Sources of Income (percent)	***Q1 = Poorest 20%***	***Q2***	***Q3***	***Q4***	***Q5 = Richest 20%***
Labor Income	48.9	67.2	77.4	84.8	90.3
Wage income	27.3	44.7	50.2	53.9	45.5
Agriculture income	13.3	15.9	18.1	21.4	35.9
Non-farm self-employment	0.4	0.6	1.5	1.6	3.8
Other labor income	7.9	6.0	7.7	7.8	5.0
Remittances	7.4	4.6	2.6	2.6	2.0
Social Transfer	42.9	27.8	19.6	12.4	7.1
Disability benefit	9.4	4.6	3.3	2.2	1.2
Pension	23.0	16.5	12.3	8.0	5.0
Child allowance	0.6	1.0	0.4	0.2	0.1
Unemployment benefit	0.2	0.2	0.0	0.0	0.0
Other social transfers	7.5	3.5	2.3	1.4	0.7
TSA (beneficiaries only)	***49.6***	***28.2***	***28.2***	***18.3***	***8.4***

Source: 2008 LSMS.

E. Poverty Impact of Social Transfers

8.18 ***Without social transfers, the extent of poverty in Azerbaijan would be much higher.*** Without social transfers, the overall poverty incidence would increase by more than 11 percentage points: from 10.8 to 21.0 percent (an increase of over 100 percent); the poverty gap would more than double—from 2.4 to 7.2 percent—and the severity of poverty would more than quintuple—from 0.7 to 3.8. The poverty reduction impact of social transfers indicates effective use of resources.

8.19 ***Pensions account for the lion's share of poverty reduction.*** The payments of pensions reduce poverty by about 6.8 percentage points, whereas social assistance programs account for about a 4.6–percentage-point reduction. The impact of TSA, however, would have been higher had the program covered more families and had it been allocated more resources at inception. Social assistance is more effective than pensions in reducing poverty.

8.20 ***Finally, inequality would be higher in the absence of social transfers.*** The Gini coefficient of the per capita consumption increases from 31.0 percent to 34.65 percent (a 15 percent increase) when social transfers are removed from household consumption. Without the pensions, it would have increased to 33.5, while without the social assistance, it would have been 32.8.

F. Conclusions and Recommendations

8.21 ***Azerbaijan's system of social transfers is extremely important for poverty reduction.*** Without social transfers, the overall poverty incidence would increase by almost 60 percent and the poverty would become very deep and severe.

8.22 ***Good poverty reduction performance indicates effective use of the modest resources Azerbaijan spends on social transfers: 4.8 percent of GDP in 2008.*** For each percentage of GDP allocated to social transfers, the poverty incidence falls by 2.5 percentage points, the poverty gap decreases by 1.3 points, and poverty severity declines by 0.9 points.

8.23 ***As the largest program (4.0 percent of GDP in 2008, or almost 85 percent of all spending on social transfers), pensions deliver most of the poverty reduction performance of social transfers.*** TSA contributes to poverty reduction as well, but because of the small size of the program (0.36 percent of GDP in 2008—only 7.5 percent of total spending on social transfers—covering only 12.4 percent of the poor), the impact is much smaller. However, relative to its budget, TSA performs better than pensions in poverty reduction; for each point of GDP spent on TSA, poverty incidence declines by 2.8 points compared to 2.0 points for pensions.

8.24 ***While Azerbaijan's TSA program performs well relative to similar programs, its coverage is limited, even if one accounts for the recent increase in the number of beneficiaries.*** Seventy percent of TSA beneficiaries are pre-TSA poor, indicating a reasonable error of inclusion of 30 percent. Almost two-thirds of all resources allocated to TSA are received by the bottom 20 percent of the population, ranked by their pre-TSA consumption. Yet, the program covers only 10 percent of its target group, i.e., the extreme poor population. This low coverage is to a large extent driven by the modest resources allocated to TSA. Even if one takes into account that TSA coverage more than doubled since spring 2008, assuming similar targeting performance, coverage of the very poor population might have reached at best 50 percent, while coverage of the overall poor might have reached about one-third.

8.25 ***The system of social transfers in Azerbaijan is well placed to play a significant role in mitigating the impact of the financial crisis.*** It features a variety of programs, has good administrative capacity, and it has delivered on its mandate to reduce poverty. In this regard, two programs are particularly important: targeted social assistance (TSA) and a basic pension. TSA has been empirically found to perform well in reaching the very poor and poor—49 percent of its beneficiaries, receiving 51 percent of TSA resources are from the bottom decile of the population. Most TSA beneficiaries (86 percent), receiving almost 90 percent of TSA resources, belong to the bottom 40 percent of the population. TSA has a well-functioning administration with fully automated business processes and covers the entire country. The basic pension provides a minimum income guarantee for the recipients of social insurance benefits. It constitutes almost 80 percent of the average pension, thus accounting for most of the observed moderately pro-poor (progressive) distribution of pensions and for their very important role in poverty reduction in Azerbaijan. Here, a key policy to mitigate the impact of the crisis would be not to allow the basic pension to decrease in real terms, thus protecting the incomes of the old, disabled, and those receiving a survivors' pension.

8.26 ***While the global financial crisis might push more people into poverty, more people might also be pushed deeper into poverty, joining the ranks of the extreme poor population.*** Azerbaijan should, therefore, focus its efforts on helping the extreme poor population. This would require a gradual increase in resources allocated to social assistance, and in particular to TSA. Some of the small social assistance programs could also be consolidated into TSA.

8.27 ***Overall, given the importance of social transfers for the well-being of Azerbaijan's population, it is important to keep resources allocated to finance them at least at constant amounts in real terms*** (eventual consolidation of programs should not have a negative impact on resources). Preferably, their share of GDP would remain at least constant or even increase, so that less-fortunate individuals are not only protected from the impact of the crisis, but are also enjoying some of the benefits of strong economic performance Azerbaijan has recorded over the last decade.

ANNEX A: DESCRIPTION OF THE 2001 HBS AND 2008 LSMS

A.1. The 2001 HBS

1. The 2001 HBS was a new household budget survey implemented starting January 2001 and covered all non-institutional population. The sample (8000 households achieved through full quarterly rotation: 2,000 new households participate in the survey each quarter) used three-stage probability sampling with preliminary stratification by urban and rural areas and by economic region.

2. The survey consists of a set of four questionnaires complemented by a diary. Interviewers visit households 3-4 times per quarter. An initial (introductory) interview is conducted at the beginning of the quarter, and then households are asked to keep a two-week expenditure and consumption diary. At the end of the quarter, the households are interviewed on quarterly income and expenditures on large items. The questionnaire gathers information needed to generate monetary measures of poverty. It also collects information on key assets and other living standards indicators including: employment, housing, land, basic services, health, education, financial transactions, farm production, and anthropometrics.

3. The strength of the Azerbaijan Household Budget Survey (HBS) is in measuring monthly current consumption, i.e. household purchases and self-consumption. Current household consumption refers to the value of the food, non-food and services consumed by the members of the household in the respective month. The Azerbaijan HBS does not allow determining with sufficient degree of accuracy the households annual consumption. The Azerbaijan HBS diverges from the Living Standard Measurement Survey (LSMS) practice in recording monthly consumption, and not annual consumption, making distributional comparisons less robust. The survey recall period is not sufficiently flexible to capture household purchases of infrequent purchases or the annual consumption of seasonal commodities. For 2001 HBS, the SSC chose the recall period and the dairy on pragmatic grounds: to implement a survey to answer the main question of interest and to be financially sustainable. Using a diary seemed to be a good choice that minimized recall error. To minimize sample attrition, the diary-keeping period had to be set to "supportable" levels (two weeks; three months for large items).

4. The survey collects labor market status information for the adult-age population, as well as salaries and wage data. But the reliability of the wage data differs between formal and informal sector. Formal sector salaries are well captured in the survey. In contrast, the remuneration or profit earned by self-employed cannot be estimated because of poor revenues and costs data, and because of their seasonality. The 2001 HBS collects detailed information on the receipts of social transfers, in cash or in kind, or remittances, making it ideal for benefit-incidence analyses. The survey records the incidence and amount of social transfers received by each member of the households (cash benefits) or by the family (privileges), as well as the quantity of major in-kind benefits, such as health services or education.

A.2. The 2008 LSMS (The TSA Monitoring Survey)

5. After almost two years of preparation, Azerbaijan introduced a targeted social assistance (TSA) program in 2006. Eligibility for TSA benefits is based on a means-testing mechanism. At the beginning, approximately 60,000 families were receiving assistance. By 2008, the number of beneficiary families increased to about 170,000 and expected to reach about 200,000 by end of 2009. The Government of Azerbaijan (GOA) through its Ministry of Labor and Social Protection of the Population (MLSPP) has made monitoring and evaluation an integral part of the TSA program. The GOA intends to use rigorous monitoring and evaluation of the program as a managing-by-results tool by testing features of the program to modify design and improve effectiveness over time. To achieve this, the MLSPP, in collaboration with the World Bank, implemented a nationally representative Living Standards Measurement Study (LSMS) during the first quarter of 2008. The 2008 LSMS, based on a sample over 6,600 households, provides an opportunity to evaluate the TSA. The survey was designed to allow evaluation of several features of the TSA: (a) coverage (a fraction of the target population—the very poor—receiving the TSA), (b) targeting performance, (c) the implementation mechanism and how well it works, and (d) the impact of the TSA on household welfare. The LSMS included an oversample of the program beneficiaries and non-beneficiaries.

6. The 2008 LSMS survey also formed the main source of data for the current report. Azerbaijan has only one main source of data, the yearly Household Budget Survey (HBS), for poverty analysis in the country. The 2008 LSMS is intended to complement the existing HBS. The LSMS differs from the HBS in many aspects, making robust comparison of the results based on the two sources practically impossible. First, the HBS is implemented throughout the year, while the LSMS was field only during the first quarter of 2008. The seasonal differences in consumption patterns, prices, and income-generation opportunities can be significant between the two sources.

7. ***Questionnaire.*** The joint team of the MLSPP and World Bank prepared the survey instrument for the LSMS. The questionnaire contained a number of modules, including household demographics, income, expenditures, consumption, labor markets, assets, housing conditions, health, education, social protection, self-evaluation of household conditions, coping strategies, and other modules typical of a standard LSMS instrument. A separate module on the TSA program was included with questions elaborating its design features, implementation arrangements, targeting mechanisms, coverage, benefits size, the application process, the awareness campaign, and other aspects that would allow rigorous monitoring and evaluation of the program.

8. ***Sample Selection.*** A sampling frame was developed based on the 1999 population census for the general sample. After the primary sampling units (PSUs) were selected, the listing of households in the selected PSUs was conducted before the final selection of the Secondary Sampling Units (SSUs). The general sample was representative for the following domains of inference: (a) urban and rural areas, (b) the economic regions of Azerbaijan plus Baku, and (c) urban and rural areas within the economic zones. A sample

of 5,500 households was randomly selected nationally. An additional 500 households were selected from the list of internally displaced persons (IDPs) obtained from the Ministry of Refugee Affairs.

9. ***TSA Sample.*** In order to have representative samples of the TSA beneficiary households and those households that applied but were deemed ineligible for TSA benefits, oversampling of these two groups of households was made from the list of TSA applicants and beneficiaries provided by the MLSPP. The overall sample, including the TSA beneficiaries and ineligible households, was about 1,000 households, with 700 coming from beneficiary families and 300 from non-beneficiary families. The overall sample of the 2008 LSMS was 7,000 households. The effective sample was about 6,600 households since the survey could not be implemented in Nakhchivan economic region.

ANNEX B: DATA COMPARABILITY

1. As described in Annex A above, the 2001 HBS and 2008 LSMS are not directly comparable for several reasons. First, the expenditures on food and small nonfood items were tracked using a daily diary for 2001 survey, as opposed to a 30 day recall period used in the 2008 LSMS. Second, for major nonfood terms and household durables, a three month recall period was used in the 2001 HBS, as opposed to a 12 month recall period for the 2008 LSMS. Moreover, the 2001 HBS was conducted throughout the year on a quarterly rotation based on a nationally representative subsample of 2000 households in each quarter, leading to overall sample of 8000 households. On the other hand, the 2008 LSMS was conducted during the first quarter of 2008 based on a nationally representative sample of 5600 households from mainland Azerbaijan excluding the Nakchivan autonomous region. These differences in questionnaire and survey design can lead to quite different poverty estimates (Lanjouw and Lanjouw, 2001). Moreover, consumption price deflators are often calculated using urban consumption baskets only, which can be quite different from rural consumption patterns, rendering them inappropriate for tracking poverty trends between 2001 and 2008.

2. There are various poverty prediction methods (Ravallion, 1996; Sahn and Stifel, 2000; Kijima and Lanjouw, 2003; Azzari et al., 2006; Luoto, 2006; Stifel and Christiaensen, 2007) used to address lack of data comparability over time. The methods differ in the data sources and prediction techniques used, as well as their underlying assumptions (for a good survey of the different methods, see Christiaensen, Lanjouw, Luoto and Stifel, 2008).

3. For our purposes, we use an adapted version of the small area estimation (SAE) methodology developed by Elbers, Lanjouw and Lanjouw (2003) to impute a definition of consumption from one household survey into the other. Kijima and Lanjouw (2003) and Stifel and Christiaensen (2007) have used this technique in India and Kenya, respectively. The SAE technique is considered superior to the more standard consumption prediction techniques in the literature (see for example Azzarri et al., 2006), as it provides consistent estimates of both the mean and the variance of consumption, and thus also a consistent estimate of the change in poverty over time. The technique has been empirically verified using repeated nationally representative household surveys that are comparable over time from three widely divergent settings: Vietnam, Russia, and Kenya (see Christiaensen, Lanjouw, Luoto and Stifel, 2008).

4. The SAE methodology is used to predict per capita consumption at the level of the household in 2008 using the available information on these households in 2008 (e.g. assets and housing conditions) as well as the parameter estimates (including those concerning the distribution of the error term) derived from a model of consumption estimated from the 2001 data. By restricting the explanatory variables to those that are comparable across the two surveys, the method ensures an identical definition of consumption (welfare) across the two surveys, circumventing the need for price deflators,

but assuming that the relationship between consumption and its correlates remains stable over time.

5. More formally[35], let H represent the poverty headcount, based on the distribution of household-level per capita consumption, y_h. Using data at t=2001, model the log of consumption y_{ht} for household *h* at t as:

(1) $\ln y_{ht} = \mathbf{x}_{ht}\beta + \mu_{ht}$,

where $\mathbf{x}_{ht}\beta$ is a vector of k parameters and μ_{ht} is a disturbance term that satisfies E[μ_{ht} $|x_{ht}] = 0$. The vector of consistent estimators $\hat{\beta}$ from equation (1) obtained using the survey data at t is then used to predict consumption levels at t+1=2008, generating a distribution of predicted values for $\hat{y}_{ht+1}$.

6. The conditional distribution of the national and subnational poverty headcounts, H, at t+1 are obtained based on the generated distribution of predicted values for $\hat{y}_{ht+1}$. A separate consumption model (1) is estimated for each subnational level (r). In particular, because the household-level disturbances at t+1 are unknown, the expected value of H is estimated using x_{ht+1} and the model of consumption in (1) as:

(2) $\lambda_r^s = E[H \mid X_r^s, \xi_r]$,

where ξ_r is the vector of model parameters, including those that describe the distribution of the disturbances, and the superscript 's' indicates that the expectation is conditional on the sample of households at t+1 from region *r* rather than a census of households (Kijima and Lanjouw 2003). Since the vector ξ_r is unknown, we replace them with the consistent estimators $\hat{\xi}_r$ estimated from the survey data at t to construct the estimator for λ_r^s and $\hat{\lambda}_r^s$. One hundred simulated draws are performed to derive the estimator $\hat{\lambda}_r^s$ in each model. The predicted log per capita consumption variable, along with the 2001 poverty line of 120,000 Azerbaijan old mantas per capita per month, is then used to produce estimates of poverty.

[35] For a more detailed discussion of the application of the SAE technique to predict poverty over time, see Kijima and Lanjouw (2003) and Stifel and Christiaensen (2007).

ANNEX C: METHODOLOGY OF POVERTY MEASUREMENT

1. This annex presents a brief conceptualization of poverty and the main elements of the methodology used to measure and analyze poverty in Azerbaijan.

The Concept of Poverty

2. A key dimension of poverty is consumption poverty—the extent to which actual levels of private consumption of households or individuals fall below a "poverty line" that society believes represents a minimum acceptable standard of living. However, the concept of poverty is multidimensional and encompasses many elements. To name but a few: limited access to adequate food, clothing, shelter, clean water and sanitation, healthcare and education, consumer and productive assets, powerlessness and social exclusion, and early mortality. Poverty measurement and analysis asks whether a household or an individual possesses enough resources or abilities to meet their basic human needs. Although the report is mainly concerned with consumption poverty and the main factors associated with it, it also captures other non-monetary dimensions of poverty that are closely linked with consumption poverty such as housing and living conditions, access to health, education and employment, and access to community infrastructure and basic services.

3. Two key ingredients are required for measuring poverty. First, a well-being indicator needs to be decided upon. Second, a "poverty line" has to be designated to mark the threshold below which a household or individual will be classified as "poor," lacking what society believes represents a minimum acceptable standard of living.

4. With regard to the well-being indicator, the first ingredient, both monetary and non-monetary measures of welfare, can be used in gauging and analyzing poverty. The two commonly used monetary measures of welfare are income and consumption expenditures. Once a choice is made on the first ingredient, deciding on the poverty line, the second ingredient entails choosing a cutoff point separating poor from non-poor. Poverty lines can be monetary (for example, a certain level of consumption or income) or non-monetary (for example, a certain level of literacy or physical health). There are two ways of selecting a poverty line: relative and absolute.

Construction of Welfare Aggregate

5. The report uses consumption to compare welfare across households, space, and time, because consumption reflects better than income a household's actual standard of living and its ability to meet basic needs. While poverty analysis could be based on income or consumption expenditures, the latter is preferred for Azerbaijan for many reasons. Empirical evidence also shows that responses to consumption questions capture

actual household living standards better than responses on income. Consumption measure suffers less from incomplete measurement, underreporting, and seasonality.

6. To be a good welfare predictor, the consumption aggregate must be as comprehensive as possible. The 2008 LSMS survey collected the necessary information to calculate all the main components of the aggregate: food consumption (both purchased and consumed from own production), non-food expenses (for example, clothing, household articles), utilities (for example, gas, telephone, and electricity), education, health, durables, and housing. Housing expenditures could not be included: most households own their own homes and their rental values could not be imputed.

7. Once the necessary data are collected, the construction of a consumption-based welfare measure typically involves aggregation of information collected from households or individuals on different types of consumption items in the survey (for example, food, user values of durable goods, health and educational expenditures, housing), In the aggregation process, several adjustments are made, including: adjustment for differences in needs among households of different size and composition, adjustments for the age of household members and for economies of scale, and adjustments for differences in prices across regions and at different points in time. Details on the composition of the consumption aggregate and how they are constructed are provided next.

Food Consumption

8. Food consumption data were collected over a 30-day period. The food module contained questions about average monthly consumption, purchased items, non-purchased items (own-produced and received as gift), food eaten outside the home, and a checklist and eventual inclusion of items purchased before the reference period. These questions were for each of more than 170 different food items. The average monthly consumption was used to check the consistency of data against purchases and own-production consumption responses. In a few cases, abnormal expenses were detected after checking food subgroups that accounted for suspiciously high budget shares and also when the household declared excessively high per capita consumption of certain food items.

9. The unit values and quantity of each purchased food item and each food item produced for own-consumption by the households or received as a gift (information readily available in the LSMS data) were used in construction of the food component of the consumption aggregate. The value of non-purchased food was based on the unit value using household's own estimation and the quantity consumed or, in a few cases, was imputed by interviewers at the prevalent local prices if a household had trouble doing so. Food items given as gifts to other households were excluded to avoid double counting, because they would be included in the recipient's consumption. Expenditures on alcoholic drinks and tobacco were classified as separate categories, as were expenditures on eating outside/restaurants.

Non-food Expenses

10. In a separate module of the questionnaire (module H), the household was asked to recall its expenditures on a number of non-food expenses such as clothing, household cleaning supplies, tobacco, household articles, entertainment, and services. Since these expenses generally take place at different intervals, households were asked to recall their expenditure on these items using two different reference periods, the previous month and 12 months. When included in the consumption aggregate, all these expenses were adjusted for expression in monthly terms.

Education

11. Expenditure for education includes all education-related expenses from preschool to higher education: school fees, uniforms, textbooks, meals and lodging, transportation, gifts to teachers and services to school, private tutoring, and other educational expenses. Educational expenses over an entire academic year were recorded and divided by 12 to get monthly expenses.

Health

12. The questionnaire has an extensive health module (module 6), tracking monthly and yearly expenditures for medicine, lab work, hospitalization charges, gifts to medical personnel, transportation, and other health-related costs. Health expenses in reactions to a shock, for which extraordinary means may be used, are excluded.

Utilities

13. Information on utility expenses was collected as part of the housing conditions (module B) and in the non-food module (module H). It includes electricity, gas, telephone (landline, mobile, and public phones), water, fuels, and other less commonly used utilities. The value reported by the household was used. The questionnaire asked for the typical monthly expenditure during winter. The average monthly expenditure was calculated by taking the mean of the survey month and a typical winter month.

Durable Goods

14. Purchases of durable items were not directly included in the consumption aggregate but can be estimated for each category in terms of the monetary benefit obtained by the household from the use of the item over time. The survey collected information on the ownership of a number of durable goods, the age of the items, and their current value. Although each item was not a homogeneous category, these data were used to estimate the relationship between an item's value and its age. The use value was estimated for durable goods with different life spans and depreciation rates.

Housing

15. By definition, each household lives in a dwelling, and its welfare is influenced by the home's characteristics and comforts. However, expressing this benefit consistently in monetary terms proved particularly difficult. The benefit a household derives from living in a certain dwelling is usually estimated from the dwelling's rental value. However, in Azerbaijan, the percentage of households that rent their residence is minimal (below 10 percent), and an actual rental market does not exist. Since including values only for households that reported a rental value would distort the consumption aggregate, housing expenses were excluded from the analysis.

Correcting for Price Differences

16. After aggregation of the consumption components, adjustment for regional price differences was made. Nominal expenditures are affected by substantial price differences between urban and rural areas and between different geographic regions. For example, AZN 1 in Baku will be able to purchase a different bundle of goods and services than in the countryside. To ensure comparability across space and time, it is important to account for price differences in urban and rural areas and for regional price variations. Since the most important item in the consumption bundle of the poor is food, we use regional food price indexes to account for food price variability. Because regional price indexes do not exist (monthly price indexes are calculated for all of Azerbaijan and are based only on prices of some cities), this adjustment was undertaken using information collected in the household survey (using the budget share collected in the survey and the implicit prices or unit values of food items). A primary sampling unit index was preferred to a household Paasche index to avoid the effect of outliers in some households and exceptional cases of households that spend most of their food budget eating outside the home. Average budget shares for each primary sampling unit were used as weights for the ratio of median prices paid by households in each primary sampling unit, and the median national prices. Median prices were preferred to average prices to avoid outlier effects. Since budget shares are already bound in values between 0 and 1, they were averaged and weighted by household size. Median national prices, calculated applying household weights, were also computed.

17. The report used aggregate consumption expenditures constructed using the framework described above for 2008 LSMS to compare welfare across households and space. To ensure comparability across time, each component of current consumption was adjusted using national and monthly Consumer Price Indexes in 2008 prices. Moreover, regional variations in prices of goods and services (that is, cost of living) were accounted for to facilitate welfare comparisons across geographic regions. Because food is the most important item in the consumption bundle of the poor, regional food price indexes were used, constructed from the unit-value information collected in the survey to account for food price variability.

Estimation of Poverty Lines

18. Analytic work on the poverty profile involves defining a suitable poverty line that echoes an absolute minimum of consumption needed to meet basic needs. Multiple poverty lines can be used to distinguish not only different levels of poverty but also different aspects of poverty. For each type of welfare chosen, there are two main ways of setting poverty lines—relative and absolute. *Relative poverty lines* are defined, as the name implies, in relation to a country's overall distribution of the welfare measure (for example, consumption).[36] *Absolute poverty lines* are anchored in some absolute standard of what households or individuals should be able to count on to meet their basic needs. For monetary measures, these absolute poverty lines are often based on estimates of the cost of basic food needs, that is, the cost of a nutritional basket considered minimal for the health of a typical family, to which a provision is added for basic non-food needs. Accordingly, in this report the estimated set of poverty lines guarantees a minimum nutritional intake of 2,267 kilocalories per capita per day (recommended by United Nations Food and Agriculture Organization), with allowances for non-food needs.

19. The absolute concept of poverty is consistent with the literature in which poverty is seen as the inability to meet basic material needs (Ravallion 1994). Fixed poverty lines, as described below, are therefore used instead of relative poverty lines to measure poverty over time. Unlike the relative poverty lines, these lines are grounded in the consumption behavior of the poorest two deciles of Azerbaijan's population and allow monitoring of changes in poverty over time.

20. As with most poverty assessments, the cost of basic needs (CBN) method was used to determine two absolute poverty lines: extreme poverty and total poverty. Following the CBN framework, lower and upper poverty lines were constructed using an observed consumption basket of the poor, based on the 2008 LSMS. The absolute poverty lines, derived on the basis of 2008 LSMS, were adjusted for inflation to allow comparisons over time. The two lines separate, respectively, the very poor and overall poor from the rest of the population. Each poverty line includes a food component (common to both lines) plus an allowance for essential non-foods and services (different for each line).

21. The *food component* of the poverty line was determined as the cost of a food basket priced at the unit values obtained from the surveys, with quantities scaled-up proportionally to give a caloric intake of 2,267 kilocalories per capita per day. The caloric amount was based on the recommendations of the Food and Agriculture Organization (FAO)/OMS/United Nations (UN) Expert Group on Nutrition. The resulting food component of the poverty line, expressed in 2008 prices, was estimated at AZN 34 per capita per month.

[36] The European Union (Laeken) poverty lines are also set at 60 percent of the national median household income after taxes and adjustment for household size and composition.

22. The *lower poverty line* was determined by summing up the food component of the poverty line with the amount of non-food and services typically consumed by those whose total consumption equals the food poverty line. If households that can cover only their food requirements gave up food to buy other consumption items, these non-food items could be considered basic necessities. Thus, the *extreme poverty line* is the sum of food and other non-food basic necessities. Individuals are classified as very poor if their consumption per adult equivalent is below the extreme poverty line. The lower poverty line, expressed in 2008 prices, was estimated at AZN 49.3 per capita per month.

23. The *upper poverty line* was determined by adding to the food component the amount spent on non-food and services by households whose food consumption equals the food component of the poverty line. In this variant, the definition of non-food necessities is broader. Individuals are classified as (total) poor if their consumption per adult equivalent is lower than the total poverty line. The upper poverty line, expressed in 2008 prices, was estimated at AZN 57.75 per capita per month.

24. Finally, to allow cross-country comparisons and monitor Azerbaijan's Millennium Development Goal on poverty, the international benchmarks such as US$1.25 and US$2.50 per capita per day at constant purchasing power parity using the 2005 International Comparison Program (ICP) conversion factor were used.

Poverty Indexes

25. The final step in poverty measurement is choosing a mathematical function that translates the comparison of the well-being indicator and the chosen poverty line into one aggregate poverty number for the population as a whole or population subgroups. This report used the Foster-Greer-Thorbecke class of poverty measures: the headcount ratio, poverty gap, and squared poverty gap as preferred poverty indexes (Foster, Greer, Thorbecke 1984). The three most commonly used measures are:

- *Incidence of poverty (headcount ratio).* This is the share of the population whose chosen measure of welfare (for example, income or consumption) is below the absolute poverty line, that is, the share of the population that cannot afford to buy a basic basket of goods.
- *Depth of poverty (poverty gap).* This provides information regarding how far off households are from the poverty line. This measure captures the mean aggregate income or consumption shortfall relative to the poverty line across the whole population. It is obtained by adding up all the shortfalls of the poor and dividing the total by the population.
- *Poverty severity (squared poverty gap).* This takes into account not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor by placing a higher weight on households farther away from the poverty line.

26. Incidence of poverty is widely used, but the depth and severity measures of poverty complement the incidence of poverty and provide insights into how far the poor are from the socially acceptable level of subsistence, namely, from the poverty line. Some groups may have a high poverty incidence but a low poverty gap (if most of them are just below the poverty line), while other groups may have a low poverty incidence but a high poverty gap (when most individuals below the poverty line experience extremely low levels of consumption). The types of interventions needed to help the two groups are therefore likely to be different.

27. Finally, all estimations incorporate the survey design in computing the standard errors. In addition to reporting poverty rates, wherever deemed useful, the poverty profile also presents the number of people who are poor and very poor at a given point in time.

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