National Statistical Office

World Bank

Poverty Profile in Mongolia

(Main Report of "Household Socio-Economic Survey" 2007-2008)

Ulaanbaatar 2009

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Published by the National Statistical Office
Ulaanbaatar, Mongolia, 2009

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FOREWORD

Today poverty reduction is arguably one of the most important challenges faced by most countries and international organizations. The fact that the first of the Millennium Development Goals is specifically aimed at eliminating poverty and hunger is a clear example of the relevance of this task. Mongolia is aligning with this worldwide appeal consistently undertaking poverty reduction activities. In order to successfully implement those activities it inevitably needs to estimate the data and information on poverty according to internationally aknowledged methodology and regularly update them. We can now assess the current poverty situation and monitor its evolution in the last years thanks to the Household Socio-Economic Survey 2007/08, which is a nationally-representative household survey implemented by the National Statistical Office of Mongolia with the technical and financial support of the World Bank.

The HSES 2007/08 is an improved version of the Household Income and Expenditure Survey (which had been conducted regularly since 1966) and was carried out between July 2007 and June 2008. It is the latest among other household surveys implemented by the NSO to evaluate the living standards of the Mongolian population such as the Assessment of the Living Standards of the Population of Mongolia, 1995; the Living Standards Measurement Survey, 1998; and the Household Income and Expenditure Survey/Living Standards Measurement Survey, 2002/03. The HSES is a permanent survey and every three years it will feature an extended version. This will not only allow monitoring poverty and living standards annually but also to capture additional information in order to help the government to design better policies.

This report presents the poverty analysis based on the HSES 2007/08. It assesses the current level of poverty, examines the changes in the last five years, and describes in detail the profile of the poor by reviewing the consumption patterns of the population and displaying the association of poverty with characteristics of the household head, with the assets held by the household, with the type of housing the population lives in, and with the safety nets people have access to. The report also includes a detailed description of the implemented methodology for poverty analysis and contains additional education, health and labor market indicators.

It is clear that the welfare of the population is determined by a number of social and economic factors and cannot be solely measured by monetary measures of poverty. Therefore, I would like to emphasize that further analytical work based on the rich information provided by the HSES should be conducted to comprehensively assess the current living standards of the people in Mongolia. This report, which has been produced in a relatively short time frame, is a first and significant step in that direction. I believe that the results of the survey will provide high quality and updated information to the policy developers and decision-makers as well as to experts and researchers and to any other person who is interested in poverty and economic issues of Mongolia.

S. MENDSAIKHAN

THE CHAIRMAN, NATIONAL STATISTICAL OFFICE OF MONGOLIA

AKNOWLEDGEMENT

The Household Socio-Economic Survey 2007/08 was implemented by the National Statistical Office of Mongolia to assess the living standards of the population in the country. First of all I would like to stress that this survey is one of the biggest national surveys conducted in the country. The credit should go to the staff of the central and local offices of the National Statistical Office, who implemented all the stages of the HSES, and to the sincere contribution of the people from more than eleven thousand households who actively participated and provided information for the survey.

I would also like to express my gratitude to the World Bank and the Government Assistance Project and their staff for the financial and technical support in conducting the survey in accordance with an international methodology and ensuring its high quality.

My deep appreciation to the staff of the PSSD, the NSO and especially to the Core Staff Team for the successful organization and conduct of the survey; to the interviewers, supervisors and data operators who carried out the fieldwork; to Ms. B. Godoy and Mr. J. Munoz, the international consultants for their cooperation in developing the sampling design, the questionnaire and the data entry activities. Also my deep acknowledgement goes to Mr. M. Cumpa, the international consultant for his cooperation with the members of the CST in processing and analyzing the data in a relatively short period and writing this report; and to Ms. D. Steel and Ms. C. Goh, World Bank staff, and to Ms. N. Yruugerel, national consultant, for their comments and recommendations for the survey design, improvement of the data quality and data analysis.

Finally I would like to thank all members of the Methodology Working Group and the Chairman's Board of the NSO, in particular for their professional advice in survey design and questionnaire development, the aimag, soum and bag authorities and staff, officers of Ulaanbaatar and local offices of the National Statistical Office of Mongolia and all the other individuals involved in the survey for their active participation and support all through the process and wish them all the best.

S. MENDSAIKHAN

CHAIRMAN OF THE NATIONAL STATISTICAL OFFICE OF MONGOLIA

LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
GE	Generalized Entropy
HIES	Household Income and Expenditure Survey
HIES/LSMS	Household Income and Expenditure Survey with Living Standards Measurement Survey
HSES	Household Socio-Economic Survey
LSMS	Living Standards Measurement Survey
NSO	National Statistical Office
PSSD	Population and Social Statistics Department
PSU	Primary Sampling Unit
Q	Quintile

INTRODUCTION

The National Statistical Office of Mongolia started implementing the Socio-Economic Survey (HSES) in July 2007 to monitor poverty and to evaluate the progress towards the Millennium Development Goals. The HSES offers a unique opportunity to review how poverty has evolved over the last five years, to assess the current living standards of the population and to provide information to policy-makers on the developmental challenges for future poverty reduction efforts. This report presents the poverty analysis conducted using the HSES 2007/08. The similarity with the previous household survey from 2002/03 is a feature that has been fully exploited and the same methodology was applied in order to maximize comparability. However, the focus on poverty should not be understood as if this indicator covers all dimensions of economic and social well-being of the population. Further analytical work should be done based on the broad scope of topics provided by the HSES to comprehensively assess the welfare of the people in Mongolia.

The structure of the report is the following: Section 1 assesses the current level of poverty and inequality and examines the changes in the last five years, while Section 2 describes in more detail the profile of the poor by reviewing the consumption patterns of the population and displaying the association of poverty with characteristics of the household head, with the assets held by the household, with the type of housing the population lives in, and with the safety nets people have access to. The report also contains a number of useful, but more technical, appendices. Appendix A provides information about the HSES, Appendix B discusses the methodology for poverty analysis, Appendix C shows a comparison with alternative poverty lines, Appendix D offers additional output mostly on education, health and the labor market, and Appendix E presents the standard errors and confidence intervals associated with the poverty estimations.

1. POVERTY AND INEQUALITY

The objectives of this section are fourfold. First, the current extent of poverty and the sensitivity of these findings to the level of the poverty line are assessed. Second, the evolution of poverty in the last five years and the robustness of the comparison are evaluated. Third, the trend in inequality is described. Lastly, the results of decomposing the poverty changes into growth and inequality components are presented.

This report focuses on monetary poverty estimates, more specifically, consumption poverty, that is, the chosen welfare indicator is per capita consumption and a person will be considered poor if its his/her consumption is below the poverty line. The poverty line is determined using a cost of basic needs approach and stands at 62.5 thousand tugrug per person per month.[1]

[1]See Appendix B for more details on the methodology.

1.1. Poverty estimates

The incidence of poverty in Mongolia is 35.2% (Table 1.1), which means that around 930,000 individuals are considered poor.[2] In other words, 35 out of every 100 Mongolians do not have the necessary means to purchase the value of a minimum food and non-food bundle. Although the poverty headcount is very easy to understand, it does not provide information on how close or far the poor are from being able to satisfy their basic needs or how consumption is distributed among the poor. This could be a serious limitation when evaluating alternative policy options, for example, the implementation of a particular policy could improve the welfare of the poor leaving unchanged the poverty incidence.

In order to obtain a more complete description of the poverty situation, two other measures are also considered: the poverty gap and the severity of poverty.

Table 1.1: National poverty rates

Headcount	Poverty gap	Severity
35.2	10.1	4.0
(0.8)	(0.3)	(0.2)

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

The poverty gap estimates the average shortfall in consumption relative to the poverty line and thus overcomes the first limitation of the headcount. It stands at 10%, which implies that the average deficit in consumption of each person in the country is 10 percent below the poverty line, if the non-poor are considered to have a zero shortfall. On the other hand, the poverty gap among the poor is 29%, that is, the average consumption of the poor falls short of the poverty line by 29 percent or around 17.9 thousand tugrug per person per month.

Lastly, the severity of poverty is 4%. Unlike the headcount or the poverty gap, this measure is sensitive to the distribution of consumption among the poor.[3] For instance, if a transfer occurs from one poor household to a richer household, the level of poverty should increase. Even when the poverty incidence and the poverty gap may be unaffected, the severity indicator will increase. Unfortunately, there is no easy or intuitive interpretation of this indicator. However, it helps to compare and rank poverty across different groups when similar incidences and poverty gaps are found.

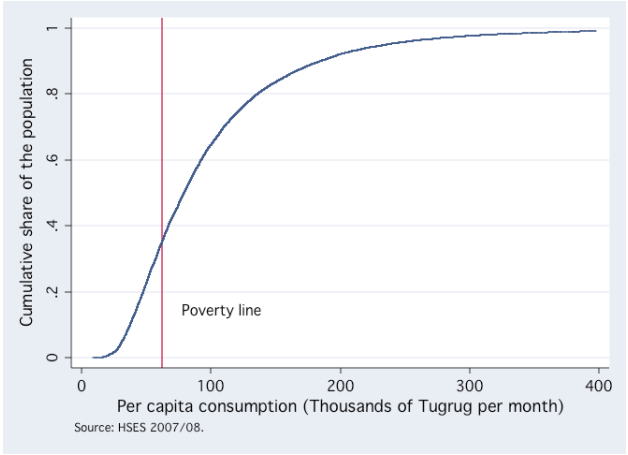
1.2. Sensitivity of the poverty estimates to the level of the poverty line

A natural concern that arises is to find out how sensitive the poverty measures are with respect to the level of the poverty line. Yet considerable effort has been put in deriving a poverty line following a previously implemented methodology and trying to be as transparent and objective as possible, an unavoidable degree of arbitrariness is involved in the process. Many explicit and implicit assumptions have been made along the way and not everybody may agree with them. Other poverty lines might be equally appealing and justified.[4]

A first way to assess how much the incidence of poverty will change when the poverty line is shifted upwards or downwards is by plotting the cumulative distribution function of per capita consumption (Figure 1.1). For a given consumption level on the horizontal axis, the curve indicates on the vertical axis the percentage of the population with an equal or lesser level of consumption. If one thinks of the chosen consumption level as the poverty line, the curve will show the associated poverty headcount and thus it can be seen as a "poverty incidence curve". Hence, at a poverty line of Tugrug 62,494 per person per month, around 35% of the population are poor. Nonetheless, given that the slope of the distribution is relatively steep around that level, it is likely that small changes in the poverty line will have large impacts on the poverty incidence.

[1] See Appendix B for more details on the methodology.
[2] The estimated population at the end of 2007, the mid-point of the period covered by the household survey, was 2,635,169 according to administrative data.
[3] It weights the shortfall in consumption relative to the poverty line more heavily the poorer the person is.
[4] See Appendix C for a comparison with other poverty lines.

Figure 1.1: Cumulative distribution of per capita consumption



The concentration of households around the poverty line can also be illustrated with the related concept of the density function.[5] Figure 1.2 depicts the kernel density estimate of per capita consumption. It shows two important characteristics of the distribution around the poverty line. First, a significant clustering occurs close to that point. Second, there is more probability mass below the poverty line than above it, which suggests that poverty measures will be less sensitive to scaling up the poverty line than to scaling it down.

Figure 1.2: Density function of per capita consumption

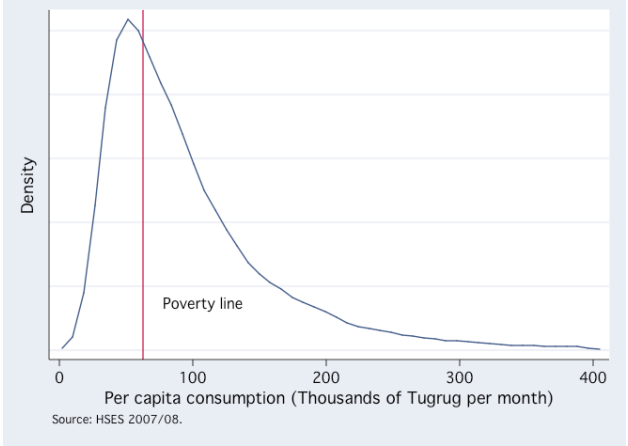


Table 1.2 confirms this by estimating all three poverty indices when the poverty line is scaled up and down. On the one hand, it reveals that 13 percent of the population lies within plus or minus 10 percent of the poverty line and almost one fourth within plus or minus 20 percent. On the other hand, the incidence of poverty changes more when the poverty line is scaled down than when it is scaled up.

Table 1.2: Impact of scaling the poverty line on poverty

Poverty line	Headcount	Poverty Gap	Severity
%			
150	60.8	23.0	11.2
140	56.3	20.4	9.7
130	51.5	17.8	8.1
120	46.4	15.3	6.7
110	41.4	12.7	5.3
100	35.2	10.1	4.0
90	28.8	7.7	2.9
80	22.4	5.4	1.9
70	16.0	3.4	1.1
60	9.8	1.9	0.6
50	4.9	0.8	0.2

Source: HSES 2007/08.

1.3. The geographical distribution of poverty

How does poverty vary across the country? Three partitions of Mongolia will be employed throughout this report: by region, by urban and rural areas, and by analytical domain. The regional divide was established by the government in order to design more appropriate policies to promote economic development in each region. Table 1.3 displays poverty measures considering this partition: West, Highlands, Central, East and Ulaanbaatar.[6] The capital is the region with less poverty,

[5] The notion of the density function is very similar to that of histograms. Traditional histograms divide a range of the variable of interest into certain number of intervals of equal width and draw a vertical bar for each interval with height proportional to the relative frequency of observations within each interval. A kernel density function can be thought of as a "smoothed" histogram. It estimates the density, or relative frequency, at every point rather than at every interval. Hence, say in the case of consumption, the area between two consumption levels is the proportion of the population with consumption within that range (it follows that the total area under the curve is 1 or 100 percent of the population).

[6] The West comprises the aimags of Bayan-Olgii, Govi-Altai, Zavkhan, Uvs and Khovd; the Highlands, Arkhangai, Bayankhongor, Bulgan, Ovorkhangai, Khovsgol and Orkhon; the Central, Dornogovi, Dundgovi, Omnogovi, Selenge, Tov, Darkhan-Uul and Govisumber; and the East, Dornod, Sukhbaatar and Khentii. The aimag of Govisumber in the Central region was excluded from the sample frame of the household survey because of its small size. Ulaanbaatar is located within the Central region but is considered as a separate region due to its significance.

a bit more than one fifth of its residents is below the poverty line. The Central region ranks second, three out of ten inhabitants are poor. The incidence of poverty is about the same in the West, the Highlands and the East, slightly less than half of their population is poor. With regard to where the poor live, the Highlands comprise almost one third of the poor but less than one fifth of the population. By contrast, Ulaanbaatar accounts for more than one third of the population but only one fifth of the poor. Another fifth of the poor live in the West, a tenth in the East and the remaining poor live in the Central area.

respectively. Among urban domains, Ulaanbaatar is less poor than aimag centers. In rural areas, soum centers are less poor than the countryside. Urban areas comprise 61% of the population but only 44% of the poor, which are evenly split between the capital and aimag centers. Another fifth of the poor live in soum centers and a bit more than one third in the countryside.

What is the sensitivity of these findings to the level of the poverty line? Stochastic dominance analysis allows us to find the range of poverty lines over which poverty comparisons are robust. It relies on graphical tools and focuses on the entire distribution of consumption.[7] At the regional level,

Table 1.3: Poverty by region

	National	West	Highlands	Central	East	Ulaanbaatar
Headcount	35.2	47.1	46.6	30.7	46.7	21.9
	(0.8)	(2.0)	(1.8)	(1.7)	(2.8)	(1.4)
Poverty gap	10.1	12.8	13.6	8.4	14.9	6.3
	(0.3)	(0.7)	(0.7)	(0.6)	(1.3)	(0.5)
Severity	4.0	4.7	5.3	3.3	6.6	2.6
	(0.2)	(0.3)	(0.3)	(0.3)	(0.7)	(0.2)
Memorandum items:						
Population share (%)	100.0	15.6	21.1	16.6	7.6	39.1
Population ('000)	2 635.2	411.1	555.7	437.9	199.3	1 031.2
Share among the poor (%)	100.0	22.1	30.5	14.7	10.5	22.2
Poor ('000)	928.5	205.4	283.6	136.3	97.4	205.7
Household size	3.9	4.1	3.9	3.7	3.8	3.9
Dependency ratio (%)	38.9	43.3	39.7	37.8	41.0	36.4
Children (% household size)	26.4	30.8	27.7	25.1	27.8	24.0
Age of household head	44.9	44.1	44.3	44.5	44.4	45.9
Male household head (%)	78.0	84.8	82.5	78.4	78.7	71.7
Urbanization (%)	57.6	30.0	34.8	36.3	36.1	100.0

Note: Population for 2007/08 is based on administrative data and refers to the estimated population at the end of 2007.
Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

It is not clear that urbanization is a factor associated with poverty when looking across regions –with the exception of the capital. The Central area has a level of urbanization equal to the East and very similar to the Highlands, but poverty is considerably lower. A more appropriate partition would be between urban and rural areas. Table 1.4 also shows a division of the country into four analytical domains. Poverty in urban areas is significantly lower than in rural areas, 27% and 47%

[7] By plotting two or more cumulative density functions of per capita consumption in the same graph, it is possible to infer first-order stochastic dominance. Distribution A first-order stochastically dominates distribution B if for any given level of per capita consumption, the share of the population with a lesser or equal level of consumption will always be lower in distribution B. In other words, if curve A always lies above curve B, distribution B will have a higher level of welfare and hence lower poverty. However, if the curves intersect each other, the criteria do not apply and it is not possible to infer which distribution has a higher level of welfare.

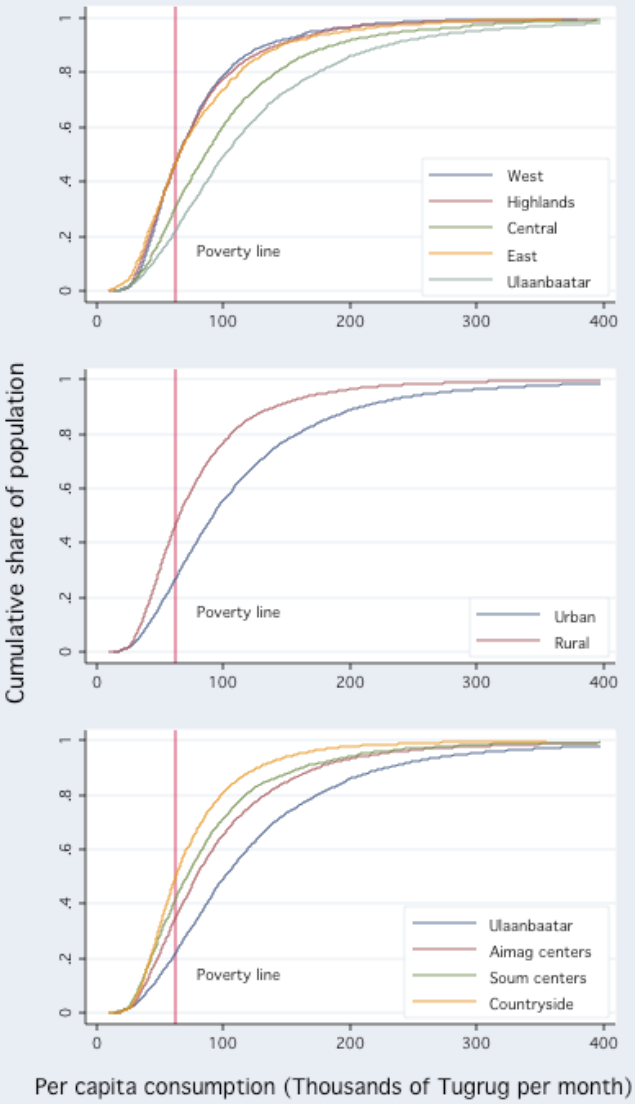
Table 1.4: Poverty by analytical domain

	National	Urban			Rural		
		Total	Ulaanbaatar	Aimag centers	Total	Soum centers	Country-side
Headcount	35.2	26.9	21.9	34.9	46.6	42.0	49.7
	(0.8)	(1.1)	(1.4)	(1.8)	(1.2)	(1.8)	(1.6)
Poverty gap	10.1	7.7	6.3	9.9	13.4	12.7	13.9
	(0.3)	(0.4)	(0.5)	(0.7)	(0.5)	(0.7)	(0.6)
Severity	4.0	3.1	2.6	3.9	5.2	5.2	5.3
	(0.2)	(0.2)	(0.2)	(0.3)	(0.2)	(0.3)	(0.3)
Memorandum items:							
Population share (%)	100.0	60.8	39.1	21.7	39.2	13.4	25.8
Population ('000)	2 635.2	1 601.0	1 031.2	569.8	1 034.2	354.3	679.9
Share among the poor (%)	100.0	43.9	22.2	21.8	56.1	20.7	35.4
Poor ('000)	928.5	407.7	205.7	202.0	520.8	192.1	328.7
Household size	3.9	3.9	3.9	3.9	3.9	3.9	3.8
Dependency ratio (%)	38.9	37.5	36.4	39.2	40.8	39.5	41.7
Children (% household size)	26.4	25.0	24.0	26.8	28.2	27.8	28.5
Age of household head	44.9	45.7	45.9	45.4	43.8	44.7	43.1
Male household head (%)	78.0	73.7	71.7	77.0	83.8	79.5	86.8

Note: Population for 2007/08 is based on administrative data and refers to the estimated population at the end of 2007. Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

the West, the Highlands and the East display the lowest levels of welfare in the country. Unfortunately nothing conclusive can be said with respect to these three regions because their curves overlap each other for most part of the distribution. In other words, they will display similar headcount indices regardless of the chosen poverty line. The Central region ranks second and Ulaanbaatar is the least poor (Figure 1.3). Regarding the urban-rural divide, the three previous points stand. First, urban areas are always better-off than rural areas. Second, Ulaanbaatar is less poor than the aimag centers. Third, unless very low poverty lines are used, soum centers display higher levels of welfare than the countryside. Overall then, the capital is the least poor, followed by aimag centers, then soum centers and finally by the countryside.

Figure 1.3: First-order stochastic dominance: Cumulative distribution of per capita consumption



Source: HSES 2007/08.

1.4 Poverty trends

In order to evaluate how poverty has evolved in the last years, the methodology for poverty analysis in 2007/08 is the same as that employed in 2002/03. Both the overall sampling design and the consumption modules from the two household surveys are comparable and hence offer reassurances to assess changes over time.[8]

The evolution of poverty in the last years is depicted in Table 1.5. All three estimates show a modest decrease in poverty in the last five years. For instance, the incidence of poverty fell from 36.1% to 35.2%. This however masks significant changes across different areas. In urban domains there is a clear decline in poverty (from 30.3% to 26.9%), while the opposite happens in rural domains (from 43.4% to 46.6%). But even within these two broad areas, the pattern is not the same. In Ulaanbaatar, the incidence of poverty fell by more than five percentage points, but in aimag centers poverty increased slightly. On the other hand, soum centers experienced a moderate decline in poverty, but in the countryside the percentage of poor rose by seven percentage points.

[8]Appendix B provides a detailed explanation of the implemented methodology.

Table 1.5: Poverty estimates, 2002/03, 2007/08

	2002/03					2007/08				
	Poverty			Population	Poor	Poverty			Population	Poor
	Headcount	Gap	Severity	(%)	(%)	Headcount	Gap	Severity	(%)	(%)
National	36.1	11.0	4.7	100.0	100.0	35.2	10.1	4.0	100.0	100.0
Urban	30.3	9.2	4.0	55.4	46.5	26.9	7.7	3.1	60.8	43.9
Rural	43.4	13.2	5.6	44.6	53.5	46.6	13.4	5.2	39.2	56.1
Ulaanbaatar	27.3	8.1	3.3	30.2	22.8	21.9	6.3	2.6	39.1	22.2
Aimag centers	33.9	10.5	4.7	25.2	23.7	34.9	9.9	3.9	21.7	21.8
Soum centers	44.5	14.4	6.4	16.2	20.0	42.0	12.7	5.2	13.4	20.7
Countryside	42.7	12.6	5.1	28.4	33.6	49.7	13.9	5.3	25.8	35.4
West	51.1	14.6	5.7	17.0	24.0	47.1	12.8	4.7	15.6	22.1
Highlands	38.7	12.3	5.2	24.1	25.8	46.6	13.6	5.3	21.1	30.5
Central a/	34.4	10.1	4.3	19.5	18.6	30.7	8.4	3.3	16.6	14.7
East	34.5	12.4	6.6	9.3	8.9	46.7	14.9	6.6	7.6	10.5

a/ Excludes Ulaanbaatar.
Source: HIES/LSMS 2002/03 and HSES 2007/08.

Across regions, poverty changed significantly in all of them. The incidence of poverty decreased in the West (from 51.1% to 47.1%) and in the Central region (from 34.4% to 30.7%). These results are reversed in the Highlands (from 38.7% to 46.6%) and in the East (from 34.5% to 46.7%). Both the poverty gap and the severity of poverty moved in the same direction as the poverty incidence.

Do the same rankings in terms of poverty stand over time? The urban and rural comparison is the same, urban domains are less poor than rural areas. Ulaanbaatar is the domain with less poverty, followed by the aimag centers. However, poverty in 2002/03 was more or less the same in all rural areas. Now, soum centers are less poor than the countryside. More evident changes are observed across regions. Before, the East and the Central areas were the least poor, followed by the Highlands and the West was the poorest region. Now, the Central maintains its position as the least poor, but all the other three regions show approximately similar levels of poverty.

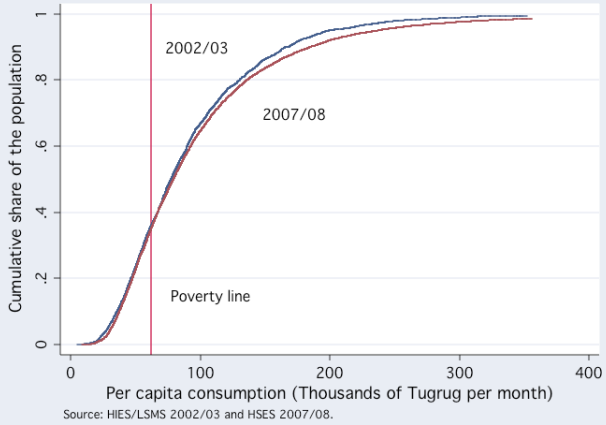
These findings did not alter much the distribution of the poor across urban and rural areas: more population lives in urban areas but more poor live in rural domains. However, now slightly more poor live in rural areas (56.1%) than five years ago (53.5%). More noticeable changes are observed across regions. The Highlands comprise now almost a third of the poor, compared to one quarter back in 2002/03. Conversely, 14.7% of the poor live now in the Central region, down from 18.6% five years ago.

1.5 Sensitivity of the temporal comparisons to the level of the poverty line

Stochastic dominance, once again, can help to clarify if these findings are sensitive to the level of the poverty line. Figure 1.4 shows that the 2007/08 distribution seems to be no worse-off than the 2002/03 distribution, that is, poverty in 2007/08 will be no higher than in 2002/03. The distribution in 2007/08 is unambiguously better-off than

that in 2002/03 for the top half of the distribution, while in the bottom half they overlap for the most part. However, at the very bottom of the distribution, the 2007/08 displays clear signs of welfare improvement. In urban areas it does not matter the level of the poverty line, poverty will always be lower in 2007/08.[9] But in rural areas the pattern is different because the curves crossed each other. The poverty line lies precisely at a point in the distribution where the curves start to get apart from each other. For lower poverty lines, poverty will be approximately the same. For higher poverty lines, the year 2007/08 will continue to be worst-off than the year 2002/03.

Figure 1.4: Cumulative distribution of per capita consumption, 2002/03, 2007/08



Across analytical domains, most of the previous results are confirmed. Ulaanbaatar displays higher welfare levels now, thus it will have less poverty no matter which poverty line is employed. In aimag centers, both curves are intertwined, so no definite statement can be made, poverty will be about the same regardless of the poverty line. In soum centers, welfare levels in 2007/08 have for the most part of the distribution barely improved compared to five years ago, so poverty will be lower now but the finding will not be significant. In the countryside, poverty will be higher in 2007/08 except for very low poverty lines, that is, consumption is lower now except for the bottom part of the distribution, where it is the same as in 2002/03. Results in rural areas also validate the new ranking among soum centers and the countryside because the former improved and the latter worsened over time.

Findings by region are also mostly corroborated. In the Central area consumption improves over time, thus poverty will be lower regardless of the poverty line. In the Highlands and in the East, welfare levels fall clearly for most part of the distribution, so the increase in poverty is a robust result. Finally, consumption in the West appears to have increased moderately or at least to be similar than before for the majority of the population. Hence, for most reasonable poverty lines, poverty has probably fallen. These findings confirm the current ranking across regions. The Central area consolidates its position in the first place, while the deterioration in the East and the Highlands coupled with the improvement in the West resulted in the three regions having similar levels of consumption.

1.6 Inequality

Inequality worsened over time. Table 1.6 shows the evolution of the Gini and the Generalized Entropy indices.[10] All three indicators show a significant increase in per capita consumption inequality for the entire country. For instance, the Gini coefficient rose from 0.33 to 0.36 at the national level. The increase in inequality is observed almost across all analytical domains and regions, although urban areas experienced larger increases than rural domains. The fact that the other two indices also display a similar pattern confirms that this is a robust result. Only the countryside and the West are the exceptions to this trend. In the countryside, two of the three indices report the same or a lower level of inequality; although the third index suggests a quite significant increase. In the West, none of the indices point to a rise in inequality, two indices report a decline and the other the same level as before.

[9] See Appendix D for results by urban and rural areas, analytical domain and region.

[10] GE(α) indices refer to the Generalized Entropy class of inequality measures; the higher (lower) the value of α, the greater the sensitivity of the indicator to consumption differences at the top (bottom) of the distribution. The Gini index is more sensitive to consumption differences in the middle of the distribution. All three indices can go from zero to one, where higher values indicate higher inequality.

Table 1.6: Inequality and average consumption, 2002/03, 2007/08

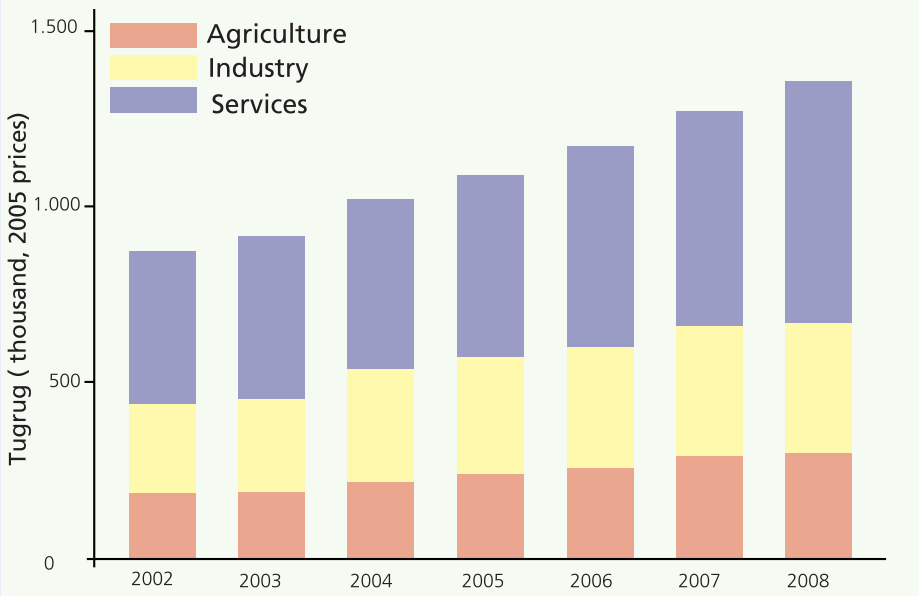
	Theil or GE(1)		Gini		GE(2)		Per capita consumption (2007/08 Tugrug per month)		
	2002/03	2007/08	2002/03	2007/08	2002/03	2007/08	2002/03	2007/08	Change
National	0.18	0.23	0.33	0.36	0.23	0.35	92 814	100 865	8.7
Urban	0.18	0.23	0.33	0.36	0.23	0.33	101 909	115 501	13.3
Rural	0.17	0.19	0.31	0.32	0.21	0.30	81 504	81 010	-0.6
Ulaanbaatar	0.19	0.23	0.33	0.36	0.24	0.34	108 612	126 494	16.5
Aimag centers	0.17	0.20	0.32	0.34	0.21	0.28	93 894	97 680	4.0
Soum centers	0.17	0.22	0.32	0.35	0.21	0.30	80 523	89 197	10.8
Countryside	0.16	0.16	0.31	0.30	0.21	0.29	82 064	75 344	-8.2
West	0.17	0.16	0.31	0.30	0.22	0.22	75 077	78 683	4.8
Highlands	0.17	0.19	0.32	0.32	0.21	0.26	86 851	80 412	-7.4
Central a/	0.16	0.22	0.31	0.35	0.19	0.36	92 901	105 505	13.6
East	0.17	0.20	0.32	0.34	0.21	0.25	89 118	81 812	-8.2

a/ Excludes Ulaanbaatar.
Note: Monetary figures from 2002/03 were updated to 2007/08 prices with the ratio between the poverty lines in both periods. GE(a) indices refer to the Generalized Entropy class of inequality measures; the higher (lower) the value of a, the greater the sensitivity of the measure to consumption differences at the top (bottom) of the distribution. The Gini index is more sensitive to consumption differences in the middle of the distribution.
Source: HIES/LSMS 2002/03 and HSES 2007/08.

It is also helpful to examine changes in mean consumption during the period of analysis (right panel of Table 1.6). Per capita consumption grew by almost 9% in real terms between 2002/03 and 2007/08. Urban areas experienced a significant increase, particularly Ulaanbaatar. In rural areas, all the improvement in soum centers was almost offset by the decline in the countryside. Across regions, mean consumption increased significantly in the Central area, rose in the West and declined notably in the Highlands and the East. This improvement in welfare is consistent with macroeconomic data, which show annual growth in every year during the period of analysis. Figure 1.5 displays per capita GDP by three broad economic sectors. It is worth noticing that all three sectors enjoyed similar growth rates, which means that not only their shares in total output have remained roughly the same but also growth was widespread across the economy.[11]

[11] It would have been quite interesting to compare household consumption from the survey against that from the national accounts.

Figure 1.5: Gross Domestic Product per capita, 2002-08



Source: Mongolian Statistical Yearbook

1.7. Decomposition of poverty changes into growth and inequality components

What is the effect of the growth in mean consumption and the increase in consumption inequality on poverty? Other things being equal, improvements in welfare are generally associated with reductions in poverty, while the rise in inequality could be expected to increase poverty. A decomposition of the poverty changes into growth and inequality components can provide insights into this issue.[12] The growth component refers to the change in poverty that would have resulted if only the real mean consumption had changed but there was no change in relative inequalities. The inequality component refers to the change in poverty that would have occurred if only relative inequalities had changed but there was no change in real mean consumption.

The results of the decomposition are shown in Table 1.7. At the national level, while the growth component contributed to a potential decline in poverty, this was severely offset by the inequality component, which contributed to a potential increase in poverty. For instance, between 2002/03 and 2007/08 the incidence of poverty fell by 0.9 percentage points. If relative inequalities were held constant over this period, the growth in consumption would have resulted in a decline of poverty of 5.0 percentage points. On the other hand, if real mean consumption had remained constant over this period, the rise in inequality would have increased poverty by 4.2 percentage points. The combined effect of these two opposite factors was a net decline in poverty incidence of 0.9 percentage points. Similar findings are found for the other two poverty indices.

Results in urban areas mirror the national pattern, although the inequality component plays a lesser role. In rural areas, both components contribute to a potential increase in poverty, but the inequality component tends to be the principal factor. Only in the case of the severity of poverty both components have different effects. Across analytical domains, the growth component dominates for almost all four domains and for all three poverty indicators. Only in aimag centers, the increase in the incidence of poverty is driven mainly by the

[12] See Datt and Ravallion (1992).

increase in the inequality component. Across regions, the growth component dominates in all of them but in the East. It is also interesting to note that in the case of the poverty incidence, both effects are mostly in the same direction (contrary to the case among analytical domains). Only in the Central region the growth component would have reduced the incidence of poverty, while the inequality component would have contributed to an increase.

The overall findings suggest that poverty changes have been mainly driven by the growth component. Inequality has mostly contributed in an opposite direction. In general, had inequality not increased that significantly, the decline in poverty would have been more pronounced.

Table 1.7: Decomposition of poverty changes into growth and inequality components, 2002/03, 2007/08

	Headcount	Poverty gap	Severity
National			
Change in poverty	-0.9	-0.9	-0.7
Growth component	-5.0	-2.1	-1.0
Inequality component	4.2	1.2	0.4
Urban			
Change in poverty	-3.4	-1.5	-0.9
Growth component	-6.7	-2.5	-1.2
Inequality component	3.3	1.0	0.4
Rural			
Change in poverty	3.2	0.2	-0.3
Growth component	0.3	0.2	0.1
Inequality component	2.9	0.0	-0.4
Ulaanbaatar			
Change in poverty	-5.3	-1.8	-0.7
Growth component	-7.3	-2.7	-1.3
Inequality component	2.0	0.9	0.6
Aimag centers			
Change in poverty	1.0	-0.6	-0.8
Growth component	-2.6	-1.0	-0.5
Inequality component	3.7	0.3	-0.4
Soum centers			
Change in poverty	-2.5	-1.7	-1.2
Growth component	-6.7	-3.0	-1.6
Inequality component	4.2	1.3	0.4
Countryside			
Change in poverty	7.0	1.3	0.2
Growth component	6.2	2.8	1.4
Inequality component	0.8	-1.5	-1.2
West			
Change in poverty	-4.0	-1.8	-1.1
Growth component	-3.5	-1.7	-0.8
Inequality component	-0.5	-0.1	-0.3
Highlands			
Change in poverty	7.9	1.4	0.2
Growth component	4.8	2.3	1.2
Inequality component	3.1	-0.9	-1.0
Central a/			
Change in poverty	-3.7	-1.8	-1.0
Growth component	-7.9	-2.9	-1.4
Inequality component	4.2	1.2	0.4
East			
Change in poverty	12.2	2.6	0.0
Growth component	4.7	2.3	1.2
Inequality component	7.4	0.3	-1.2

a/ Excludes Ulaanbaatar.
Source: HIES/LSMS 2002/03 and HSES 2007/08.

2. WELFARE PROFILE

A welfare profile assesses how living standards vary across different subgroups of the population. This section is primarily concerned with the construction of a poverty profile that will show the characteristics of poverty and their correlation with different features of the household and other aspects of welfare. It will separate the poor from the non-poor in order to obtain a better understanding on who the poor are, their levels of human capital and wealth, the type of work they engage in, the quality of their housing and the safety nets they have access to. This may provide useful information for a better design of poverty alleviation efforts.

2.1. Consumption patterns

The first step to construct a poverty profile is to agree on a comparable welfare indicator for the population. For the purposes of this report, per capita consumption of the household is employed. It is therefore important to show what consumption includes and the absolute and relative importance of its different components.

According to the household survey, the monthly per capita consumption in Mongolia during 2007/08 was Tugrug 100,865.[13] Table 2.1 displays the average consumption by main expenditure groups and across three different partitions of the country: urban and rural areas, analytical domains and regions. Urban areas display consumption levels significantly higher than rural areas, around 40% more. Across analytical domains, the capital ranks first, followed by aimag centers, soum centers are third and the countryside shows the lowest level of consumption. Among regions, consumption is highest in the Central area, the only region with consumption higher than the national average. The East ranks second; the Highlands, third; and the West, last. However, the differences between these three regions are rather small.

The shares of all consumption groups are displayed in the bottom panel of the table. Food is the main category and accounts for 36% of total consumption, with significant differences between urban and rural areas. It is expected that urban areas will have lower food shares compared to rural ones because of their differences in welfare levels and the relative importance of other components of consumption. Indeed, that is the case. In the former, food accounts only for 33% of total consumption, while in the latter for 43%. Both urban domains, the capital and aimag centers, show similar food shares of around one third. More substantial differences are found among rural domains, soum centers follow the national pattern but in the countryside the food share reaches almost half of their consumption. Among regions, the shares are most stable, ranging from 36% in the Central region to 41% in the West.

Among non-food categories, clothing is the most important component and accounts for 17% of total consumption, urban areas have a slightly less share, while in rural areas it reaches one fifth. Transportation and communication account for 13% of total consumption, it is highest in the capital and displays similar shares in the other three analytical domains. The share of education is 7% and it is fairly stable across all three partitions of the country. The value of housing only represents 6% of total consumption.

Whereas in urban areas it accounts for 8%, in rural areas is barely 1%. Health expenditures display a steady share across all divisions; it stands at around 5%. Heating consumption stands at 3% of total consumption, rural households have a 2% share compared to 4% in urban areas. Across regions, heating shares are relatively similar. Utilities, i.e. water, electricity and lighting, account also for a 3% share. The remaining 10% of total consumption is comprised by entertainment, toiletries, durable goods and alcohol and tobacco.

[13] All monetary figures are in 2007/08 real prices.

Table 2.1: Consumption per capita per month by main consumption categories

(2007/08 real Tugrug)

	National	Urban	Rural	Analytical domains				Geographical regions			
				Ulaanbaatar	Aimag centers	Soum centers	Countryside	West	Highlands	Central a/	East
Consumption											
Food	36 239	37 549	34 462	40 274	33 131	33 355	35 228	32 497	32 547	37 966	33 020
Alcohol and tobacco	1 561	1 241	1 997	1 131	1 418	2 307	1 782	1 493	1 467	2 601	1 708
Education	7 298	8 393	5 813	8 302	8 540	7 373	4 733	7 284	6 599	7 389	4 660
Health	4 676	5 000	4 236	5 023	4 963	5 610	3 285	4 413	3 728	5 823	3 992
Durable goods 1/	877	1 027	673	1 166	801	760	613	638	721	831	629
Rent 2/	5 573	8 793	1 206	11 322	4 692	1 555	965	1 513	2 565	3 231	1 966
Heating 3/	3 094	4 458	1 245	4 475	4 430	2 172	603	2 514	2 178	2 571	1 885
Utilities 4/	2 549	3 831	811	4 475	2 787	1 486	344	710	1 225	2 380	1 959
Clothing	17 154	17 976	16 039	18 258	17 519	17 190	15 242	15 714	15 460	18 908	16 415
Transportation and communication	13 352	17 157	8 191	20 935	11 031	10 120	6 856	6 806	7 576	14 301	7 773
Others 5/	8 491	10 079	6 337	11 133	8 369	7 268	5 693	5 100	6 346	9 505	7 804
Total	100 865	115 501	81010	126 494	97 680	89 197	75 344	78 683	80 412	105 505	81 812
Shares											
Food	36	33	43	32	34	37	47	41	40	36	40
Alcohol and tobacco	2	1	2	1	1	3	2	2	2	2	2
Education	7	7	7	7	9	8	6	9	8	7	6
Health	5	4	5	4	5	6	4	6	5	6	5
Durable goods 1/	1	1	1	1	1	1	1	1	1	1	1
Rent 2/	6	8	1	9	5	2	1	2	3	3	2
Heating 3/	3	4	2	4	5	2	1	3	3	2	2
Utilities 4/	3	3	1	4	3	2	0	1	2	2	2
Clothing	17	16	20	14	18	19	20	20	19	18	20
Transportation and communication	13	15	10	17	11	11	9	9	9	14	10
Others 5/	8	9	8	9	9	8	8	6	8	9	10
Total	100	100	100	100	100	100	100	100	100	100	100

a/ Excludes Ulaanbaatar.
1/ Estimation of the monetary value of the consumption derived from the use of durable goods.
2/ Estimation of the monetary value of the consumption derived from occupying the dwelling. If the household rents its dwelling, the actual rent will be included instead of the imputed rent.
3/ Includes central and local heating, firewood, coal and dung.
4/ Includes water, electricity and lighting. It excludes telephone.
5/ Includes recreation, entertainment, beauty and toilet articles, and household utensils.
Source: HSES 2007/08.

More striking differences are observed by poverty status and urban and rural areas (Table 2.2). First, the average consumption of the poor is one third of that of the non-poor. Second, food consumption among the non-poor is almost double the food consumption of the poor, something that coupled with the differences in total consumption is reflected in the higher food share among the poor. Third, average spending on education is quite different by poverty status, but in terms of shares, the non-poor share is only slightly higher than that of the poor. Fourth, with regard to health, the non-poor have not only significantly higher average spending but also devote proportionally more resources to it. Fifth, the non-poor spend more on heating, but the share among the poor is higher. The urban poor drive this result because in rural areas the opposite is found. Sixth, clothing spending is substantially higher among the non-poor, but the non-poor share is only moderately higher. Lastly, the non-poor spend significantly more on transportation and communication than the poor, both in absolute and relative terms.

Table 2.2: Consumption per capita per month by poverty status
(2007/08 real Tugrug)

	Total		Urban		Rural	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Consumption						
Food	43 340	23 188	43 394	21 648	43 240	24 393
Alcohol and tobacco	1 965	819	1 497	541	2 834	1 036
Education	9 850	2 608	10 539	2 553	8 569	2 652
Health	6 675	1 001	6 426	1 121	7 138	907
Durable goods 1/	1 176	328	1 307	265	932	377
Rent 2/	7 965	1 177	11 418	1 651	1 554	806
Heating 3/	3 892	1 629	5 029	2 904	1 781	630
Utilities 4/	3 452	889	4 678	1 525	1 176	392
Clothing	22 650	7 053	22 379	5 998	23 152	7 878
Transportation and communication	19 166	2 665	22 290	3 190	13 367	2 255
Others 5/	11 352	3 233	12 581	3 271	9 070	3 202
Total	131 483	44 589	141539	44 667	112 813	44 528
Shares						
Food	33	52	31	48	38	55
Alcohol and tobacco	1	2	1	1	3	2
Education	7	6	7	6	8	6
Health	5	2	5	3	6	2
Durable goods 1/	1	1	1	1	1	1
Rent 2/	6	3	8	4	1	2
Heating 3/	3	4	4	7	2	1
Utilities 4/	3	2	3	3	1	1
Clothing	17	16	16	13	21	18
Transportation and communication	15	6	16	7	12	5
Others 5/	9	7	9	7	8	7
Total	100	100	100	100	100	100

1/ Estimation of the monetary value of the consumption derived from the use of durable goods.
2/ Estimation of the monetary value of the consumption derived from occupying the dwelling. If the household rents its dwelling, the actual rent will be included instead of the imputed rent.
3/ Includes central and local heating, firewood, coal and dung.
4/ Includes water, electricity and lighting. It excludes telephone.
5/ Includes recreation, entertainment, beauty and toilet articles, and household utensils.
Source: HSES 2007/08.

2.2. The seasonality of poverty

A relevant feature of poverty in Mongolia is its seasonality. Livestock and agricultural activities may determine substantial fluctuations in consumption along the year. The composition of food consumption may change drastically, with more intake of dairy products in the summer, more vegetables in the autumn, more meat products in the winter and somehow a lean period during the spring. The autumn is considered a season of relative abundance because it benefits from the remaining higher dairy production from the summer and the early availability of meat for the winter. However, for the purposes of comparability with the previous report, the analysis presented here is by quarter, a division of the year that does not match exactly with the four seasons in the country.[14]

The evolution of poverty along the year shows a remarkable deterioration of welfare from quarter to quarter (Table 2.3), a result unlikely to be associated solely with seasonality[15] or with particular characteristics of the households[16]. The incidence of poverty increases from 25.1% during the first quarter of the survey to 42.1% in the last three months, while the poverty gap and the severity of poverty almost double. Poverty increased significantly up to the third quarter and then rather modestly in the last quarter. This pattern is the same across almost all urban and rural areas, analytical domains and regions. The incidence of poverty in urban areas increased by 14 percentage points and in rural areas by 21 percentage points. Whereas in the capital and aimag centers the rise was similar to the overall urban increase, in rural domains the countryside experienced a higher rise than soum centers (24 percentage points and 17 percentage points respectively).

Table 2.3: Poverty by quarter

	National	Quarter I (Jul-Sep 2007)	Quarter II (Oct-Dec 2007)	Quarter III (Jan-Mar 2008)	Quarter IV (Apr-Jun 2008)
Headcount	35.2	25.1	33.3	40.5	42.1
	(0.8)	(1.5)	(1.6)	(1.8)	(1.8)
Poverty gap	10.1	6.9	9.3	11.5	12.7
	(0.3)	(0.5)	(0.6)	(0.6)	(0.7)
Severity	4.0	2.8	3.6	4.5	5.1
	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)
Memorandum items:					
Population share (%)	100.0	25.1	24.8	25.0	25.1
Share among the poor (%)	100.0	17.9	23.5	28.7	29.9
Household size	3.9	3.9	3.9	3.9	3.9
Dependency ratio (%)	38.9	39.1	39.5	38.6	38.3
Children (% household size)	26.4	26.9	27.0	26.3	25.4
Age of household head	44.9	44.5	44.7	44.9	45.4
Male household head (%)	78.0	79.2	77.5	78.5	76.9
Urbanization (%)	57.6	57.3	57.0	58.1	57.8

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

[14] Summer could be assumed to last from June to August; autumn, September to November; winter, December to February; and spring, March to May.

[15] It is important to mention that the consumption aggregate has been adequately corrected for temporal price differences (see Appendix B for more details).

[16] The memorandum items reported in the table show no significant variations across the four quarters in the demographic features of the households or in the degree of urbanization of the sample.

Even when any rigorous attempt to explain this finding is beyond the scope of this report, one obvious hypothesis is that the massive increase in international prices of major food staples coincides with the period of analysis. The poor spend a higher share of their consumption in food, hence such a rise in food prices is likely to affect them the most. For instance, food inflation in the country during the period of analysis was around 50% and the products that increased more were flour, rice, bread and vegetables, all crucial items in the diet of Mongolians.[17] Inflation was particularly high during the second half of the survey, the same period where poverty is at its worst. The evidence on price increases also shows that the food inflation happened in urban and rural areas alike.

2.3. Household composition

Households differ in their demographic composition, some are comprised by nuclear or by extended families, others have a high proportion of children, and others have only elders as members. Is there any correlation between poverty and household composition? Table 2.4 shows how poverty varies with the size of the household. The incidence of poverty increases monotonically with household size. This is hardly surprising given that the welfare indicator is per capita consumption, which implicitly assumes that there are neither different needs among members nor economies of size within the household. The likelihood of being poor if one lives in households of up to two members is barely more than 10 percent. These households account for 9% of the population and just 3% of the poor. The poverty incidence in households of three, four or five members, the typical household size in the country, is around 31 percent. These households comprise two thirds of the population and almost three out of five poor. By contrast, more than half of those leaving in households with more than five members are poor. They represent only a quarter of the population but two fifths of the poor. Poverty is extremely high among households with at least eight members, where seven out of ten people are below the poverty line. These large households account for just 6% of the population but 12% of the poor.

Table 2.4: Poverty by household size

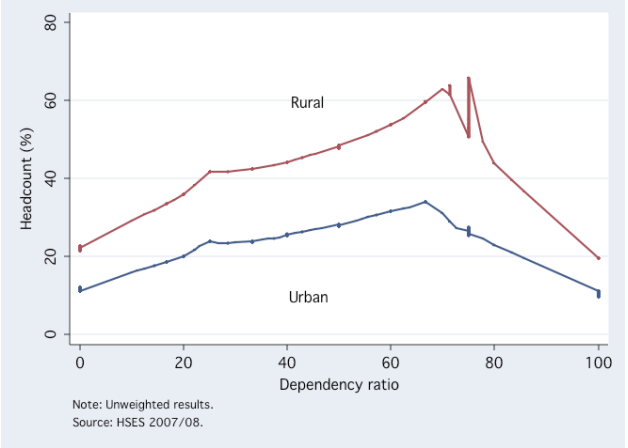
	National	Household size							
		1	2	3	4	5	6	7	8 plus
Headcount	35.2	8.9	13.4	21.8	30.3	38.6	47.8	53.6	69.0
	(0.8)	(1.1)	(1.0)	(1.0)	(1.1)	(1.4)	(1.9)	(2.8)	(3.1)
Poverty gap	10.1	1.7	2.9	4.9	7.8	10.8	14.5	18.1	24.8
	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)	(0.5)	(0.7)	(1.2)	(1.6)
Severity	4.0	0.5	1.0	1.6	2.8	4.1	5.9	8.0	11.5
	(0.2)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.4)	(0.7)	(1.0)
Memorandum items:									
Population share (%)	100.0	1.9	6.7	16.9	27.4	21.6	12.7	6.7	6.1
Share among the poor (%)	100.0	0.5	2.6	10.4	23.6	23.7	17.2	10.1	12.0
Dependency ratio (%)	38.9	50.4	41.0	33.5	38.7	38.8	40.1	38.2	40.2
Children (% household size)	26.4	0.3	9.8	24.1	33.8	34.7	35.5	33.5	35.5
Age of household head	44.9	53.5	49.9	42.2	41.6	43.8	45.6	48.4	50.1
Male household head (%)	78.0	45.3	60.7	75.1	86.5	90.3	87.5	84.4	77.8

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

[17] The official food inflation for the 12-month period is 47%, while the estimate from the household survey is 54%.

A second way to analyze the demographic composition of the households is through the dependency ratio. This is a common indicator to capture the demographic composition of the families. It will be defined as the ratio between the non-working age population and the number of members in the household.[18] Thus it represents the share of "dependants" in the household. Figure 2.1 displays the relationship between the poverty incidence and the dependency ratio for urban and rural areas. The higher the dependency ratio, the higher the poverty experienced by the household. Usually a higher share of children and elderly people relative to the total number of members in the family means that "earners" have to support more people, hence there is less income and consumption available to each household member and therefore more poverty. This relationship holds up to values of 70%, above these levels poverty declines, which is likely to reflect the fact that in households where the share of dependants is really high, these households are mainly comprised by elderly people still working or receiving some steady income, like a pension or remittances, that defends them against poverty[19].

Figure 2.1: Poverty by dependency ratio



Note: Unweighted results.
Source: HSES 2007/08.

2.4. Characteristics of the household head

A common practice when doing poverty comparisons is to classify households according to the characteristics of the household head.[20] Although not without limitations, it does provide a simple and useful way to make comparisons across households.[21] Often living standards and the demographic composition of families are linked with the characteristics of the head, who is likely to be the main source of economic support within the household. For instance, a head with tertiary education is likely to live in urban areas and have a smaller than average number of children. In this section, the connection between poverty and age, gender, education, employment and migrant status of the household head is examined.

2.4.1 Age

What is the link between the age of the household head and poverty? Table 2.5 displays the poverty measures according to five age cohorts of the household head. Poverty seems to increase during the thirties, decreases a bit during the forties, falls more significantly during the fifties and then stays about the same after the sixties. Three out of five people live in households with middle-aged heads, three out of ten have an older head and barely one tenth has a younger head. The distribution of the poor follows relatively close the distribution of the population. Some differences in the composition of the households across these cohorts may help to explain the observed poverty trend. For instance, the increase in poverty during the thirties is associated with an increase in the household size of almost one member, who is more likely to be a child. Interestingly, the older the cohort is, the more likely the household is to be headed by a woman.

[18] Alternatively, it can be also defined as the ratio between the non-working-age population and the working-age population, typically those less than 15 or more than 64 to those 15 to 64 years old. Hence it represents the number of "dependants" for each "earner" in the household. However, in Mongolia a different cut-off is used to define working-age population: men aged 16 to 59 and women aged 16 to 54.

[19] For instance, two thirds of households with dependency ratios higher than 70% have household heads that are pensioners. This compares to barely more than one tenth among households with lower dependency ratios.

[20] The HSES applies a precise definition to identify the head of the household. It is the person who is acknowledged as the head by the other members, plays the main role in organizing the activities of other members, bears full responsibility for household problems, and takes most of the household financial decisions.

[21] For instance, sometimes the eldest person is considered as the head as a sign of respect, although he or she does not fulfill the given definition. Another example is when female widows, who may be in practice the head of the household, refer to their eldest son as the head of the family.

Table 2.5: Poverty by age of the household head

	National	<30	30 - 39	40 - 49	50 - 59	>=60
Headcount	35.2	33.9	38.3	36.3	31.9	31.6
	(0.8)	(1.6)	(1.2)	(1.1)	(1.5)	(1.6)
Poverty gap	10.1	9.4	10.9	10.7	9.4	8.5
	(0.3)	(0.6)	(0.4)	(0.5)	(0.6)	(0.5)
Severity	4.0	3.6	4.2	4.4	3.8	3.2
	(0.2)	(0.3)	(0.2)	(0.3)	(0.3)	(0.3)
Memorandum items:						
Population share (%)	100.0	11.0	28.0	31.3	16.4	13.4
Share among the poor (%)	100.0	10.5	30.5	32.2	14.8	12.0
Household size	3.9	3.2	4.0	4.4	4.1	3.1
Dependency ratio (%)	38.9	32.2	44.8	25.7	21.9	71.9
Children (% household size)	26.4	30.1	43.2	24.5	13.5	11.1
Age of household head	44.9	25.7	34.7	44.4	53.8	69.2
Male household head (%)	78.0	87.7	85.1	80.0	72.7	60.4

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.4.2 Gender

According to the household survey, poverty in households headed by a woman is about the same as in households headed by a man (Table 2.6). Differences are not significant in rural areas either, although in urban areas, male-headed households appear to endure less poverty. One out of six people live in households led by a woman, a proportion that increases to one fifth in urban areas and decreases to one out of eight in rural areas. Almost equal shares are observed when looking at the distribution of the poor. These results must be taken with caution because the comparison is assessing families with very dissimilar structures. Three demographic features of the household may illustrate this point. First, almost four of every five female heads are widows, divorced or separated, while more than nine out of ten male heads are married. Second, the average household size among female-headed households is smaller than among male-headed families, 3 and 4 members respectively. Lastly, a substantial age difference is observed by gender, female heads are on average 8 years older than male heads.

Table 2.6: Poverty by gender of the household head

	National		Urban		Rural	
	Female	Male	Female	Male	Female	Male
Headcount	34.7	35.3	30.6	25.8	45.0	46.8
	(1.4)	(0.9)	(1.7)	(1.1)	(2.4)	(1.3)
Poverty gap	10.3	10.0	8.9	7.3	14.0	13.3
	(0.6)	(0.3)	(0.7)	(0.4)	(1.0)	(0.5)
Severity	4.2	4.0	3.6	2.9	5.7	5.2
	(0.3)	(0.2)	(0.4)	(0.2)	(0.5)	(0.2)
Memorandum items:						
Population share (%)	17.7	82.3	22.0	78.0	12.0	88.0
Share among the poor (%)	17.5	82.5	25.1	74.9	11.5	88.5
Household size	3.1	4.1	3.3	4.1	2.8	4.1
Dependency ratio (%)	44.7	37.2	42.0	35.8	50.7	38.9
Children (% household size)	22.6	27.5	23.3	25.6	21.1	29.6
Age of household head	51.0	43.2	49.7	44.3	53.7	41.8
Married, living together (%)	10.2	92.8	11.6	92.9	6.6	92.8
Separated, divorced, widowed (%)	78.3	4.1	78.3	4.6	78.5	3.5

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.4.3 Education

A fundamental indicator of human capital is education. It is widely recognized as one of the main factors to increase the living standards of the population. People with none or little education are likely to be employed in labor-intensive industries, which generally exhibit less productivity and hence lower salaries, have a small degree of labor mobility and are more vulnerable to adverse shocks. Education enlarges not only job opportunities but also helps people to realize the significance of other aspects of welfare, like the importance of a better health or to participate more actively in society.

Table 2.7 displays information on poverty measures by the highest level of education obtained by the household head. Before commenting on the relationship between education and poverty, it is important to note that education levels of household heads are relatively high, six out of seven individuals live in households where the head has finished at least lower secondary[22] and only one out of seven lives in households where the head has no education or only primary school.[23] As expected, the higher the level of instruction completed, the lower the poverty experienced. The returns to education seem to increase considerably if the head has finished complete secondary, the population living in these households has a poverty incidence of 35 percent. For lower levels of education, the incidence of poverty is around 50 percent; while for higher educational attainments, only 16 percent. This hides differences within each of these two broad groups. Poverty levels are worst among those with heads with no education, whereas pov-

[22] The number of years of study to graduate from lower secondary depends on the year of graduation. Until 1963 lower secondary lasted until the 7th grade; from 1964 to 2004, until the 8th grade; and from 2005, until the 9th grade.

[23] Some unexplained results appeared when comparing against figures from 2002/03. For instance, the share of population living in households where the head completed secondary surged from 18.8% to 31.4%, whereas the share of population living in households where the head completed university or obtained a diploma fell from 25% to 16%. Neither the way the household head was identified nor the questions regarding the level of education changed between both surveys.

erty is similar among those with primary or up to lower secondary. For levels beyond secondary, it is interesting that poverty is about the same when the head has obtained a diploma or a university degree, a finding that is quite different from what was observed in 2002/03. Poverty among those with vocational education is clearly lower than any secondary degree but higher than those with a diploma or a university degree. This overall pattern is the same across urban and rural areas, but the effect in the latter is less pronounced than in the former.

ployed but similar to those whose head is out of the labor force. Among the employed, poverty levels are lower in families whose head works in services compared to those in industries and significantly lower than those in agriculture. Two out of five poor live in households whose head engages in agriculture, a fifth in services, one out of seven in industry and about a quarter in families whose head has not worked at all during the past year. The distribution of the population follows a very similar pattern, except that agriculture decreases its share and the contrary occurs to services.

Table 2.7: Poverty by highest educational level completed of the household head

	National	None	Primary	Lower secondary	Complete secondary	Vocational	Diploma	University	Other
Headcount	35.2	58.0	51.5	48.1	34.6	25.3	9.5	8.8	6.1
	(0.8)	(2.8)	(1.7)	(1.4)	(1.2)	(1.6)	(1.1)	(1.4)	(4.5)
Poverty gap	10.1	19.8	16.0	14.1	9.3	6.9	2.1	2.3	0.6
	(0.3)	(1.4)	(0.7)	(0.5)	(0.4)	(0.5)	(0.3)	(0.5)	(0.4)
Severity	4.0	8.9	6.7	5.6	3.5	2.6	0.6	0.8	0.1
	(0.2)	(0.9)	(0.4)	(0.3)	(0.2)	(0.3)	(0.1)	(0.2)	(0.0)
Memorandum items:									
Population share (%)	100.0	3.9	11.9	23.1	31.4	13.0	10.0	6.0	0.6
Share among the poor (%)	100.0	6.5	17.4	31.6	30.9	9.4	2.7	1.5	0.1
Household size	3.9	3.3	3.6	4.2	4.0	4.0	3.7	3.3	3.6
Dependency ratio (%)	38.9	52.8	49.6	37.4	35.8	36.7	38.6	32.6	30.4
Children (% household size)	26.4	22.3	20.9	29.6	30.1	25.1	19.7	26.0	24.7
Age of household head	44.9	52.8	52.6	42.7	40.9	47.1	50.0	37.9	39.8
Male household head (%)	78.0	59.9	71.2	85.5	80.9	72.2	80.1	74.7	80.9

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.4.4 Employment

One of the most evident determinants of household welfare is whether or not their members can participate in the labor market and particularly, if employed, the type of job that they can engage in. Table 2.8 combines information on participation on the labor force, main sector of economic activity and poverty.[24] Population living in households where the head is currently working has higher living standards than those whose head is unem-

[24] A person participates in the labor force if she worked during the last twelve months, did not work but had a job or did not work, did not have a job but looked for work. Otherwise, she is considered out of the labor force. The reference period of the last 12 months is quite a significant difference with regard to 2002/03, when the reference period was the last week.

Table 2.8: Poverty by labor force participation of the household head

	National	Employed					Unemployed	Out of the labor force	Unspecified
		Total	Agriculture	Industry	Services	Unspecified			
Headcount	35.2	34.3	49.1	32.8	20.9	36.1	54.4	34.9	35.9
	(0.8)	(0.9)	(1.5)	(1.7)	(1.0)	(3.6)	(2.8)	(1.5)	(9.6)
Poverty gap	10.1	9.4	13.7	9.3	5.3	10.8	19.6	10.7	8.8
	(0.3)	(0.3)	(0.5)	(0.6)	(0.3)	(1.5)	(1.4)	(0.6)	(3.2)
Severity	4.0	3.6	5.2	3.7	2.0	4.6	9.1	4.4	3.7
	(0.2)	(0.1)	(0.3)	(0.3)	(0.2)	(0.9)	(0.9)	(0.3)	(1.9)
Memorandum items:									
Population share (%)	100.0	75.7	28.5	14.5	30.3	2.4	4.2	19.9	0.3
Share among the poor (%)	100.0	73.6	39.7	13.5	18.0	2.5	6.5	19.7	0.3
Household size	3.9	4.0	4.0	4.1	3.9	4.2	4.1	3.5	3.4
Dependency ratio (%)	38.9	35.4	40.0	32.5	32.2	38.6	34.1	51.4	37.2
Children (% household size)	26.4	29.3	29.3	29.7	28.7	35.8	31.6	15.6	30.5
Age of household head	44.9	41.0	42.2	39.8	40.6	39.3	38.6	58.8	43.2
Male household head (%)	78.0	83.3	89.1	87.1	77.6	63.9	86.0	59.4	54.2

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

The relationship between poverty and employment can be further explored by looking at the sector of employment. Table 2.9 separates employed household heads in herders, working in the private sector, in the public sector and in state companies.[25] An additional breakdown is done among those out of the labor force into pensioners and others. A few findings are worth emphasizing. First, the population in households whose head is involved in livestock activities experiences higher poverty than those whose head is employed anywhere else. Second, public and especially state jobs seem to offer better living standards to the 15 percent of Mongolians living in those households. Third, poverty levels in households with heads employed in the private sector are somewhere in between, although much closer to those working in public posts than to those rearing livestock.

Fourth, families with an unemployed head experience more than a 50 percent chance of being poor. However, they comprise less than 7 percent of the poor. Fifth, there are two very different groups among heads that are not participating in the labor market: pensioners and non-pensioners. The probability of being poor in households where the head is a pensioner is significantly lower than in families where the head is not, 32% and 44% respectively. However, a higher proportion of the poor have a pensioner as a head than a non-pensioner (14 and 6 percent respectively). Sixth, demographic indicators provide some useful information. Pensioners are the only group that seems to stand out compared to all the other groups. For instance, the average age of the household head is significantly higher, whereas the household size and the number of children are considerably lower. They also have the highest chance of being headed by a woman. Among those employed, the average age of the head is similar across all groups as well as the household size and the proportion of children. One interesting difference is that female heads are more common among those employed in public jobs.

[25] State companies are concentrated in few sectors in the economy, mainly transportation, utilities and mining.

Table 2.9: Poverty by sector of employment of the household head

	National	Employed					Unemployed	Out of the labor force		Unspecified
		Herder	Private	Public	State	Unspecified		Pensioner	Other	
Headcount	35.2	49.0	29.2	22.4	14.6	44.6	54.4	32.0	43.7	35.9
	(0.8)	(1.6)	(1.1)	(1.6)	(2.3)	(4.2)	(2.8)	(1.6)	(2.7)	(9.6)
Poverty gap	10.1	13.4	8.0	5.7	4.5	15.0	19.6	9.4	14.9	8.8
	(0.3)	(0.6)	(0.4)	(0.6)	(0.9)	(2.0)	(1.4)	(0.6)	(1.2)	(3.2)
Severity	4.0	5.0	3.1	2.1	1.9	7.0	9.1	3.7	6.8	3.7
	(0.2)	(0.3)	(0.2)	(0.3)	(0.5)	(1.3)	(0.9)	(0.3)	(0.7)	(1.9)
Memorandum items:										
Population share (%)	100.0	24.4	34.7	11.4	3.4	1.8	4.2	14.9	5.0	0.3
Share among the poor (%)	100.0	34.0	28.8	7.3	1.4	2.2	6.5	13.5	6.2	0.3
Household size	3.9	3.9	4.1	3.9	3.9	3.7	4.1	3.3	4.0	3.4
Dependency ratio (%)	38.9	40.8	33.0	30.7	32.2	42.4	34.1	58.3	25.9	37.2
Children (% household size)	26.4	29.6	29.8	26.9	28.6	34.3	31.6	13.7	22.9	30.5
Age of household head	44.9	42.0	39.9	42.3	41.0	40.3	38.6	63.6	41.1	43.2
Male household head (%)	78.0	89.5	82.4	75.0	90.1	56.2	86.0	55.2	74.7	54.2

Note: Pensioner refers to household heads receiving any pension or benefit from the state.
Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.4.5. Migrant status

The pace of migration continued in the last years as people kept relocating to new areas because of job opportunities, marriage and the desire to live close to the market or to relatives. According to the household survey almost two out of five people live in households headed by a migrant, this share increases to more than half in urban areas and declines to a fifth in rural areas.[26] What is the observed connection between poverty and migration? Poverty is lower among households headed by a migrant than among households headed by a non-migrant, 28% and 40% respectively (Table 2.10). The same pattern is found in rural areas, but being a migrant household head in urban areas does not make any significant difference in terms of poverty. Where are immigrants located? Immigrants are concentrated in urban areas, four out of five immigrants live in urban domains. Similarly, one third of the poor lives in households headed by an immigrant, and three out of four of them are in urban areas. Finally, migrant heads are older than non-migrant heads, particularly in urban areas. On the other hand, migrant heads are more likely to be female in rural domains.

[26] The definition considers population born in a different soum in which they are currently living and people that originally emigrated from their soum of birth but returned to live in there. This estimate is substantially higher than the 12.3% finding in 2002/03. The difference seems to be explained by a better and more accurate listing of households for sampling purposes, which are now constantly updated by the local authorities and monitored by the NSO.

Table 2.10: Poverty by migrant status of the household head

	National		Urban		Rural	
	Non-migrant	Migrant	Non-migrant	Migrant	Non-migrant	Migrant
Headcount	40.1	27.8	27.6	26.3	49.4	33.9
	(1.0)	(1.2)	(1.4)	(1.3)	(1.3)	(2.3)
Poverty gap	11.7	7.7	8.0	7.4	14.4	9.1
	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.8)
Severity	4.6	3.1	3.3	2.9	5.6	3.5
	(0.2)	(0.2)	(0.3)	(0.2)	(0.3)	(0.4)
Memorandum items:						
Population share (%)	60.6	39.4	44.9	55.1	81.8	18.2
Share among the poor (%)	68.9	31.1	46.2	53.8	86.7	13.3
Household size	3.9	3.9	3.8	3.9	3.9	3.8
Dependency ratio (%)	38.2	40.0	34.0	40.3	41.3	38.7
Children (% household size)	27.5	24.6	25.6	24.6	29.0	24.8
Age of household head	43.2	47.4	43.2	47.8	43.3	45.9
Male household head (%)	79.9	75.1	73.5	73.9	84.7	79.8

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.5. Assets

Ownership of assets is an essential factor to determine the living standards of the population. It allows households to hedge against economic insecurity or seasonal patterns in agriculture. If the main breadwinner is suddenly unemployed or if a natural disaster occurs, such as heavy snowstorms, droughts or floods, the household can use its assets to smooth their consumption. For instance, livestock can be slaughtered or money taken out from savings. Assets are generally crucial to access credit markets. Hence this wealth indicator works as insurance to avoid vulnerability. Three types of household assets will be examined: livestock, land and financial assets.

2.5.1 Livestock

Raising livestock serves a dual purpose in the country because livestock is not only a key asset for families but also the main production factor in the most widespread economic activity in the country. At least two out of five of those working engage in herding and related activities. Stockbreeding involves mainly five types of animals, each one reflecting different opportunities for the household, having goats implies been involved in the cashmere business, owning sheep or camels is related to the wool commerce, and raising cattle and horses is associated with meat, milk and dairy production. Sheep and cattle also contribute to the skin and hides trade.

Table 2.11 shows livestock holdings for the main five species. Almost four out of ten people hold animals. Cattle, horses, goats and sheep are held by around one fourth to one third of the population, whereas camels are brought up by less than one out of twenty people. Patterns vary by region, less than 10% of urban dwellers own animals compared with slightly more than three quarters in rural areas. Ulaanbaatar is the domain where ownership of animals is lowest, not even 3 percent. By contrast, in the countryside more than 90 percent of the population holds some type of animal. A more even pattern is observed when looking at the west-east divide, with the West as the region where ownership is higher, especially for sheep and goats. These findings are generally quite similar to those in 2002/03. However, across regions, ownership in the West has improved notably (from 54% to 70%), whereas it has fallen in the East (from 54% to 47%).

Table 2.11: Livestock holdings

	Cattle		Horses		Camels		Sheep		Goats		Bods	
	Holders (%)	Average among holders	Holders (%)	Average among holders	Holders (%)	Average among holders	Holders (%)	Average among holders	Holders (%)	Average among holders	Holders (%)	Average among holders
National	28.8	3.3	26.0	3.3	4.1	1.4	30.8	21.0	33.2	19.5	37.2	10.2
Urban	5.5	2.7	3.5	2.9	0.2	1.7	5.0	15.3	5.7	15.4	8.2	6.0
Rural	60.5	3.4	56.6	3.3	9.4	1.4	65.8	21.6	70.6	19.9	76.5	10.8
Ulaanbaatar	2.4	3.1	0.8	5.4	0.0	5.0	0.9	17.3	1.0	13.1	2.8	5.6
Aimag centers	10.5	2.5	7.9	2.5	0.5	1.7	11.6	15.1	13.3	15.7	17.0	6.1
Soum centers	40.6	2.7	30.5	2.5	2.0	1.1	39.4	12.6	45.4	12.8	54.2	6.4
Countryside	74.3	3.7	74.6	3.6	14.5	1.5	84.0	24.5	88.0	22.5	92.0	12.6
West	52.2	2.3	47.3	2.0	10.0	0.9	59.5	18.7	66.8	21.6	70.2	8.4
Highlands	49.1	4.0	45.8	3.3	2.4	1.8	52.9	21.1	55.3	16.2	59.8	10.9
Central a/	27.6	3.4	24.9	4.3	6.3	2.6	31.8	24.3	34.3	24.6	41.8	11.0
East	42.5	3.9	39.5	5.1	10.3	0.9	38.5	23.4	41.2	16.8	47.1	13.1
Non-poor	24.6	4.0	22.4	4.1	3.8	1.7	26.4	26.7	28.0	24.4	31.7	12.7
Poor	36.6	2.6	32.7	2.2	4.6	1.0	38.7	14.0	42.9	13.6	47.3	7.1

a/ Excludes Ulaanbaatar.
Note: The bod scale was used to estimate the size of the herd. These factors transform cattle, camels, sheep and goats into equivalent horses. One horse is assumed to have the same value as one cattle, 0.67 camels, six sheep or eight goats. Cattle includes cows and yaks.
Source: HSES 2007/08.

The average livestock per capita among herders is 10 bods, or an equivalent of 10 horses[27] (see also Table 2.11). This represents quite an improvement with respect to 2002/03, when ownership was the same but the average number of bods was 7. Not surprisingly, the amount of bods in rural areas is almost double than in urban domains. Among analytical domains, the more rural the area is, the higher the average holdings are. Across regions, the East has the highest livestock per capita, partly because of its higher holdings of cattle and horses. The fact that most of its territory consists of vast steppes and grasslands, a critical element for herding, favors these activities in that region. On the other hand, the West is the region where ownership of almost all species is the highest, but the average number of animals is the lowest. Finally, more poor people are involved in rearing animals but their average livestock held is considerably lower than that of the non-poor. This pattern is similar for all types of livestock.

What is the connection between raising livestock and living standards? Table 2.12 compares poverty measures by urban and rural areas and by whether or not the household holds livestock. The evidence seems to suggest that the impact of rearing livestock is very different in those two domains. In urban areas it is linked with a higher level of poverty, probably reflecting the fact that in cities reliance on agriculture activities is not enough, households must diversify in order to improve their livelihood. However, in rural areas, owning livestock appears not to increase the welfare of the population. The incidence of poverty is about the same than among non-herder households, although the poverty gap and the severity of poverty indices are lower among herders. Across regions, it is in the East and the Central area where herders enjoy higher living standards than non-herders, but only in the East the level of poverty is considerably lower among the population involved in herding. Both in the West and the Highlands the incidence of poverty is lower among non-herders, but only in the latter is significantly lower.

[27] The purpose of the bod scale is to calculate the size of the herd by transforming all livestock held into equivalent horses. One horse is assumed to be the same as one cattle (cow or yak), 0.67 camels, six sheep or eight goats.

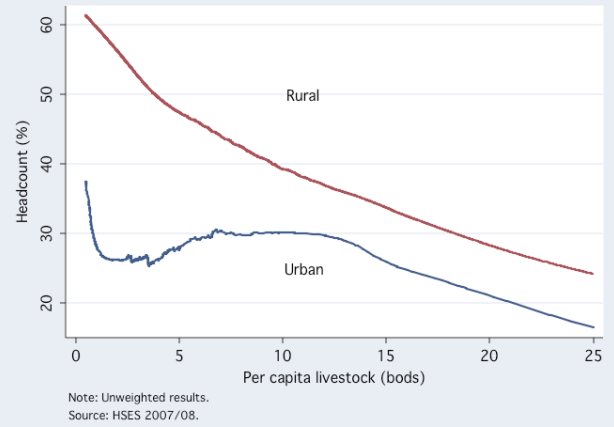
Table 2.12: Poverty by ownership of livestock

	National		Urban		Rural	
	Non-herder	Herder	Non-herder	Herder	Non-herder	Herder
Headcount	29.6	44.8	26.4	31.7	46.2	46.7
	(1.0)	(1.3)	(1.1)	(3.0)	(2.1)	(1.4)
Poverty gap	8.8	12.3	7.6	8.0	15.0	12.9
	(0.4)	(0.5)	(0.4)	(0.9)	(0.8)	(0.5)
Severity	3.7	4.6	3.1	2.8	6.5	4.8
	(0.2)	(0.2)	(0.2)	(0.4)	(0.4)	(0.3)
Memorandum items:						
Population share (%)	62.8	37.2	91.8	8.2	23.5	76.5
Share among the poor (%)	52.7	47.3	90.3	9.7	23.3	76.7
Household size	3.8	4.0	3.9	4.1	3.6	4.0
Dependency ratio (%)	37.2	41.8	36.9	43.6	38.5	41.6
Children (% household size)	25.0	28.9	24.9	27.2	25.6	29.1
Age of household head	45.3	44.0	45.5	47.5	44.4	43.5
Male household head (%)	73.2	86.4	72.9	83.6	74.8	86.8

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

This result seems to imply that, at least in rural areas, being a herder does not hedge against poverty. This finding is quite different from 2002/03, where poverty among rural herders was substantially lower than among rural non-herders. Does the number of livestock held matter? Figure 2.2 displays the incidence of poverty relative to the level of per capita livestock among herders. It is found that indeed poverty declines with a higher number of per capita livestock in both urban and rural domains. Although the population owning livestock is better-off compared to those that do not in both urban and rural areas, among livestock owners, the more livestock they hold, the less poverty they experience. A possible explanation for this general finding is that the more animals the household own, the more productive activities it can engage, so by diversifying, the household minimizes its exposure to negative shocks that may hit them harder if they relied only in one particular activity. The fact that 75% of herders own at least three of the main five types of animals provides support to this hypothesis.[28]

Figure 2.2: Poverty by herd size



2.5.2 Land

Land is typically recognized as one of the most important assets of households, particularly in agricultural economies. However in Mongolia farming is limited and it does not compared with the significance of herding activities. A few factors

[28] The other case would be if households focus in only one or two livestock activities, which may allow them to specialize and reach some economies of scale in the production process.

may help to explain why agriculture is not developed in the country. First, exposure to weather conditions makes farming difficult because production can be easily lost due to weather hazards. Second, the quality of the soil and the low share of irrigated land affect productivity. Third, more investment may be required for farming than, say, for herding, both in terms of labor and capital. Fourth, it is not a traditional activity performed by households, just until a few years ago the state used to run farms in the country. Fifth, farming is harder to reconcile with the movements involved in the long-established way of breeding livestock.

According to the household survey, less than one out of ten people lives in households that either own agricultural land or use land for agricultural purposes. (Table 2.13). Similar shares are observed in urban and rural domains. Although at the national level landowners are worse-off than those that do not own land, ownership or use of land does not seem to influence the likelihood of being poor in urban or rural areas. It is also worth mentioning that more than four out of five landowners use all or part of their land to grow crops, that is, the majority of landowners make use of their land in a productive way. Finally, the poor are just marginally more likely to be involved in agriculture than the non-poor, 9.6% and 7.5% respectively.

2.5.3 Financial assets

A significant component of household wealth is generally made of financial assets. If income exceeds expenditure, people can accumulate savings, but if they are more concerned with daily survival, this is unlikely to happen. In Mongolia, one quarter of the population lives in households that have savings accounts in financial institutions.[29] This is a substantial increase with respect to the estimate of 7% in 2002/03.[30] This high-

Table 2.13: Poverty by ownership of land

	National		Urban		Rural	
	No land	Land	No land	Land	No land	Land
Headcount	34.7	41.1	26.9	27.0	46.3	48.1
	(0.8)	(2.5)	(1.1)	(3.8)	(1.3)	(3.0)
Poverty gap	10.0	11.7	7.6	8.3	13.4	13.4
	(0.3)	(0.9)	(0.4)	(1.4)	(0.5)	(1.1)
Severity	3.9	4.6	3.1	3.4	5.2	5.2
	(0.2)	(0.4)	(0.2)	(0.7)	(0.2)	(0.6)
Memorandum items:						
Population share (%)	91.8	8.2	95.2	4.8	87.1	12.9
Share among the poor (%)	90.4	9.6	95.2	4.8	86.7	13.3
Household size	3.8	4.4	3.9	4.3	3.8	4.4
Dependency ratio (%)	38.9	38.2	37.4	38.3	41.1	38.2
Children (% household size)	26.3	27.6	25.1	24.4	28.1	29.2
Age of household head	44.9	44.9	45.6	47.3	43.8	43.6
Male household head (%)	77.5	84.9	73.4	80.6	83.4	87.1

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

[29] The household survey does not ask for what type of monetary savings the household holds, but it is reasonable to assume that families will refer to savings accounts in banks and/or in savings and loans associations. For instance, holding cash in the dwelling as a way of saving is not a common practice.

[30] The figure in the 2002/03 report was 12%, but that included 5% of the population that owned stocks..

er degree of financial intermediation can be explained, among other reasons, by a 2003 law that allowed the presence of new financial institutions to capture savings from the public (e.g. savings and loans associations), by banks opening more branches and offering more services, by beneficiaries of public allowances now been permitted to receive their pensions directly into savings accounts, and perhaps by the increase in welfare levels of some segments of the population that allowed them to save.

Savers in urban areas also represent one quarter of its population, while in rural areas this share falls to one fifth. It is quite obvious from the information displayed in Table 2.14 that having savings is strongly and negatively associated with poverty, particularly in Ulaanbaatar and aimag centers where the poverty incidence among savers is one third that among non-savers. In soum centers and the countryside, three out of ten savers are poor compared to one out of two among non-savers. This overall pattern is even more evident when comparing the other two poverty measures. Lastly, the poor make less use of the financial system than the non-poor (13% and 31% respectively).

2.6. Housing

Another key determinant of living standards for the population is the type of housing they occupy and the access to basic infrastructure services. Households can quickly improve their welfare if they are provided with a better dwelling or with services that make them less vulnerable and expand their options and opportunities. A proper infrastructure will lift some of the constraints they face to increase their productivity, for example, it could make a big difference if instead of fetching water from a place half an hour away from the dwelling, household members could obtain water from an improved source located closer to the dwelling, say a public standpipe, or even better, if they could be connected to the water network. Two aspects of housing will be examined: type of dwellings and access to basic services.

2.6.1 Dwelling

Gers are the most common type of housing in Mongolia, 46% of dwellers live there, a third in houses and a fifth in apartments. This varies by regions, in urban areas two out of five people live

Table 2.14 Poverty by possession of savings

	National		Urban		Rural	
	Non-saver	Saver	Non-saver	Saver	Non-saver	Saver
Headcount	40.6	18.3	32.6	10.7	51.0	30.6
	(0.9)	(1.1)	(1.2)	(1.1)	(1.3)	(1.9)
Poverty gap	11.9	4.5	9.5	2.6	15.0	7.7
	(0.3)	(0.3)	(0.5)	(0.4)	(0.5)	(0.6)
Severity	4.8	1.6	3.8	0.9	6.0	2.6
	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)
Memorandum items:						
Population share (%)	75.8	24.2	74.0	26.0	78.3	21.7
Share among the poor (%)	87.4	12.6	89.6	10.4	85.7	14.3
Household size	3.8	4.0	3.9	3.9	3.8	4.1
Dependency ratio (%)	38.9	38.7	37.5	37.2	40.7	41.3
Children (% household size)	25.0	30.9	23.6	29.0	26.7	34.2
Age of household head	45.6	42.4	46.6	43.3	44.5	40.8
Male household head (%)	76.7	82.4	71.6	80.0	83.1	86.7

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

in houses, three out of ten in apartments and another three out of ten in gers. In rural areas, two thirds of the population live in gers, a quarter in houses and the remaining in apartments. Table 2.15 displays the relationship between poverty and type of dwellings. The incidence of poverty is higher in gers, lower in houses and the least in apartments. The same trend is observed in urban and rural areas, but relative differences are quite dissimilar. For instance, around half of those living in gers are poor, whether they live in urban or rural areas. But poverty among those living in urban apartments is only 7%, while among those living in rural apartments is 22%. The poor are more likely to live in gers, a bit more than three out of five do do, a third in houses and barely one out of twenty in apartments. In Ulaanbaatar and aimag centers, people living in gers account for 30 percent of the population but 50 percent of the poor, whereas those in apartments account also for 30 percent of the population but just 8 percent of the poor. In rural domains the distribution of the poor follows the distribution of the population, seven out of ten live in gers and one quarter in houses.

2.6.2 Infrastructure services

Living standards are increased by adequate infrastructure services such as access to an improved source of water, proper sanitation facilities or electricity.[31] Lack of safe water or basic sanitation affects the health of the population by increasing the chances of illnesses that are quickly transmitted in those environments. Lack of electricity has a direct effect on education and investment prospects. How does Mongolia fare in these dimensions of welfare?

The association between poverty and access to basic infrastructure services is displayed in Tables

Table 2.15 Poverty by type of dwelling

	National				Urban				Rural			
	Ger	Apartment	House	Other	Ger	Apartment	House	Other	Ger	Apartment	House	Other
Headcount	48.8	8.5	32.6	44.3	46.7	6.7	27.9	46.1	50.1	22.0	42.4	41.3
	(1.1)	(0.8)	(1.3)	(7.7)	(1.8)	(0.8)	(1.5)	(9.9)	(1.4)	(3.1)	(2.2)	(12.2)
Poverty gap	14.6	2.2	8.6	12.9	14.2	1.9	7.4	14.7	14.8	5.0	11.4	9.6
	(0.4)	(0.3)	(0.4)	(2.7)	(0.7)	(0.3)	(0.5)	(3.6)	(0.6)	(0.9)	(0.7)	(3.8)
Severity	5.9	0.9	3.3	4.7	5.9	0.8	2.8	5.6	5.9	1.7	4.2	3.2
	(0.2)	(0.2)	(0.2)	(1.2)	(0.4)	(0.2)	(0.3)	(1.6)	(0.3)	(0.4)	(0.4)	(1.5)
Memorandum items:												
Population share (%)	45.7	20.0	33.8	0.5	28.8	30.9	39.8	0.5	68.6	5.3	25.7	0.4
Share among the poor (%)	63.3	4.8	31.3	0.6	50.0	7.7	41.3	0.9	73.8	2.5	23.4	0.4
Household size	3.9	3.5	4.2	3.4	4.0	3.5	4.2	3.4	3.8	3.7	4.1	3.3
Dependency ratio (%)	41.7	35.5	37.2	34.7	40.9	35.7	36.6	31.2	42.1	34.0	38.4	40.7
Children (% household size)	28.1	23.3	26.2	25.1	27.6	22.7	25.3	23.2	28.3	27.7	28.1	28.3
Age of household head	44.2	45.1	45.6	43.3	45.4	45.5	46.1	44.4	43.6	42.1	44.6	41.3
Male household head (%)	79.6	72.4	80.0	56.6	71.4	71.6	77.9	56.7	84.0	79.8	84.6	56.4

Note: Other includes student residences, company dormitories and any other building designed not to be inhabited by households.
Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

[31] Access to an improved water source refers to the percentage of the population with household connection, public standpipe or protected well or spring. Unimproved sources include vendors, tanker trucks, water storage sites and unprotected wells and springs. Sanitation refers to the percentage of the population with access to improved sanitation facilities such as adequate excreta disposal facilities (private or shared but not public). They can range from simple but protected pit latrines to flush toilets with a sewerage connection.

2.16 and 2.17. According to the household survey, four out of nine people have access to improved sources of water, five out of nine to improved sanitation facilities, three quarters to electricity, and one third of the population to all of them. Conditions with respect to 2002/03 have improved in terms of sanitation, remain the same for electricity, but unfortunately nothing can be said regarding access to improved sources of water or to all three services. There is a considerable urban bias because the availability of these services in urban areas is far more common than in rural regions. For instance, three quarters of urban dwellers have access to improved sanitation facilities compared to one third in rural areas. Electricity is enjoyed by almost all urban dwellers, but only two out of five have access to it in rural areas. It is interesting to mention that a feature not captured in none of these two tables is the huge increase in the use of solar energy in rural areas. The government implemented a program to provide solar panels to herders at reduced prices and it the last few years this program has expanded considerably. In 2002/03, only 4% of the rural population used solar energy; however, now this figure stands at 36%. Even when this source of energy is not a perfect substitute for electricity, now three quarters of the rural population have access to either solar energy or electricity. Even more significant is the comparison among those receiving all of the three basic services, almost half in urban areas but only one out of six people in rural regions. Another factor, not fully captured in the survey, is the quality of the services. Urban areas generally have access to better services than rural areas. For instance, tap water may be regarded as of better quality than water coming from a well, which, even when is protected, could be more exposed to contamination.

Population lacking appropriate access to water, sanitation or electricity is poorer than those with access to them. The contrast is more evident when comparing access to all of the three basic services, less than one fifth of the population re-

Table 2.16: Poverty by access to infrastructure services

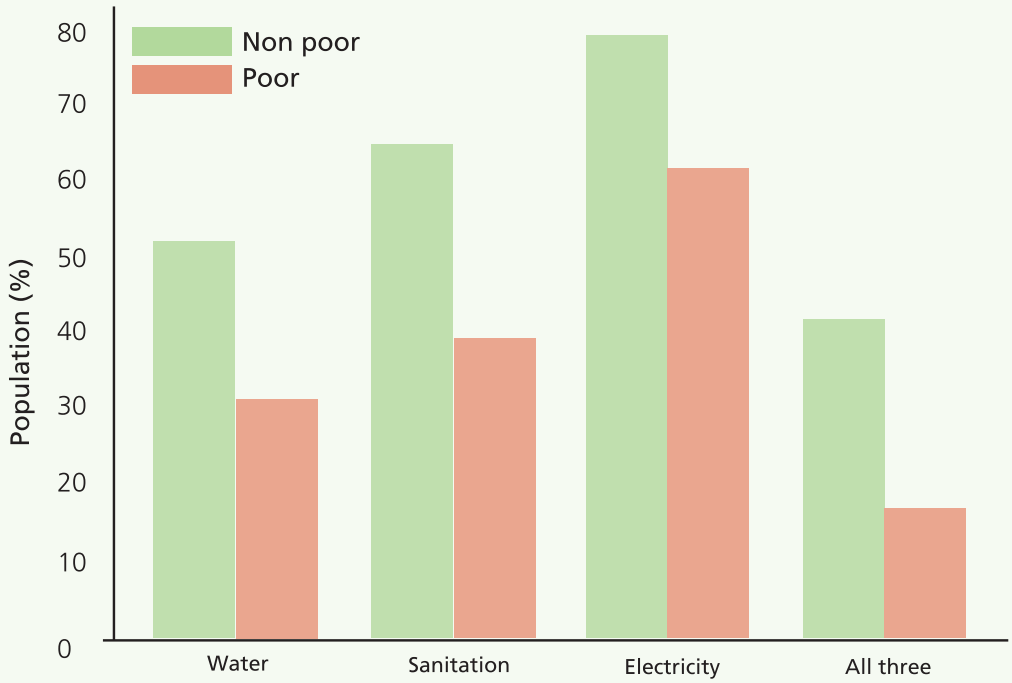
	Improved water sources a/		Sanitation b/		Electricity		All three	
	No	Yes	No	Yes	No	Yes	No	Yes
Headcount	44.0	24.8	48.8	25.0	51.1	29.7	43.9	18.3
	(1.1)	(1.1)	(1.2)	(0.9)	(1.5)	(0.9)	(1.0)	(1.1)
Poverty gap	12.6	7.1	14.4	6.8	14.8	8.5	12.7	5.0
	(0.4)	(0.4)	(0.5)	(0.3)	(0.6)	(0.3)	(0.4)	(0.4)
Severity	4.9	2.9	5.8	2.6	5.8	3.4	5.1	1.9
	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.2)	(0.2)	(0.2)
Memorandum items:								
Population share (%)	54.5	45.5	43.1	56.9	25.8	74.2	66.1	33.9
Share among the poor (%)	68.0	32.0	59.6	40.4	37.4	62.6	82.4	17.6
Household size	4.0	3.8	3.9	3.8	3.9	3.9	4.0	3.7
Dependency ratio (%)	40.1	37.4	40.4	37.8	41.8	37.8	40.1	36.7
Children (% household size)	27.3	25.4	28.2	25.1	28.6	25.6	27.4	24.6
Age of household head	44.6	45.1	43.8	45.7	43.2	45.4	44.6	45.4
Male household head (%)	80.1	75.6	81.4	75.6	85.7	75.4	79.8	74.8

a/ It refers to the percentage of the population with access to an improved water source such as household connection, public standpipe or protected well or spring. Unimproved sources include vendors, tanker trucks, water storage sites and unprotected wells and springs.
b/ Sanitation refers to the percentage of the population with access to improved sanitation facilities such as adequate excreta disposal facilities (private or shared but not public). They can range from simple but protected pit latrines to flush toilets with sewerage connection.
Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

ceiving them is poor compare to more than two fifths among those who do not. This pattern is the same in both urban and rural areas, although in the latter the differences are less pronounced. In other words, in urban areas the incidence of poverty is considerably lower among those receiving any service or all of them than among dwellers lacking access to infrastructure services.

The availability of infrastructure services by poverty status of the population is shown in Figure 2.3. The non-poor have better access to improved water sources, sanitation facilities and electricity than the poor, and the gap is more substantial when considering joint access. Once again, this pattern is similar in urban and rural areas. However, differences in access between the non-poor and the poor are considerably less pronounced in rural areas.

Figure 2.3: Access to infrastructure services by poverty status



Source: HSES 2007/08

Table 2.17: Poverty by access to infrastructure services in urban and rural areas

	Improved water sources a/				Sanitation b/				Electricity				All three			
	Urban		Rural		Urban		Rural		Urban		Rural		Urban		Rural	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Headcount	37.7	17.7	49.8	40.1	44.4	20.4	51.2	38.0	66.3	26.4	50.7	40.6	37.7	14.3	49.5	32.7
	(1.6)	(1.3)	(1.4)	(1.8)	(2.1)	(1.1)	(1.5)	(1.7)	(7.0)	(1.1)	(1.6)	(1.7)	(1.5)	(1.2)	(1.3)	(2.2)
Poverty gap	10.8	5.0	14.2	11.7	13.6	5.5	14.9	10.5	24.8	7.5	14.5	11.8	10.9	3.9	14.3	8.8
	(0.6)	(0.5)	(0.6)	(0.7)	(0.9)	(0.4)	(0.6)	(0.6)	(4.2)	(0.4)	(0.6)	(0.6)	(0.6)	(0.4)	(0.5)	(0.8)
Severity	4.4	2.0	5.5	4.7	5.8	2.1	5.8	4.2	12.6	3.0	5.6	4.7	4.4	1.5	5.6	3.4
	(0.3)	(0.2)	(0.3)	(0.4)	(0.5)	(0.2)	(0.3)	(0.3)	(3.2)	(0.2)	(0.3)	(0.3)	(0.3)	(0.2)	(0.3)	(0.4)
Memorandum items:																
Population share (%)	45.8	54.2	66.3	33.7	26.9	73.1	65.1	34.9	1.2	98.8	59.1	40.9	53.8	46.2	82.7	17.3
Share among the poor (%)	64.3	35.7	70.9	29.1	44.4	55.6	71.5	28.5	3.0	97.0	64.3	35.7	75.5	24.5	87.9	12.1
Household size	4.1	3.7	3.9	3.8	4.2	3.8	3.8	3.9	3.7	3.9	3.9	3.9	4.1	3.7	3.9	3.9
Dependency ratio (%)	38.5	36.6	41.6	39.2	38.7	37.0	41.2	39.9	41.1	37.4	41.9	39.2	38.5	36.4	41.4	37.7
Children (% household size)	25.9	24.4	28.5	27.6	27.3	24.3	28.7	27.4	28.9	25.0	28.6	27.8	26.1	23.9	28.5	27.1
Age of household head	46.0	45.5	43.4	44.4	45.3	45.8	43.0	45.2	43.4	45.7	43.2	44.5	45.8	45.6	43.6	44.6
Male household head (%)	74.1	73.5	85.5	80.4	73.6	73.8	85.4	80.8	78.2	73.7	85.9	80.8	74.1	73.4	84.5	80.3

a/ It refers to the percentage of the population with access to an improved water source such as household connection, public standpipe or protected well or spring.
Unimproved sources include vendors, tanker trucks, water storage sites and unprotected wells and springs.
b/ Sanitation refers to the percentage of the population with access to improved sanitation facilities such as adequate excreta disposal facilities (private or shared but not public).
They can range from simple but protected pit latrines to flush toilets with a sewerage connection.
Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.7. Safety nets

Safety nets typically play a key role in reducing economic insecurity and alleviating poverty. Their aim is to mitigate the adverse effects of economic, social, environmental and physical situations that affect the household ability to properly cope with them. These shocks can be permanent, such as a disability that hinders the faculty to work, or temporal, like unemployment. They can also have an effect on most members of a society, such as the occurrence of natural disasters, or be specific to a family, like the death of the main earner in the household. Each shock may require different responses.

Broadly speaking there are two types of networks that serve as safety nets: private safety nets, which involve traditional, and generally informal, coping mechanisms based on community and family support; and public transfers, which are the response of the state to protect and help those that are vulnerable. Mongolia possesses an extensive system of social protection, mainly insurance and assistance.[32] But the population also relies in an informal support network. For instance, herders often exchange animals as a form of private transfer. This section examines first the extent and relative importance of formal and informal networks in the country and then analyzes the incidence of private and public transfers received by the household.

2.7.1 Extent and importance of transfers

Table 2.18 summarizes information on safety nets in the country according to the source of the transfers and remittances. Several findings are worth highlighting. First, the extent of these networks is impressive, nine out of ten households receive some sort of transfer. Second, the coverage of public and private transfers received by the households is quite different. Public transfers reach almost nine out of ten households, while private remittances are received by one fifth of the households. Third, public transfers account for slightly more than three quarters of the total amount transferred. Fourth, the two main components of public transfers are retirement pensions and child allowances. The former reaches more than one quarter of households and represents more than half of the public funds. The latter reaches seven out of ten households and accounts for one quarter of the public transfers. Actually, the universal coverage of the child allowances is the main factor behind the surge in coverage by public transfers compared to 2002/03, when it reached less than half of the households. Fifth, as expected, family and friends account for more than nine out of ten Tugrug transferred from private sources to households. Sixth, although private transfers from abroad reach four out of five households receiving any private remittance, they only account for half of the amount transferred by private sources. Lastly, public transfers make up for a bit more than a fifth of the consumption of households receiving them, while private transfers make up for slightly less than one fifth. Overall, all public transfers and private remittances account for one quarter of the consumption of households receiving any transfer or remittance.

[32] Social insurance comprises benefits provided by the state to cover specific risks such as retirement pensions, unemployment or sickness benefits. Social assistance refers to benefits intended to provide protection to disadvantaged or vulnerable groups. These include disability or special pensions, and also family assistance, which is targeted particularly to children.

Table 2.18: Transfers and remittances received by the household

	Households with transfers (%)	Population with transfers (%)	Among those receiving: Average transfer per household (Tugrug per month)	Among those receiving: Share of consumption (%)	Share of total transfers (%)
Total	91.5	94.5	72 917.46	25.9	100.0
Pensions and allowances	88.9	93.1	58 242.09	22.2	77.7
State pension	27.1	25.0	101 980.20	41.5	41.5
Disability pension	7.8	8.5	51 999.65	19.9	6.1
Survivor pension	3.4	3.7	51 841.28	19.5	2.6
Maternity benefit	5.3	6.4	12 201.48	3.9	1.0
Baby care allowance	4.1	5.1	11 344.04	4.1	0.7
Child allowance	70.7	81.2	19 405.59	6.7	20.6
Others a/	13.0	15.3	26 802.94	9.2	5.2
Remittances and aid	21.8	20.2	68 229.08	17.9	22.3
Family and friends	18.9	17.1	74 473.96	19.5	21.1
Others b/	3.6	3.9	22 134.78	6.3	1.2
From within the country	4.7	4.4	158 645.70	35.4	11.1
From abroad	17.7	16.4	42 359.53	12.8	11.2

a/ Includes special pension, unemployment benefits, illness payments, funeral payments and other benefits.
b/ Includes the government, companies and organizations, NGOs, foreign organizations or individuals, and other sources.
Source: HSES 2007/08.

2.7.2 Transfers received by the household

One of the main objectives of safety networks is to provide households with the means to avoid economic insecurity and to help some groups that may be vulnerable. The correlation between the incidence of poverty and whether or not the household receives a private or public transfer is shown in Table 2.19. In the case of private transfers, poverty is lower among the population receiving private remittances. The same pattern is observed in urban areas, while in rural areas poverty is about the same among recipients and non-recipients. Two other findings are worth noticing. First, those benefiting from private transfers only account for one seventh of the poor. Second, female-headed households are more likely to receive private remittances. The comparison regarding public transfers has to be evaluated with caution. Poverty is higher among those benefiting from public funds, which could be interpreted as a good sign in terms of targeting. However, the fact that almost all the population receives some type of public transfer distorts the information that these aggregate indicators may provide.

Table 2.19: Poverty by receipt of private and public transfers

	Private				Public			
	Urban		Rural		Urban		Rural	
	No	Yes	No	Yes	No	Yes	No	Yes
Headcount	28.2	23.3	46.7	45.4	9.9	28.3	20.7	48.1
	(1.2)	(1.8)	(1.3)	(2.7)	(1.6)	(1.1)	(2.3)	(1.2)
Poverty gap	8.2	6.4	13.3	14.2	2.9	8.1	5.6	13.9
	(0.4)	(0.6)	(0.5)	(1.2)	(0.7)	(0.4)	(0.9)	(0.5)
Severity	3.3	2.6	5.1	6.3	1.2	3.2	2.3	5.4
	(0.2)	(0.3)	(0.2)	(0.7)	(0.4)	(0.2)	(0.5)	(0.2)
Memorandum items:								
Population share (%)	72.5	27.5	89.6	10.4	7.9	92.1	5.6	94.4
Share among the poor (%)	76.2	23.8	89.8	10.2	2.9	97.1	2.5	97.5
Household size	4.0	3.6	3.9	3.5	2.6	4.1	2.2	4.0
Dependency ratio (%)	35.6	41.9	40.8	40.9	3.7	42.0	1.8	45.0
Children (% household size)	25.7	23.6	28.6	25.5	2.1	28.2	0.7	31.2
Age of household head	44.8	47.8	43.7	44.4	41.4	46.3	39.5	44.2
Male household head (%)	77.5	64.8	85.3	72.4	70.3	74.2	86.5	83.5

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

2.7.3 Retirement pensions

Given the importance of public transfers, the link between retirement pensions, the most important component of those transfers in terms of funds, and poverty is also examined (see Table 2.20). At the national level, people living in households receiving these pensions are less poor than those who do not receive them.[33] But this hides different regional patterns. In fact, while in rural areas poverty is significantly lower among those receiving these benefits, in urban areas there are no differences in poverty levels between recipients and non-recipients. A possible implication of this finding is that having a retirement pensioner in soum centers and the countryside improves the living standards of the other household members, which is possibly related to the fact that this is a regular source of income and it does not depend on seasonal patterns. The distribution of the poor is closely aligned with that of the population, around a quarter of the poor live in recipient households, this share increases to almost a third in urban areas but falls to less than a fifth in rural regions. Demographic indicators show clear trends too. Children represent a lower share among those receiving transfers but dependency ratios are higher, reflecting a larger share of elders within the household. Household heads are considerably older and more likely to be female in households benefiting from these pensions.

[33] It shall be kept in mind that retirement pensions are not social assistance, they reflect the contributions made by workers to their retirement funds.

Table 2.20: Poverty by receipt of retirement pensions

	National		Urban		Rural	
	No	Yes	No	Yes	No	Yes
Headcount	36.3	32.1	26.5	27.7	48.0	40.9
	(0.9)	(1.3)	(1.2)	(1.7)	(1.3)	(1.9)
Poverty gap	10.5	8.8	7.8	7.5	13.8	11.6
	(0.3)	(0.5)	(0.5)	(0.6)	(0.5)	(0.7)
Severity	4.2	3.3	3.2	2.8	5.4	4.4
	(0.2)	(0.2)	(0.2)	(0.3)	(0.2)	(0.4)
Memorandum items:						
Population share (%)	75.0	25.0	71.0	29.0	80.5	19.5
Share among the poor (%)	77.3	22.7	70.0	30.0	82.9	17.1
Household size	4.0	3.6	3.9	3.8	4.1	3.1
Dependency ratio (%)	32.0	57.4	30.0	55.4	34.5	60.6
Children (% household size)	31.4	12.8	29.4	14.6	34.0	10.0
Age of household head	39.0	60.8	39.5	60.5	38.2	61.2
Male household head (%)	83.6	63.0	78.6	62.1	89.9	64.6

Note: Standard errors taking into account the survey design are shown in parentheses.
Source: HSES 2007/08.

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APPENDIX A: THE SOCIO-ECONOMIC SURVEY 2007/08

This appendix provides some details on the general characteristics of the Socio-Economic Survey (HSES) 2007/08, the sample design and an overall assessment of the quality of the data.

A.1. An overview of the survey

The HSES 2007/08 is a nationally representative survey, whose main objectives are to evaluate and monitor the income and expenditure of households, to update the basket and the weights for the consumer price index, and to offer inputs to the national accounts. The HSES is a permanent survey carried out by the NSO and any 12-month period can be employed for analysis. For this report, the first 12 months of fieldwork will be used, that is, from July 2007 to June 2008. The HSES was conceived as an improved version of the Household Income and Expenditure Survey (HIES) because several modules from a typical Living Standards Measurement Survey were merged to the previous HIES. It contains 16 major modules: basic socio-economic information about the members of the household, education, health, reproductive health, migration, employment, wage jobs, job search, agriculture and herding, non-farm family businesses, other income, savings and loans, housing and energy, durable goods, non-food expenditures and food consumption.

A.2. The sampling design

The sampling frame of the HSES was developed by the NSO based on population figures for 2005 from local registration offices. This updated sampling frame is crucial because the spatial distribution of the population had changed dramatically over the last years and any frame based on the Census 2000 would have not been relevant anymore.[35]

The design of the survey recognizes three explicit strata: Ulaanbaatar, aimag centers, and rural areas and small towns. In addition, the sample was implicitly allocated by districts and khoroos in Ulaanbaatar, and by aimags in rural areas. Each aimag center was an explicit sub-stratum. The aimag of Govisumber was excluded from the sample due to its small size.

The selection strategy was different in each stratum: a two-stage process in urban areas and a three-stage process in rural areas. In Ulaanbaatar, first 360 khesegs were selected, and then 10 households in each kheseg. In aimag centers, first 12 or 24 bags were selected, and then 10 households in each bag.[35] In rural areas, first 52 soums were selected, then 12 bags in each soum and finally 8 households in each bag. All 1,248 primary sampling units or clusters (khesegs, bags or soums) were selected with probability proportional to size and were randomly allocated into the 12 months of survey fieldwork. Thus the survey visited a random sub-sample of 104 clusters each month.

The use of this sampling procedure means that households living in different areas of the country have been selected with different probabilities. Therefore, in order to obtain representative statistics for each stratum and for the whole country, it is necessary to use sampling weights. These weights are applied to each household and correspond to the inverse of the probability of selection, calculated taking into account the sampling strategy.

The sample of 11,232 households was allocated as follows: 3,600 in Ulaanbaatar, 2,640 in aimag centers and 4,992 in rural areas and small towns. However, the actual sample used for this report is slightly lower: 3,571 households in Ulaanbaatar, 2,621 in aimag centers, and 4,980 in rural areas and small towns. The difference corresponds to 60 households that were excluded because they did not have complete information.

[34] Mongolia is divided into 21 aimags. Ulaanbaatar is the capital city and is subdivided into 9 districts, 121 khoroos and 1,035 khesegs. Each kheseg has approximately 200 households. The rest of the country is divided into soums and bags. One of the soums in each aimag is normatively considered as the aimag center, while the others are regarded as the rural area.

[35] Darkhan-Uul and Orkhon were the only two aimags were 24 bags were selected.

Table A.1: HSES 2007/08 sample by stratum and month of interview

	Ulaanbaatar	Aimag centers	Rural	National
July 2007	297	216	408	921
August	297	217	412	926
September	297	219	412	928
October	298	220	407	925
November	299	219	423	941
December	295	220	415	930
January 2008	293	220	411	924
February	299	220	420	939
March	298	220	416	934
April	300	211	425	936
May	300	219	416	935
June	298	220	415	933
Total	3,571	2,621	4,980	11,172

A.3. Data quality

The overall data quality is to be considered of good standard. On the one hand, the large amounts of information that the HSES collects from households imposed new demands on operational strategies and data management compared to the previous HIES. All procedures were streamlined and centralized, which is likely to have had a positive impact on the quality of the information. On the other hand, three different rounds of consistency checks were applied to the data: first during the data entry process, then during the compilation of the raw data files and finally during the preparation of this report. In all cases it was possible to compare these listings against the actual questionnaires filled out by the households (and at least during the first round of checks, some households were visited again) and the data were amended whenever a mistake was found.

APPENDIX B: THE METHODOLOGY FOR POVERTY ANALYSIS

Poverty analysis requires three main elements. First, a welfare indicator, both measurable and acceptable, to rank all population accordingly. Second, an appropriate poverty line to be compared against the chosen indicator in order to classify individuals in poor and non-poor. Lastly, a set of measures that combine individual welfare indicators into an aggregated poverty figure. The methodology will try to replicate as much as possible that employed in the poverty analysis of the HIES/LSMS 2002/03 in order to guarantee comparability over time.[36]

This appendix explains all the steps involved in the construction of the consumption measure, the derivation of the poverty line and the poverty measures. Section 1 reviews the arguments to choose consumption as the preferred welfare indicator. Section 2 describes the estimation of the nominal household consumption. Section 3 and 4 explain how to arrive to an individual measure of real consumption by correcting for differences in location, interview dates and demographic composition of households. Section 3 is concerned with the spatial and temporal price adjustment and Section 4 deals with the household composition adjustment. Section 5 clarifies the derivation of the poverty line. Finally, Section 6 presents the poverty measures used in this report.

B.1. The choice of the welfare indicator

Poverty involves multiple dimensions of deprivation, such as poor health, low human capital, limited access to infrastructure, malnutrition, lack of goods and services, inability to express political views or profess religious beliefs, etc. Each of them deserves separate attention as they refer to different components of welfare, and indeed may help policy makers to focus attention on the various facets of poverty. Nonetheless, often there is a high degree of overlapping: a malnourished person is also poorly educated and without access to health care.

Research on poverty over the last years has reached some consensus on using economic measures of living standards and these are routinely employed on poverty analysis. Moreover, income-based poverty indicators are the basis to monitor the first of the Millennium Development Goals. Although they do not cover all aspects of human welfare, they do capture a central component of any assessment of living standards. The main decision is to make the choice between income and consumption as the welfare indicator. Consumption is the preferred measure because it is likely to be a more useful and accurate measure of living standards than income. This preference of consumption over income is based on both theoretical and practical issues.[37]

The first theoretical consideration is that both consumption and income can be approximations to utility, even though they are different concepts. Consumption measures what individuals have actually acquired, while income, together with assets, measures the potential claims of a person. Second, the time period over which living standards are to be measured is important. If the interest is the long-run, as in a lifetime period, both should be the same and the choice does not matter. In the short-run though, say a year, consumption is likely to be more stable than income. Households are often able to smooth out their consumption, which may reflect access to credit or savings as well as information on future streams of income. Consumption is also less affected by seasonal patterns than income, for example, in agricultural economies, income is more volatile and affected by growing and harvest seasons, hence relying on that indicator might over or underestimate significantly living standards.

On the other hand, there are practical arguments to take into account. First, consumption is generally an easier concept than income for the respondents to grasp, especially if the latter is from self-employment or own-business activities. For instance, workers in formal sectors of the economy will have no problem in reporting accurately their main source of income, i.e. their wage or salary. But people working as self-employed, in informal sectors or in agriculture will have a harder time coming up with a precise measure of their income. Often is the case that household and business

[36] See National Statistical Office of Mongolia (2004).
[37] See Deaton and Zaidi (2002) and Hentschel and Lanjouw (1996).

transactions are intertwined. Besides, as it was mentioned before, seasonal considerations are to be included to estimate an annual income figure. Finally, we also need to consider the degree of reliability of the information. Households are less reluctant to share information on consumption than on income. They may be afraid than income information will be used for different purposes, say taxes, or they may just considered income questions as too intrusive. It is also likely that household members know more about the household consumption than the level and sources of household income.

B.2. The construction of the consumption aggregate

Creating a consumption aggregate is also guided by theoretical and practical considerations. First, it must be as comprehensive as possible given the available information. Omitting some components assumes that they do not contribute to people's welfare or that they do no affect the rankings of individuals. Second, market and non-market transactions are to be included, which means that purchases are not the sole component of the indicator. Third, expenditure is not consumption. For perishable goods, mostly food, it is usual to assume that all purchases are consumed. But for other goods and services, such as housing or durable goods, corrections have to be made. Lastly, the consumption aggregate comprises five main components: food, non-food, housing, durable goods and energy. The specific items included in each component and the methodology used to assign a consumption value to each of these items is outlined below.

Food component

The food component can be readily constructed by simply adding up all consumption per food item, previously normalized to a uniform reference period, and then aggregating all food items per household. The HSES 2007/08 records information on food consumption at the household level for 122 items, organized in 13 categories: flour and flour products; meat and meat products; fish and seafood; milk, cheese and eggs; oils and fat; fruits; vegetables; sugar and jam; other food; tea and coffee; mineral water and soft drinks; alcoholic beverages; and tobacco and cigarettes.

The method to collect these data and the reference period vary across urban and rural areas. In the capital and in aimag centers, information is captured through a diary, which is compiled by an enumerator every ten days, three times during a month. In other words, the reference period is one month. In soum centers and in the countryside, a recall period for the last week is employed. The reasons for this different approach are at least threefold. First, enumerators live in aimag centers, which are frequently at considerable distance from rural areas. It is impractical to visit households every ten days. Second, herder households move often, so sometimes it is difficult to find the dwelling in a second or third visit. Lastly, people in rural areas have more problems filling out the diary compared to those living in urban areas.

A few general principles are applied in the construction of this component. First, all possible sources of consumption are included. This means that the food component comprises not only expenditures on purchases in the market or on meals eaten away from home but also food that was own produced or received as a gift. Second, only food that was actually consumed, as opposed to total food purchases or total home-produced food, enters in the consumption aggregate. Third, non-purchased food items need to be valued and included in the welfare measure. The HSES collects average prices for food purchases, whereas for all other sources only quantities are recorded. These average prices were used to estimate the monetary value of non-purchased items. Most food items are disaggregated enough to be regarded as relatively homogeneous within each category, however these average prices will also reflect differences in the quality of the good. To minimize this effect, and to consider spatial and seasonal differences too, median prices were computed at several levels: by household, cluster, aimag, stratum and month. Hence if a household purchased a food item, the same price would be used to value its self-produced and in-kind consumption. If the household did not make any purchase but consumed a food item, the average price from the

immediate upper level was used to estimate the value of that consumption.

Food consumption between the HIES/LSMS 2002/03 and the HSES 2007/08 differs in three aspects: the method to collect the information, the reference period and the number of items included in the food module. The method to collect food consumption in 2002/03 was based on a diary and a "stocks and flows" approach. Households were asked about initial stocks of each item, purchases, self-consumption, sales, quantities given to and received from other households for free, and final stocks. Consumption was then estimated as the difference between all these components. On the other hand, the food module that was considered for the 2007/08 consumption aggregate asks about purchases, food received for free and self-consumption. However, this alternative approach did not lead to significant differences.[38]

The reference period in 2002/03 was the last month, but households were interviewed for three consecutive months. Information though was compiled at the end of every month, thus this approach is not that dissimilar to the reference periods used in 2007/08.[39] The final difference between the two surveys is with regard to the number of food items considered. The number of food items increased from 92 in 2002/03 to 122 in 2007/08. This addition is not likely to have a considerable effect on food estimates because the food bundle in 2002/03 was already quite comprehensive. Overall then none of the differences is expected to have a significant impact in terms of comparability over time.

Non-food component

As in the case of food, non-food consumption is a simple and straightforward calculation. Again, all possible sources of consumption must be included and normalized to a common reference period. Data on an extensive range of non-food items are available, 371 items arranged in 38 different groups such as clothing and footwear for men, women and children, jewelry and souvenirs, clothing materials, education, health, recreation, beauty and toilet articles and services, cultural expenses, household goods, durable goods, housing expenditures, transportation, communication, insurance and taxes. The HSES does not gather information on quantities consumed because most non-food items are too heterogeneous to try to calculate unit values. With the exception of durable goods, housing and energy, which will be dealt with later, this subsection covers the consumption of all the other non-food items.

Practical difficulties arise often for two reasons: the choice of items to include and the selection of the recall period. Regarding the first issue, the rule of thumb is that only items that contribute to the consumption are to be included. For instance, clothing, footwear, beauty articles and recreation are included. Others such as taxes are commonly excluded because they are not linked to higher levels of consumption, households paying more taxes are not likely to receive better public services. Capital transactions like purchases of financial assets, debt and interest payments should also be excluded. The case for lumpy or infrequent expenditures like marriages, dowries, births and funerals is more difficult. Given their sporadic nature, the ideal approach would be to spread these expenses over the years and thus smooth them out, otherwise the true level of welfare of the household will probably be overestimated. Lack of information prevents us to do that, so they are left out from the estimation. Finally, remittances given to other households are better excluded. The rationale for this is to avoid double counting because these transfers almost certainly are already reflected in the consumption of the recipients. Hence including them would increase artificially living standards.

Two non-food categories deserve special attention: education and health. In the case of education there are three issues to consider. First, some

[38] The HSES 2007/08 also captures food in a separate module that was originally included to maximize comparability with the HIES/LSMS 2002/03: the same "stocks-and-flows" approach was followed, although using a recall period of one month rather than a diary. It was found that both food modules in 2007/08 provide remarkably similar estimates not only in terms of the level of food consumption but also in the composition of the food aggregate. It was decided to employ the new approach because it is considered that collects information in a simpler and more efficient way, and this is the module that will be used in future rounds of the survey, hence guaranteeing forward comparability.

[39] However, the fact that households were followed by three consecutive months is likely to produce less variability of food consumption both within and across households.

argue that if education is an investment, it should be treated as savings and not as consumption. Benefits from attending school are distributed not simply during the school period but during all years after. Second, there are life-cycle considerations, educational expenses are concentrated in a particular time of a person's life. Say that we compare two individuals that will pay the same for their education but one is still studying while the other finished several years ago. The current student might seem as better-off but that result is just related to age and not to true differences in welfare levels. One way out would be to smooth these expenses over the whole life period. Third, we must consider the coverage in the supply of public education. If all population can benefit from free or heavily subsidized education (as it happens in Mongolia) and the decision of studying in private schools is driven by quality factors, differences in expenditures can be associated with differences in welfare levels and the case for their inclusion is stronger. Standard practice was followed and educational expenses were included in the consumption aggregate. Excluding them would make no distinction between two households with children in school age, but only one been able to send them to school.

Health expenses share some of the features of education. Expenditures on preventive health care could be considered as investments. Differences in access to publicly provided services may distort comparisons across households. If some sectors of the population have access to free or significantly subsidized health services, whereas others have to rely on private services, differences in expenditures do not correspond to differences in welfare. But there are other factors to take into account. First, health expenditures are habitually infrequent and lumpy over the reference period. Second, health may be seen as a "regrettable necessity", i.e. by considering in the welfare indicator the expenditures incurred by a household member that was sick, the welfare of that household is increased when in fact the opposite has happened. Third, health insurance can also distort comparisons. Insured households may register small expenditures when some member has fallen sick, while uninsured ones bigger amounts. It was decided to include health expenses because, as in the case of education, their exclusion would imply making no distinction between two households, both facing the same health problems, but only one paying for treatment.

The second difficulty regarding non-food consumption is related with the election of the recall period. The key aspect to consider is the relationship between recall periods and frequency of purchases. Many non-food items are not purchased frequently enough to justify a weekly or monthly recall period, exceptions being for instance toiletries, beauty articles and payment of utilities, hence generally recall periods are the last quarter or the last year. The HSES collects information with two reference periods: last month and last year. The decision on which to choose can have significant implications for the consumption aggregate. Using only last month data was discarded because households do not buy non-food items every month and it is likely that many families will not report any expenditure at all. Whereas this could provide an appropriate estimation of average consumption in the last month, for the purposes of poverty analysis those households that did not buy anything will have their consumption significantly biased downwards and will be more likely to be considered poor. Using the last year as the reference period will certainly overcome the previous limitation because the last 12 months is a more reasonable recall period for non-food expenses. However, a trade-off appears when the reference period is extended. More households are likely to report expenditures but the average expenditure among those reporting will be lower that that from a shorter reference period.[40] A third option that can be seen as a compromise between these two choices is to combine the information from both recall periods. In this case information was taken from the last month if available, and if the

[40] Indeed this is the case in the HSES 2007/08. After excluding transactions on durable goods, housing and energy, the number of transactions reported for the other non-food categories in the last month is only 40% of the number of transactions reported in the last year. On the other hand, the average amount using the last month as the reference period is 150% more than that from the last year. These findings are partly explained by progressive forgetting (the longer the recall period, the harder for families to remember the expenditure and the more likely they are to underestimate consumption) and "telescoping" (interviewees include expenditures that occurred before the recall period, particularly if they are significant expenses, something that is more likely to happen with non-food items and which usually will overestimate consumption).

household did not purchase anything in the last 30 days, information from the last year will be considered. This alternative is thought to capture better the consumption of the household and is also considered to be the best option to be compared against the reference period of last quarter used in 2002/03.

Finally, the HSES offers a second source of expenditure data for education and health because it includes specific modules on these two topics. These data differ from the standard non-food module in two ways. On the one hand, information is collected at the individual level as opposed to household level as in the standard section. When the reference is the household, questions are normally more aggregated than when the same topics are asked to each household member. Generally households are known to provide a more accurate account of expenses when they are asked in more detail, which would favor the use of the specialized modules. On the other hand, both specialized modules ask only for one reference period, last twelve months in the case of education and mostly last month in the case of health. It was decided to use the specialized modules because they are thought to capture better the long-term welfare of the household.

Durable goods

Ownership of durable goods could be an important component of the welfare of the households. Given that these goods last typically for many years, the expenditure on purchases is not the proper indicator to consider. The right measure to estimate, for consumption purposes, is the stream of services that households derive from all durable goods in their possession over the relevant reference period. This flow of utility is unobservable but it can be assumed to be proportional to the value of the good. A usual procedure involves calculating depreciation rates for each type of good based on their current value and age, which in this case is provided by the HSES along with the number of durables owned by the household.[41]

The estimation of this component involved three steps. First, a selection of durable goods was done. The HSES supplies data on 42 durable goods, ranging from home appliances to furniture. However, a third of them were excluded because they were goods used for household businesses or fell under jewelry, dwelling or residual categories. Second, to calculate implicit depreciation rates a median regression for each of the remaining goods was run with the current unit value as the dependent variable on a constant and the age of the durable. This technique provides more robust estimates for the depreciation rates because they will be less affected by extreme values. Finally, the stream of consumption is computed by multiplying the estimated value of the good a year ago times its depreciation rate, and aggregating these amounts by household.

Housing

Housing conditions are considered an essential part of people's living standards. Nonetheless, in most developing countries limited or nonexistent housing rental markets pose a difficult challenge for the estimation and inclusion of this component in the consumption aggregate. As in the case of durable goods, the objective is to try to measure the flow of services received by the household from occupying its dwelling. When a household rents its dwelling, and provided rental markets function well, that value would be the actual rent paid. In Mongolia, the housing value for households who own their dwelling cannot be determined based upon on information from renters because very few cases reported renting their dwellings.[42] Yet the HSES asks households for estimates of how much their dwelling could be rented for and also how much their dwelling could be sold for. Implicit rental values can in principle be used in the consumption aggregate whenever actual rents are not reported, but they are a hypothetical concept and the estimates may not always be credible or usable.[43] An additional complication is that almost half of the population lives in gers, for which establishing a rental value appears to be even more difficult.

[41] Further refinements can be made using the inflation rate and the nominal interest rate.
[42] Only 183 out of the 11,172 households.
[43] A reflection of this difficulty is the fact that two thirds of households do not provide this information.

Hedonic housing regressions were run with the imputed value of the dwelling as the dependent variable.[44] The set of independent variables included characteristics of the dwelling such as main type of floor, walls and roof, number of rooms, access to water, electricity, heating, location, etc. This exercise was conducted separately for gers, houses and apartments. Results show that the value of the dwelling has a strong correlation with its characteristics and this may be intuitively explained by the fact that even though households do not rent dwellings, they do buy and build them, so they report more accurately the overall value of the dwelling rather than a hypothetical rent. However, the use of property values requires an additional assumption to arrive to an estimation of the services provided from housing and that is either the depreciation rate or the remaining lifespan of the dwelling. It was assumed that houses and apartments still have a lifespan of 33 years and gers of 17 years. Therefore for the consumption aggregate, the estimated imputed rents derived from the self-reported or imputed property values were used as estimates for the flow of services from housing, except when actual rents were available.

Energy

The final non-food component that justified special attention was energy, meaning basically expenditures on heating and electricity. Mongolia is a country that endures extreme weather conditions, during winter temperatures can easily reach –40 degrees Celsius and in the summer 30 plus degrees. While summer may pose fewer inconveniences, winter is indeed a serious matter. Winters are long, they last on average 6 months and with usual below zero temperatures. For instance, average temperatures in January and February in the capital are –25C. This means that heating becomes a basic and essential necessity for households all over the country, and in some cases it could be a very significant and important component of their consumption.

The HSES collects information only on purchases and self-reported valuations of goods and services obtained for free. In principle this should be enough to capture properly energy consumption. However, that may not be the case. If the household uses centralized heating and/or electricity, households will report the cost of these expenses and most likely will have not enjoyed any free consumption. But if the household uses fuel for heating and lighting, that is, wood, coal and/or dung, households tend to overwhelmingly report only purchases and not to value any fuel fetched for free. Given that no data on quantities of collected fuel are available, it is not possible to impute a value to that consumption. This is likely to lead to an underestimation of the energy consumption of the household and this bias is expected to be larger in rural areas, where households rely more in collecting fuel.

B.3. Price adjustment

Mongolia shows remarkable seasonal price differences, especially for food items. For instance, food prices are usually higher during spring compared to all the other seasons. At the same time, there are also regional price differences. In particular, prices in Ulaanbaatar are relatively higher than in the rest of the country. Therefore, in order to properly measure living standards, expenditure values need to be corrected for such differences using price indices. A price index consists of two components: prices and budget shares that attach the proper weights to prices. It follows price indices will vary because of differences in prices or in consumption patterns.

The household survey provides information on budget shares for all items but information on average prices paid by the household only for food items. A Paasche price index at the cluster level was constructed combining information from the HSES and the national consumer price index. Clusters are comprised by 10 households in urban areas and 8 households in rural areas. Households within a cluster are likely to face similar prices and have similar consumption patterns. The Paasche price index for the primary sampling unit is obtained with the following formula:

$$p_i^P = \left[\sum_{k=1}^{n} w_{ik} \left(\frac{p_{ik}}{p_{0k}} \right)^{-1} \right]^{-1} \qquad (1)$$

[44] Nine out of ten households report this information.

where k is one of the n goods considered for the index,

w_{ik} is the budget share of good k in the primary sampling unit i,

p_{ik} is the median price of good k in the primary sampling unit i, and

p_{0k} is the national median price of good k.

In the case of food, average budget shares for each food item were matched with the average prices paid. The HSES provided both pieces of information. In the case of non-food, the average total non-food share was provided by the HSES, whereas the average price was provided by the national non-food index. This means that all non-food items were bundled together and it was assumed that they experienced the same inflation. Overall, the final price index considers both food and non-food items for the temporal adjustment, but spatial differences come only from food. It is not clear what the impact will be on the poverty estimations of assuming that there are no spatial differences in non-food prices. For instance, generally non-food prices (excluding housing) in rural areas are higher than in urban areas. If the price index assumes no differences, rural areas will appear to be relatively better-off compared to urban areas.

The average values of the food and total price indices by stratum and month are reported in Table B.1. Two findings are worth emphasizing. First, both indices confirm that living costs in Ulaanbaatar are higher than in the rest of the country, while the opposite is found in rural areas. Second, all strata experienced considerable inflation during the period of analysis: more than 50% for food and more than 30% for food and non-food categories.

Table B.1: Cluster Paasche Index by stratum and month of interview

	Food Paasche Index				Total Paasche Index			
	Ulaanbaatar	Aimag centers	Rural	National	Ulaanbaatar	Aimag centers	Rural	National
July 2007	0.86	0.83	0.78	0.82	0.91	0.89	0.83	0.87
August	0.91	0.83	0.80	0.84	0.95	0.90	0.84	0.89
September	0.94	0.88	0.82	0.87	0.97	0.94	0.87	0.92
October	0.95	0.89	0.84	0.89	1.00	0.96	0.91	0.95
November	0.98	0.91	0.89	0.92	1.01	0.99	0.93	0.97
December	1.01	0.93	0.87	0.93	1.01	0.97	0.92	0.97
January 2008	1.02	0.96	0.92	0.96	1.02	0.99	0.96	0.99
February	1.08	1.03	0.95	1.01	1.05	1.02	0.98	1.01
March	1.12	1.08	0.98	1.05	1.07	1.05	0.99	1.03
April	1.26	1.17	1.06	1.16	1.13	1.10	1.05	1.09
May	1.33	1.26	1.22	1.27	1.16	1.15	1.14	1.15
June	1.36	1.26	1.19	1.26	1.18	1.15	1.12	1.15
Average	1.07	1.00	0.94	1.00	1.04	1.01	0.96	1.00

Source: HSES 2007/08.

B.4. Household composition adjustment

The final step in constructing the welfare indicator involves going from a measure of standard of living defined at the household level to another at the individual level. Ultimately the concern is to make comparisons across individuals and not across households. Consumption data are collected typically at the household level (usual exceptions are health and education expenses), so computing an individual welfare measure generally is done by adjusting total household consumption by the number of people in the household, and assigning that value to each household member. Common practice when doing this is to assume that all members share an equal fraction of household consumption, however as it will be explained later that is a very particular case.

Two types of adjustments have to be made to correct for differences in composition and size. The first relates to demographic composition. Household members have different needs based mainly on their age and gender, although other characteristics can also be considered. Equivalence scales are the factors that reflect those differences and are used to convert all household members into "equivalent adults". For instance, children are thought to need a fraction of what adults require, thus if a comparison is made between two households with the same total consumption and equal number of members, but one of them has children while the other is comprised entirely by adults, it would be expected that the former will have a higher individual welfare than the latter. Unfortunately there is no agreement on a consistent methodology to calculate these scales. Some are based on nutritional grounds, a child may need only 50% of the food requirements of an adult, but is not clear why the same scale should be carried over non-food items. It may very well be the case that the same child requires more in education expenses or clothing. Others are based on empirical studies of household consumption behavior, although with more analytical grounds, they do not command complete support either.[45]

The second adjustment focuses in the economies of scale in consumption within the household. The motivation for this is the fact that some of the goods and services consumed by the household have characteristics of "public goods". A good is said to be public when its consumption by a member of the household does not necessarily prevent another member to consume it too. Examples of these goods could be housing and durable goods. For example, one member watching television does not preclude another for watching too. Larger households may spend less to be as well-off as smaller ones. Hence, the bigger the share of public goods in total consumption is, the larger the scope for economies of scale is. On the other hand, private goods cannot be shared among members, once they have been consumed by one member, no other can. Food is the classic example of a private good. It is often pointed out that in poor economies, food represents a sizeable share of the household budget and therefore in those cases there is little room for economies of scale.

Both adjustments can be implemented using the following approach:

$$AE = (A + \alpha K)^{\vartheta}$$

where AE is the number of adult equivalents of the household, A is the number of adults, K the number of children, α is the parameter that measures the relative cost of a child compared to an adult and ϑ represents the extent of the economies of scale.[46] Both parameters can take values between zero and one. It is been reported that in developing countries, children are relatively cheaper than adults, perhaps with values of α as low as 0.3, while in developed ones values are closer to one.[47] At the same time, in poorer economies food is often the most important good in the household consumption, and given that is a private good, the budget share of public goods is limited and so is the scope for economies of scale, perhaps with ϑ close to 1, whereas in richer countries around 0.75.

[45] See Deaton and Muellbauer (1986) or Deaton (1997).
[46] Actually, since the elasticity of adult equivalents with respect to "effective size" $A+\alpha K$ is ϑ, the measure of economies of scale is $1-\vartheta$.
[47] Deaton and Zaidi (2002).

It was mentioned that standard practice is to use a per capita adjustment for household composition and that is also followed here. This is a special case of the above formulation, it happens when α and ϑ are set equal to one, so children consume as much as adults and there is no room for economies of scale. In other words, all members within the household consume equal shares of the total consumption and costs increase in proportion to the number of people in the household. In general, per capita measures will underestimate the welfare of households with children as well as larger households with respect to families with no kids or with a small number of members respectively. It is important then to conduct sensitivity analysis to see how robust the poverty measures and rankings are to different assumptions regarding child costs and economies of scale.[48]

B.5. The poverty line

The poverty line can be defined as the monetary cost to a given person, at a given place and time, of a reference level of welfare. (Ravallion (1998)) If a person does not attain that minimum level of standard of living, she will be considered as poor. But setting poverty lines could be a very controversial issue because not only people disagree on what "minimum" is but also on its eventual effects on monitoring poverty and policy making decisions.

The poverty line will be absolute because it fixes a given welfare level, or standard of living, over the domain of analysis. This guarantees that comparisons across individuals will be consistent, e.g. two persons with the same welfare level will be treated the same way regardless of the location where they live. Second, the reference utility level is anchored to certain attainments, generally nutritional ones, for instance, obtaining the necessary calories to have a healthy and active life. Finally, the poverty line will be set as the minimum cost of achieving that requirement.

The Cost of Basic Needs method was employed to estimate the nutrition-based poverty line. This approach calculates the cost of obtaining a consumption bundle believed to be adequate for basic consumption needs. If a person cannot afford the cost of the basket, this person will be considered to be poor. First, it shall be kept in mind that the poverty status focuses on whether the person has the means to acquire the consumption bundle and not on whether its actual consumption met those requirements. Second, nutritional references are used to set the utility level but nutritional status is not the welfare indicator. Otherwise, it will suffice to calculate caloric intakes and compare them against the nutritional threshold. Third, the consumption basket can be set normatively or to reflect prevailing consumption patterns. The latter is undoubtedly a better alternative. Lastly, the poverty line comprises two main components: food and non-food.

Food component

The first step in setting this component is to determine the nutritional requirements deemed to be appropriate for being healthy and able to participate in society. Clearly, it is rather difficult to arrive to a consensus on what could be considered as a healthy and active life, and hence to assign caloric requirements. Common practice is to establish 2,100 calories per person per day as the reference for energy intake. Second, a food bundle must be chosen. In theory, infinite food bundles can provide that amount of calories. One way out of this is to take into consideration the existing food consumption patterns of a reference group in the country. It was decided to use the bottom 40% of the population, ranked in terms of real per capita consumption, and obtain its average consumed food bundle. It is better to try to capture the consumption pattern of the population located in the low end of the welfare distribution because it will probably reflect better the preferences of the poor. Hence the reference group can be seen as a first guess for the poverty incidence. Third, caloric conversion factors were used to transform the food bundle into calories. The main source for these factors was the Food Research Center, which is a unit of the Ministry of Health of Mongolia. Tobacco, residual categories and meals eaten outside the household were excluded from this calculation: the first because is not really a food

[48] Lanjouw et al. (1998).

item and the other two because it is very difficult to approximate caloric intakes for them. For all of the remaining food items, it was possible to assign a caloric factor. Fourth, median unit values were derived in order to price the food bundle. Unit values were computed using only transactions from the reference group. Again, this will capture more accurately the prices faced by the poor. Fifth, the average caloric intake of the food bundle was estimated, so the value of the food bundle could be scaled proportionately to achieve 2,100 calories per person per day. For instance, the average daily caloric intake of the bottom 40% of the population in Mongolia was around 1,430 calories per person and the daily value of the food bundle was Tugrug 789 per person. Hence the value of the daily poverty line is Tugrug 1,159 (= Tugrug 789 x 2,100 / 1,430) per person. Table B.2 shows the caloric contribution of the main food categories as well as their respective share in the cost of the food poverty line.[49]

Table B.2: Food bundle per person per day by main food groups

	Caloric intake		Value	
	Calories	%	Tugrug	%
Total	2,100	100	1,159	100
Flour and flour products	1,270	60	304	26
Meat and meat products	222	11	471	41
Fish and seafood	0	0	1	0
Milk, cheese and eggs	179	9	169	15
Oils and fat	228	11	68	6
Fruits	5	0	9	1
Vegetables	67	3	52	5
Sugar and jam	106	5	38	3
Other food	4	0	10	1
Tea and coffee	8	0	15	1
Mineral water and soft drinks	4	0	7	1
Alcoholic beverages	6	0	15	1

Source: HSES 2007/08.

Non-food component

Setting this component of the poverty line is far from being a straightforward procedure. There is considerable disagreement on what sort of items should be included in the non-food share of the poverty line. However, it is possible to link this component with the normative judgment involved when choosing the food component. Being healthy and able to participate in society requires spending on shelter, clothing, health care, recreation, etc. The advantage of using the HSES is that the non-food allowance can also be based on prevailing consumption patterns of a reference group and no pre-determined non-food bundle is required.

The initial step is to choose a reference group that will represent the poor and calculate how much they spend on non-food goods and services. Two possible non-food poverty lines can be constructed according to the World Bank methodology. On the one hand, the upper non-food poverty line is the average non-food consumption of the population whose food consumption is similar to the food poverty line. The rationale behind this upper reference group is that if an individual spends in food what was considered appropriate for being healthy and maintaining certain activity levels, it will be assumed that this person has also acquired the minimum non-food goods and services to support this lifestyle. On the other hand, the lower non-food poverty line is the average non-food consumption of the population whose total consumption is similar to the food poverty line. The justification for the lower reference group is that if these people have substituted basic food needs in order to satisfy some non-food needs, that amount can be interpreted as the minimum necessary allowance for non-food spending.

An equivalent way of estimating the non-food poverty lines is using the food shares of the upper and lower reference groups rather than their average non-food consumption. Two different procedures to calculate the food share can be proposed. One relies on econometric techniques to estimate the Engel curve, i.e. the relationship between food spending and total expenditures. Another is to use a simple non-parametric calculation as suggested in Ravallion (1998). The advantages of the latter is that no assumptions are made on the functional form of the Engel curve and that weights decline linearly around the food poverty line, i.e. the closer the household to the food poverty line is, the higher its weight is. This procedure was used to determine the non-food components of the upper and lower poverty lines.

[49] A more detailed table by food item is provided at the end of this annex.

In the case of the upper poverty line, the procedure starts by estimating the average food share of those households whose food expenditures lie within plus and minus 1% of the food poverty line. The same exercise is then repeated for households lying plus and minus 2%, 3%, and up to 10%. Second, these ten mean food shares are averaged and that will be the final food share of the upper reference group. Finally, the upper poverty line can be easily estimated by dividing the food poverty line by this food share. In the case of the lower poverty line, the methodology is similar but there are two differences. First, the reference group is now those households whose total consumption is around the food poverty line. Second, the lower poverty line will be the result of multiplying the food poverty line by the difference between 2 and the food share.[50]

The poverty line employed in this report can be seen as a combination of the lower and upper poverty lines. On the one hand, the lower poverty line may be considered as an extremely low threshold because the non-food component comes from the population whose total consumption is barely enough to cover the required food consumption. On the other hand, the upper poverty line may unnecessarily overstate the non-food component because once basic food needs have been satisfied, food consumption may not increase proportionally with total consumption. In other words, the non-food component may be taking into consideration consumption patterns of people that are relatively high in the consumption distribution and can not be regarded as poor. The poverty line used in this report has a food share that is the average between the food share of the lower and upper poverty lines and can be seen as a compromise between the two. Table B.3 displays the food and non-food components of these three poverty lines. Even though this moderate poverty line is applied throughout the report, estimates with the lower and upper poverty lines are presented in Appendix C.

[50] Say FZ is the food poverty line, FSu is the food share from the upper reference group and FSl is the food share from the lower reference group. The upper poverty line will be estimated as FZ/FSu, while the lower poverty line as FZ*(2-FSl).

Table B.3: Poverty lines per person per month

	Lower poverty line		Moderate poverty line		Upper poverty line	
	Tugrug	%	Tugrug	%	Tugrug	%
Food	35 239	70	35 239	56	35 239	42
Non-food	15 369	30	27 256	44	48 574	58
Total	50 607	100	62 494	100	83 813	100

Source: HSES 2007I08.

B.6. Poverty measures

The literature on poverty measurement is extensive, but attention will be given to the class of poverty measures proposed by Foster, Greer and Thorbecke (1984). This family of measures can be summarized by the following equation:

$$P_\alpha = (1/n)\sum_{i=1}^{q}\left(\frac{z - y_i}{z}\right)^\alpha$$

where α is some non-negative parameter, z is the poverty line, y denotes consumption, i represents individuals, n is the total number of individuals in the population, and q is the number of individuals with consumption below the poverty line.

The headcount index (α=0) gives the share of the poor in the total population, i.e. it measures the percentage of population whose consumption is below the poverty line. This is the most widely used poverty measure mainly because it is very simple to understand and easy to interpret. However, it has some limitations. It takes into account neither how close or far the consumption levels of the poor are with respect to the poverty line nor the distribution among the poor. The poverty gap (α=1) is the average consumption shortfall of the population relative to the poverty line. Since the greater the shortfall, the higher the gap, this measure overcomes the first limitation of the headcount. Finally, the severity of poverty (α=2) is sensitive to the distribution of consumption among the poor, a transfer from a poor per-

son to somebody less poor may leave unaffected the headcount or the poverty gap but will increase this measure. The larger the poverty gap is, the higher the weight it carries.

These measures satisfy some convenient properties. First, they are able to combine individual indicators of welfare into aggregated measures of poverty. Second, they are additive in the sense that the aggregate poverty level is equal to the population-weighted sum of the poverty levels of all subgroups of the population. Third, the poverty gap and the severity of poverty satisfy the monotonicity axiom, which states that even if the number of the poor is the same, but there is a welfare reduction in a poor household, the measure of poverty should increase. And fourth, the severity of poverty will also comply with the transfer axiom: it is not only the average welfare of the poor that influences the level of poverty, but also its distribution. In particular, if there is a transfer from one poor household to a richer household, the degree of poverty should increase.[51]

Finally, along the report all poverty measures are shown with their respective standard errors. Since these estimations are based on surveys and not on census data, standard errors must reflect the elements of the sample design, i.e. stratification, clustering and sampling weights.[52] Ignoring them will risk, when carrying out poverty comparisons, mixing up true population differences with differences in sampling procedures. Appendix E shows confidence intervals for the poverty measures when correlated with some variables of interest.

[51] Both the monotonicity and transfer axioms were formulated by Sen (1976).
[52] See Howes and Lanjouw (1997) for a detailed explanation.

Table B.4: Food bundle per person per day

	Calories per unit (kcals)	Quantity required	Calories provided	Price per unit (Tugrug)	Value (Tugrug)
Total			2,100		1,159
Flour and flour products					
Bread (1 piece = 670 gr) - piece	1 589	0.121	192	468	57
Rice - Kg	3 447	0.056	192	709	40
Flour, highest grade - Kg	3 617	0.006	21	808	5
Flour, grade 1 - Kg	3 250	0.206	669	705	145
Flour, grade 2 - Kg	3 474	0.012	42	587	7
Other flour - Kg	3 742	0.000	1	798	0
Noodle,domestic - Kg	3 505	0.004	16	1 111	5
Noodle, import - Kg	3 623	0.002	7	1 237	2
Bakery - Kg	4 050	0.030	122	1 228	37
Biscuit - Kg	2 508	0.001	3	1 640	2
Cake - Kg	3 096	0.001	2	5 066	3
Millet - Kg	3 513	0.001	4	660	1
Other rice (farina) - Kg	3 455	0.000	1	863	0
Meat and meat products					
Mutton - Kg	1 083	0.083	90	2 700	225
Beef - Kg	1 531	0.034	52	2 831	96
Goat meat - Kg	1 057	0.023	24	2 214	51
Horse meat - Kg	911	0.016	15	2 091	34
Camel meat - Kg	1 025	0.001	1	2 126	2
Dried meat - Kg	4 292	0.004	19	8 894	39
Chicken - Kg	1 908	0.000	0	3 382	0
Pork - Kg	3 554	0.000	0	3 331	0
Bacon - Kg	4 580	0.000	0	4 806	0
Game - Kg	1 788	0.001	1	724	0
Other poultry - Kg	1 908	0.000	0	1 653	0
Animal interior - Kg	1 057	0.012	12	1 241	14
Sausage (big), salami - Kg	2 666	0.002	7	2 988	7
Sausage (small) - Kg	1 680	0.000	0	2 732	0
Canned meat - Kg	2 250	0.000	1	2 557	1
Fish and seafood					
Fish - Kg	821	0.000	0	2 411	1
Dried, smoked, salted fish - Kg	2 600	0.000	0	2 226	0
Canned fish - Kg	1 965	0.000	0	3 285	0

Milk, cheese and eggs					
Milk - Lt	671	0.169	113	691	117
Youghurt - Lt	564	0.030	17	684	21
Eggs - Piece	78	0.014	1	190	3
Dried curds - Kg	4 908	0.004	21	2 640	11
Horse milk, l - Lt	487	0.006	3	860	5
Curds - Kg	2 566	0.004	11	769	3
Cheese, national - Kg	4 733	0.001	3	1 906	1
Cheese - Kg	3 040	0.000	0	5 384	0
Eezgii (a kind of traditional diary products) - Kg	4 010	0.000	2	1 736	1
Dried and coffee milk - Kg	3 293	0.001	2	3 810	2
Condensed milk - Lt	4 850	0.000	2	2 055	1
Sour cream - Kg	2 495	0.002	4	2 650	5
Dried eggs - Kg	5 441	0.000	0	1 629	0
Oils and fat					
Butter - kg	5 323	0.005	27	2 533	13
Margarine - kg	7 448	0.000	0	2 167	0
Vegetable oil - Lt	8 991	0.011	95	2 395	25
Edible animal fats - kg	8 991	0.009	77	1 537	13
Cream - kg	3 835	0.005	17	2 519	11
Melted butter - kg	8 415	0.001	12	3 579	5
Olive oil - Lt	8 991	0.000	0	11 893	0
Fruits					
Apple - Kg	468	0.006	3	1 029	6
Mandarin - Kg	376	0.001	0	1 295	1
Raisin- Kg	716	0.000	0	1 854	1
Wild fruit - Kg	398	0.000	0	1 700	0
Dried fruit - Kg	2 721	0.000	1	1 627	0
Wild nuts - Kg	5 980	0.000	1	1 444	0
Vegetables					
Potato - Kg	877	0.061	54	450	28
Cabbage - Kg	140	0.011	2	590	7
Carrot - Kg	224	0.009	2	528	5
Turnip - Kg	208	0.003	1	537	2
Onion - Kg	336	0.011	4	595	7
Garlic - Gr	1	0.239	0	1	0
Tomato - Kg	260	0.000	0	1 530	0
Cucumber - Kg	142	0.001	0	1 296	1
Jelly sticks - Kg	3 272	0.001	4	1 259	2
Canned cucumber - Kg	164	0.000	0	1 507	1
Canned vegetable salad - Kg	1 120	0.000	0	2 078	1
Pepper - Kg	220	0.000	0	1 619	1

Sugar and jam					
Sugar - Kg	3 992	0.020	78	884	17
Lump sugar - Kg	3 996	0.000	1	1 292	0
Sugar substitution - Gr	4	0.001	0	14	0
Candy - Kg	3 697	0.004	14	2 505	10
Sweet - Kg	5 200	0.001	6	3 074	4
Chocolate - Gr	5	0.408	2	6	3
Honey - Gr	3	0.029	0	5	0
Compotes - Gr	1	0.260	0	3	1
Jam - Gr	3	0.379	1	3	1
Icecream - Gr	2	1.259	2	1	2
Chewing gum - Piece	4	0.011	0	43	0
Syrop - Kg	2 644	0.000	0	2 024	0
Other food					
Salt - Gr	0	9.488	0	0	3
Vinegar - Gr	1	0.144	0	2	0
Ketchup - Gr	1	0.950	1	1	1
Mayonnaise - kg	6 258	0.000	2	3 591	1
Yeast - Gr	2	0.168	0	7	1
Spice - Gr	1	0.563	0	5	3
Babyfood - kg	2 940	0.000	0	3 408	0
Tea and coffee					
Green tea - Gr	1	7.069	8	2	12
Tea - Gr	1	0.276	0	9	3
Coffee - Gr	1	0.090	0	5	0
Cocoa - Gr	3	0.002	0	5	0
Mineral water and soft drinks					
Beverage - Lt	342	0.008	3	483	4
Juice - Lt	488	0.003	1	1 153	4
Pure water, bottled - Lt	0	0.001	0	335	0
Alcoholic beverages					
Vodka, domestic - Lt	2 750	0.002	6	6 203	13
Beer, domestic - Lt	240	0.000	0	1 989	1
Vodka, imported - Lt	2 750	0.000	0	6 914	1
Beer, imported - Lt	240	0.000	0	1 599	0
Wine - Lt	700	0.000	0	4 636	1

Source: HSES 2007/08.

APPENDIX C: LOWER AND UPPER POVERTY ESTIMATES

Table C.1: Poverty lines per person per month, 2002/03, 2007/08

	2002/03		2007/08	
	Tugrug	%	Tugrug	%
Lower				
Food	14 386	70	35 239	70
Non-food	6 022	30	15 369	30
Total	20 408	100	50 607	100
Moderate				
Food	14 386	58	35 239	56
Non-food	10 357	42	27 256	44
Total	24 743	100	62 494	100
Upper				
Food	14 386	44	35 239	42
Non-food	17 984	56	48 574	58
Total	32 370	100	83 813	100

Note: Poverty lines are at prices of each period.
Source: HIES/LSMS 2002/03 and HSES 2007/08.

Table C.2: Lower poverty estimates, 2002/03, 2007/08

	2002/03					2007/08				
	Poverty			Population	Poor	Poverty			Population	Poor
	Headcount	Gap	Severity	(%)	(%)	Headcount	Gap	Severity	(%)	(%)
National	25.0	6.8	2.7	100.0	100.0	23.0	5.6	2.0	100.0	100.0
Urban	20.4	5.7	2.3	55.4	45.3	17.2	4.3	1.6	57.6	43.0
Rural	30.6	8.1	3.1	44.6	54.7	30.8	7.4	2.5	42.4	57.0
Ulaanbaatar	18.1	4.9	1.8	30.2	21.9	14.0	3.6	1.4	35.6	21.7
Aimag centers	23.1	6.7	2.9	25.2	23.4	22.2	5.5	1.9	22.0	21.3
Soum centers	32.2	9.3	3.9	16.2	20.9	28.8	7.3	2.6	17.4	21.8
Countryside	29.7	7.4	2.7	28.4	33.8	32.3	7.4	2.4	25.1	35.2
West	34.8	8.4	3.0	17.0	23.7	31.0	6.5	2.0	16.6	22.4
Highlands	29.9	7.6	2.9	24.1	28.9	31.4	7.6	2.6	23.1	31.6
Central a/	22.1	6.2	2.5	19.5	17.3	18.3	4.6	1.6	16.8	13.4
East	22.2	8.9	4.7	9.3	8.2	31.7	9.1	3.7	7.9	10.9

a/ Excludes Ulaanbaatar.
Source: HIES/LSMS 2002/03 and HSES 2007/08.

Table C.3: Upper poverty estimates, 2002/03, 2007/08

	2002/03					2007/08				
	Poverty			Population	Poor	Poverty			Population	Poor
	Headcount	Gap	Severity	(%)	(%)	Headcount	Gap	Severity	(%)	(%)
National	53.6	19.0	9.0	100.0	100.0	53.5	18.9	8.8	100.0	100.0
Urban	46.5	16.1	7.6	55.4	48.2	43.9	14.8	6.7	60.8	47.3
Rural	62.3	22.5	10.8	44.6	51.8	66.4	24.5	11.5	39.2	52.7
Ulaanbaatar	42.4	14.5	6.7	30.2	23.9	37.6	12.3	5.6	39.1	25.0
Aimag centers	51.5	18.1	8.8	25.2	24.3	54.2	18.7	8.6	21.7	22.3
Soum centers	61.2	23.1	11.6	16.2	18.5	60.3	22.6	10.8	13.4	19.6
Countryside	62.9	22.2	10.2	28.4	33.4	70.6	25.9	11.9	25.8	33.1
West	71.1	25.5	11.8	17.0	22.5	68.5	24.3	11.0	15.6	21.2
Highlands	56.7	20.8	10.0	24.1	25.5	67.1	24.8	11.6	21.1	29.0
Central a/	52.3	17.8	8.4	19.5	19.1	48.2	16.3	7.4	16.6	15.2
East	52.3	19.5	10.5	9.3	9.0	64.7	25.5	12.8	7.6	9.6

a/ Excludes Ulaanbaatar.
Source: HIES/LSMS 2002/03 and HSES 2007/08.

APPENDIX D: ADDITIONAL STATISTICAL TABLES

Table D.1: Per capita monthly consumption by poverty status and analytical domain (2007/08 real Tugrug)

Total		Ulaanbaatar		Aimag centers		Soum centers		Countryside	
Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
43 340	23 188	45 631	21 201	39 044	22 102	40 777	23 107	45 207	25 145
1 965	819	1 342	381	1 800	705	3 165	1 123	2 570	985
9 850	2 608	9 963	2 388	11 660	2 721	10 651	2 848	6 906	2 537
6 675	1 001	6 103	1 178	7 054	1 062	8 892	1 079	5 737	807
1 176	328	1 432	223	1 065	308	1 047	365	841	383
7 965	1 177	13 944	1 987	6 507	1 309	2 024	906	1 179	748
3 892	1 629	4 798	3 324	5 477	2 478	2 946	1 102	850	354
3 452	889	5 251	1 709	3 564	1 337	2 005	768	513	172
22 650	7 053	21 932	5 179	23 248	6 833	24 433	7 190	22 130	8 281
19 166	2 665	25 718	3 909	15 626	2 459	16 059	1 918	11 216	2 451
11 352	3 233	13 393	3 090	11 003	3 456	10 198	3 222	8 170	3 191
131 483	44 589	149 506	44 567	126 047	44 769	122 199	43 629	105 318	45 054
33	52	31	48	31	49	33	53	43	56
1	2	1	1	1	2	3	3	2	2
7	6	7	5	9	6	9	7	7	6
5	2	4	3	6	2	7	2	5	2
1	1	1	0	1	1	1	1	1	1
6	3	9	4	5	3	2	2	1	2
3	4	3	7	4	6	2	3	1	1
3	2	4	4	3	3	2	2	0	0
17	16	15	12	18	15	20	16	21	18
15	6	17	9	12	5	13	4	11	5
9	7	9	7	9	8	8	7	8	7
100	100	100	100	100	100	100	100	100	100

4/ Includes water, electricity and lighting. It excludes telephone.

Table D.2: Per capita monthly consumption by poverty status and region
(2007/08 real Tugrug)

	Total		West		Highlands		Central		East		Ulaanbaatar	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Consumption												
Food	43 340	23 188	39 387	24 760	40 185	23 789	44 560	23 111	42 309	22 422	45 631	21 201
Alcohol and tobacco	1 965	819	1 867	1 072	2 053	795	3 292	1 044	2 360	965	1 342	381
Education	9 850	2 608	11 366	2 700	9 976	2 727	9 400	2 858	6 828	2 187	9 963	2 388
Health	6 675	1 001	7 451	1 000	6 227	864	7 947	1 039	6 637	974	6 103	1 178
Durable goods 1/	1 176	328	870	379	994	407	1 056	324	992	215	1 432	223
Rent 2/	7 965	1 177	2 043	918	3 955	971	4 236	967	2 893	908	13 944	1 987
Heating 3/	3 892	1 629	3 553	1 348	3 286	908	3 095	1 390	2 595	1 074	4 798	3 324
Utilities 4/	3 452	889	1 013	370	1 757	614	2 998	986	2 871	920	5 251	1 709
Clothing	22 650	7 053	22 748	7 814	22 213	7 717	24 164	7 067	24 271	7 453	21 932	5 179
Transportation and communication	19 166	2 665	10 710	2 422	12 277	2 186	19 327	2 979	13 262	1 511	25 718	3 909
Others 5/	11 352	3 233	7 211	2 730	9 060	3 232	12 063	3 742	11 243	3 881	13 393	3 090
Total	131 483	44 589	108 219	45 513	111 982	44 210	132 137	45 508	116 259	42 510	149 506	44 567
Shares												
Food	33	52	36	54	36	54	34	51	36	53	31	48
Alcohol and tobacco	1	2	2	2	2	2	2	2	2	2	1	1
Education	7	6	11	6	9	6	7	6	6	5	7	5
Health	5	2	7	2	6	2	6	2	6	2	4	3
Durable goods 1/	1	1	1	1	1	1	1	1	1	1	1	0
Rent 2/	6	3	2	2	4	2	3	2	2	2	9	4
Heating 3/	3	4	3	3	3	2	2	3	2	3	3	7
Utilities 4/	3	2	1	1	2	1	2	2	2	2	4	4
Clothing	17	16	21	17	20	17	18	16	21	18	15	12
Transportation and communication	15	6	10	5	11	5	15	7	11	4	17	9
Others 5/	9	7	7	6	8	7	9	8	10	9	9	7
Total	100	100	100	100	100	100	100	100	100	100	100	100

1/ Estimation of the monetary value of the consumption derived from the use of durable goods.
2/ Estimation of the monetary value of the consumption derived from occupying the dwelling. If the household rents its dwelling, the actual rent will be included instead of the imputed rent.
3/ Includes central and local heating, firewood, coal and dung.
4/ Includes water, electricity and lighting. It excludes telephone.
5/ Includes recreation, entertainment, beauty and toilet articles, and household utensils.
Source: HSES 2007/08.

Table D.3: Per capita monthly consumption by decile
(2007/08 real Tugrug)

	National	Urban	Rural	Analytical domains				Regions			
				Ulaanbaatar	Aimag centers	Soum centers	Countryside	West	Highlands	Central a/	East
Poorest	30 497	32 191	29 127	33 728	30 686	28 395	29 658	31 496	29 217	31 827	24 958
II	42 854	47 787	39 070	52 242	43 196	39 028	39 106	40 375	38 483	46 449	36 540
III	52 436	60 180	46 415	66 302	53 093	47 341	45 977	47 105	45 909	57 102	44 536
IV	62 272	72 445	53 427	80 266	62 614	56 205	52 189	53 253	53 155	67 317	53 040
V	73 323	85 357	61 280	93 737	73 675	65 839	58 899	60 871	61 180	79 768	60 828
VI	85 847	99 571	70 471	110 101	85 102	77 180	66 599	70 019	70 364	92 894	70 893
VII	101 126	118 013	81 981	129 500	99 618	89 893	77 081	80 221	80 978	107 513	84 759
VIII	122 475	142 174	96 921	156 229	119 869	107 401	90 195	93 306	95 294	128 395	102 777
IX	157 957	181 093	120 558	197 876	151 762	136 626	110 732	115 154	120 939	160 431	127 172
Richest	280 033	316 457	211 048	345 151	257 942	244 471	183 170	195 595	209 057	284 035	214 092
Total	100 865	115 501	81 010	126 494	97 680	89 197	75 344	78 683	80 412	105 505	81 812

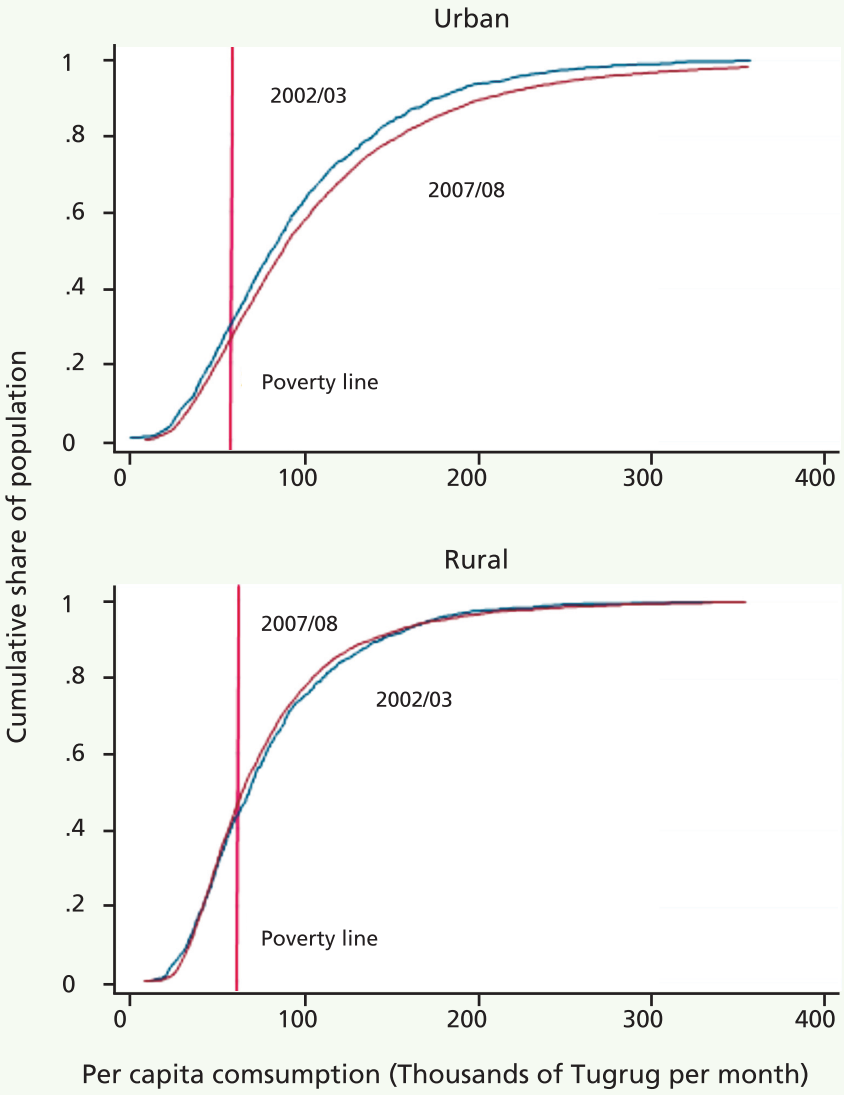
a/ Excludes Ulaanbaatar.
Note: Deciles were constructed separately for each domain. They comprise 10% of the population of the respective region.
Source: HSES 2007/08.

Table D.4: Share of total consumption by decile
(2007/08 real Tugrug)

	National	Urban	Rural	Analytical domains				Regions			
				Ulaanbaatar	Aimag centers	Soum centers	Countryside	West	Highlands	Central a/	East
Poorest	3.0	2.8	3.6	2.7	3.2	3.2	3.9	4.1	3.6	3.0	3.1
II	4.2	4.1	4.8	4.1	4.4	4.4	5.2	5.1	4.8	4.4	4.5
III	5.2	5.2	5.7	5.3	5.4	5.3	6.1	6.0	5.7	5.4	5.5
IV	6.2	6.3	6.6	6.3	6.4	6.3	6.9	6.8	6.7	6.4	6.3
V	7.3	7.4	7.6	7.4	7.5	7.4	7.8	7.7	7.6	7.6	7.4
VI	8.5	8.6	8.7	8.7	8.8	8.7	8.8	8.9	8.8	8.8	8.7
VII	10.0	10.2	10.1	10.2	10.1	10.1	10.2	10.2	10.0	10.2	10.3
VIII	12.1	12.3	12.0	12.4	12.2	12.1	12.0	11.8	11.9	12.1	12.5
IX	15.7	15.7	14.9	15.6	15.6	15.3	14.7	14.6	15.0	15.2	15.7
Richest	27.7	27.4	26.0	27.3	26.3	27.4	24.3	24.8	25.9	26.9	25.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

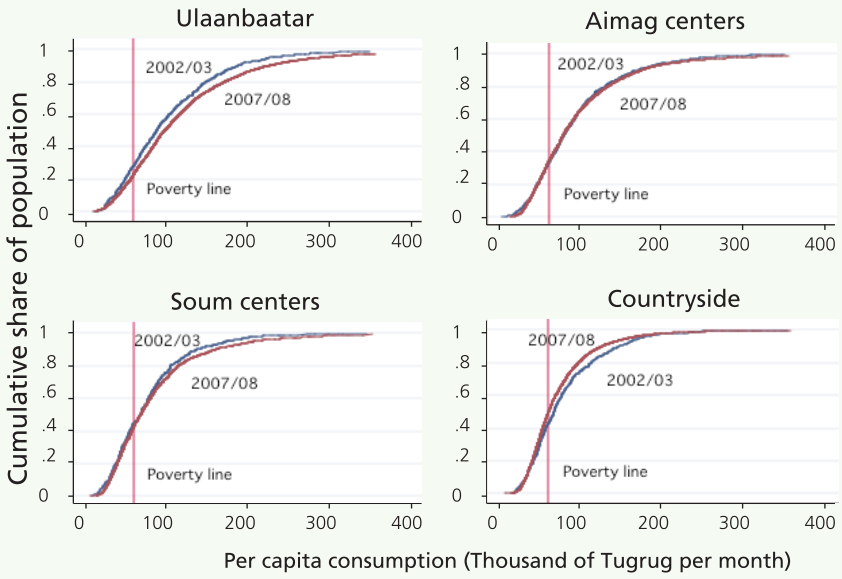
a/ Excludes Ulaanbaatar.
Note: Deciles were constructed separately for each domain. They comprise 10% of the population of the respective region.
Source: HSES 2007/08.

Figure D.1: First-order stochastic dominance: Cumulative distribution of per capita consumption by urban and rural areas, 2002/03, 2007/08



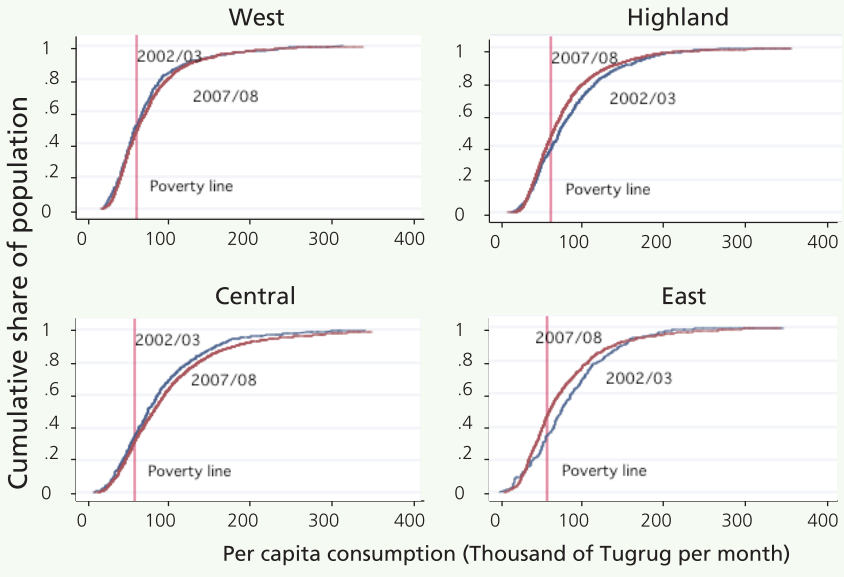
Source: HIES/ISMS2002/03 and HSES 2007/08

Figure D.2: First-order stochastic dominance: Cumulative distribution of per capita consumption by analytical domain, 2002/03, 2007/08



Source: HIES/LSMS 2002/03 and HSES 2007/08.

Figure D.3: First-order stochastic dominance: Cumulative distribution of per capita consumption by region, 2002/03, 2007/08



Source: HIES/LSMS 2002/03 and HSES 2007/08.

Table D.5: Poverty profile by characteristics of the household head and urban and rural areas

	Headcount			Share of population			Share of poor		
	Urban	Rural	National	Urban	Rural	National	Urban	Rural	National
Total	26.9	46.6	35.2	100.0	100.0	100.0	100.0	100.0	100.0
Gender									
Male	25.8	46.8	35.3	78.0	88.0	82.3	74.9	88.5	82.5
Female	30.6	45.0	34.7	22.0	12.0	17.7	25.1	11.5	17.5
Age									
Less than 30 years	23.0	44.0	33.9	9.2	13.3	11.0	7.9	12.6	10.5
Between 30 and 39	28.8	49.2	38.3	25.9	30.8	28.0	27.8	32.5	30.5
Between 40 and 49	27.4	49.1	36.3	32.1	30.1	31.3	32.7	31.8	32.2
Between 50 and 59	26.0	41.5	31.9	17.7	14.6	16.4	17.1	13.0	14.8
60 years and older	25.8	42.2	31.6	15.1	11.2	13.4	14.5	10.1	12.0
Educational attainment									
None	57.7	58.2	58.0	2.0	6.6	3.9	4.3	8.2	6.5
Primary	47.3	52.7	51.5	4.6	21.8	11.9	8.1	24.6	17.4
Lower secondary	45.3	50.0	48.1	15.9	33.0	23.1	26.7	35.4	31.6
Complete secondary	29.9	44.7	34.6	37.1	23.7	31.4	41.2	22.8	30.9
Vocational	21.1	34.9	25.3	15.7	9.5	13.0	12.3	7.1	9.4
Diploma	8.3	16.1	9.5	14.7	3.7	10.0	4.5	1.3	2.7
University	7.9	15.6	8.8	9.2	1.7	6.0	2.7	0.6	1.5
Other	4.7	20.7	6.1	0.9	0.1	0.6	0.2	0.1	0.1
Migration									
Non-migrant	27.6	49.4	40.1	44.9	81.8	60.6	46.2	86.7	68.9
Migrant	26.3	33.9	27.8	55.1	18.2	39.4	53.8	13.3	31.1
Employment									
Labor force participation									
Employed	24.1	45.3	34.3	68.5	85.4	75.7	61.5	83.1	73.6
Unemployed	48.1	65.6	54.4	4.6	3.6	4.2	8.3	5.1	6.5
Out of the labor force	30.3	50.6	34.9	26.7	10.6	19.9	30.1	11.5	19.7
Unspecified	16.3	46.0	35.9	0.1	0.4	0.3	0.1	0.4	0.3
Among those employed,									
Economic activity									
Agriculture	40.0	50.0	49.1	4.7	60.8	28.5	6.9	65.3	39.7
Industry	29.8	44.3	32.8	20.0	7.0	14.5	22.2	6.6	13.5
Services	18.7	28.6	20.9	40.8	16.1	30.3	28.3	9.9	18.0
Unspecified	35.3	38.1	36.1	3.1	1.6	2.4	4.0	1.3	2.5
Sector of employment									
Herders	45.6	49.3	49.0	2.5	54.2	24.4	4.2	57.3	34.0
Private	25.4	41.6	29.2	46.2	19.2	34.7	43.6	17.2	28.8
Public	17.6	32.2	22.4	13.4	8.8	11.4	8.8	6.1	7.3
State	11.9	24.6	14.6	4.6	1.7	3.4	2.0	0.9	1.4
Unspecified	42.0	48.8	44.6	1.9	1.6	1.8	2.9	1.6	2.2

Source: HSES 2007/08.

Table D.6: Poverty profile by characteristics of the household head and analytical domain

	Headcount				Share of population				Share of poor			
	Ulaan-baatar	Aimag centers	Soum centers	Country-side	Ulaan-baatar	Aimag centers	Soum centers	Country-side	Ulaan-baatar	Aimag centers	Soum centers	Country-side
Total	21.9	34.9	42.0	49.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gender												
Male	20.2	34.4	42.5	49.6	75.8	81.5	84.6	90.4	69.7	80.3	85.5	90.2
Female	27.5	37.3	39.5	51.1	24.2	18.5	15.4	9.6	30.3	19.7	14.5	9.8
Age												
Less than 30 years	20.5	27.8	35.6	47.1	9.8	8.3	8.8	16.5	9.1	6.6	7.5	15.6
Between 30 and 39	22.1	38.6	44.5	52.2	24.8	27.7	29.3	31.8	25.0	30.7	31.0	33.4
Between 40 and 49	22.6	34.3	42.0	55.6	30.7	34.3	35.1	26.7	31.6	33.8	35.1	29.9
Between 50 and 59	21.5	34.2	39.1	43.5	18.3	16.6	16.6	13.2	17.9	16.2	15.5	11.6
60 years and older	21.8	34.0	45.1	40.5	16.3	13.1	10.2	11.8	16.2	12.7	11.0	9.6
Educational attainment												
None	43.2	68.1	66.2	55.8	1.3	3.0	3.7	8.5	2.6	5.9	5.9	9.6
Primary	41.3	51.5	58.6	50.8	3.1	7.0	13.3	27.6	5.8	10.4	18.5	28.2
Lower secondary	37.9	51.7	47.0	51.4	12.1	22.1	26.0	37.8	20.9	32.7	29.1	39.1
Complete secondary	27.8	33.4	40.7	49.7	37.3	36.7	31.9	18.0	47.2	35.1	30.9	18.0
Vocational	19.1	24.9	33.0	38.3	16.6	14.3	15.0	5.7	14.4	10.2	11.8	4.4
Diploma	6.9	13.2	14.9	19.9	18.4	8.7	6.7	1.6	5.8	3.3	2.4	0.6
University	6.9	9.9	18.7	5.1	10.3	7.4	3.2	0.7	3.3	2.1	1.4	0.1
Other	0.0	14.0	0.0	48.4	1.0	0.8	0.2	0.1	0.0	0.3	0.0	0.1
Migration												
Non-migrant	20.6	38.4	46.3	51.1	43.8	46.7	71.1	89.2	41.2	51.3	78.5	91.6
Migrant	23.0	31.9	31.3	38.6	56.2	53.3	28.9	10.8	58.8	48.7	21.5	8.4
Employment												
Labor force participation												
Employed	18.6	32.1	38.6	49.2	65.4	73.7	76.8	91.4	55.4	67.8	70.5	90.4
Unemployed	43.3	54.3	66.3	63.0	4.2	5.3	6.8	1.4	8.3	8.2	10.7	1.8
Out of the labor force	26.2	40.2	48.0	54.4	30.4	20.7	15.7	7.1	36.2	23.8	17.9	7.8
Unspecified	0.0	19.7	49.1	35.2	0.0	0.3	0.7	0.1	0.0	0.2	0.9	0.1
Among those employed,												
Economic activity												
Agriculture	18.2	48.5	50.5	49.9	2.1	8.8	29.7	82.3	1.8	12.2	35.7	82.5
Industry	27.0	33.8	41.3	51.5	19.0	21.8	12.1	3.5	23.4	21.1	11.9	3.6
Services	14.1	26.7	26.6	37.8	42.1	38.5	32.2	4.9	27.1	29.5	20.4	3.7
Unspecified	32.5	37.4	37.3	40.2	2.1	4.6	2.8	0.7	3.2	5.0	2.5	0.6
Sector of employment												
Herders	29.5	49.9	49.8	49.2	0.8	5.1	20.6	77.4	1.1	7.3	24.4	76.5
Private	19.6	35.3	35.5	59.0	47.2	44.6	34.7	8.5	42.1	45.1	29.3	10.0
Public	12.3	25.0	32.5	30.9	12.6	14.7	17.0	3.1	7.0	10.5	13.1	1.9
State	13.4	10.8	24.2	25.4	3.1	7.1	2.8	1.0	1.9	2.2	1.6	0.5
Unspecified	42.1	41.8	47.9	49.7	1.7	2.2	1.8	1.4	3.3	2.6	2.0	1.4

Source: HSES 2007/08.

Table D.7: Poverty profile by characteristics of the household head and region

	Headcount					Share of population					Share of poor				
	West	High-lands	Central	East	Ulaan-baatar	West	High-lands	Central	East	Ulaan-baatar	West	High-lands	Central	East	Ulaan-baatar
Total	47.1	46.6	30.7	46.7	21.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gender															
Male	47.8	47.2	29.6	45.7	20.2	89.9	86.3	82.4	83.2	75.8	91.2	87.5	79.3	81.3	69.7
Female	41.0	42.4	36.3	51.9	27.5	10.1	13.7	17.6	16.8	24.2	8.8	12.5	20.7	18.7	30.3
Age															
Less than 30 years	46.5	50.6	20.1	36.4	20.5	12.8	10.9	11.0	12.6	9.8	12.6	11.9	7.2	9.8	9.1
Between 30 and 39	50.8	49.7	34.7	47.5	22.1	30.4	29.8	29.5	28.6	24.8	32.8	31.8	33.3	29.1	25.0
Between 40 and 49	50.4	45.1	30.8	51.9	22.6	30.5	32.3	31.0	32.9	30.7	32.6	31.3	31.0	36.6	31.6
Between 50 and 59	39.6	42.9	30.8	45.3	21.5	15.0	14.5	17.2	14.0	18.3	12.6	13.3	17.3	13.6	17.9
60 years and older	38.9	43.7	30.5	42.8	21.8	11.4	12.5	11.3	11.9	16.3	9.4	11.7	11.2	10.9	16.2
Educational attainment															
None	52.6	67.3	47.6	73.6	43.2	5.8	5.2	4.3	7.1	1.3	6.5	7.5	6.6	11.2	2.6
Primary	52.8	55.4	41.7	59.1	41.3	17.0	19.6	12.5	16.9	3.1	19.0	23.4	17.0	21.4	5.8
Lower secondary	56.1	54.8	36.8	51.7	37.9	27.1	31.4	26.2	34.0	12.1	32.2	36.9	31.3	37.7	20.9
Complete secondary	46.7	41.5	29.9	41.3	27.8	31.5	26.5	30.5	20.8	37.3	31.2	23.6	29.7	18.4	47.2
Vocational	35.3	31.3	25.7	33.2	19.1	10.2	8.1	15.5	12.6	16.6	7.7	5.4	12.9	8.9	14.4
Diploma	27.2	15.5	6.8	12.4	6.9	4.3	5.0	7.3	4.5	18.4	2.5	1.7	1.6	1.2	5.8
University	8.5	17.9	7.6	7.4	6.9	3.8	3.8	3.3	3.7	10.3	0.7	1.5	0.8	0.6	3.3
Other	23.1	0.0	0.0	76.0	0.0	0.3	0.3	0.4	0.4	1.0	0.1	0.0	0.0	0.6	0.0
Migration															
Non-migrant	48.7	51.1	33.9	50.0	20.6	84.6	73.0	51.5	68.6	43.8	87.4	80.0	56.8	73.3	41.2
Migrant	38.5	34.5	27.4	39.6	23.0	15.4	27.0	48.5	31.4	56.2	12.6	20.0	43.2	26.7	58.8
Employment															
Labor force participation															
Employed	45.9	45.9	29.6	42.8	18.6	82.9	81.7	82.8	74.6	65.4	80.7	80.5	79.8	68.3	55.4
Unemployed	68.9	63.7	43.4	61.0	43.3	5.5	3.9	3.5	3.7	4.2	8.0	5.3	5.0	4.8	8.3
Out of the labor force	45.8	45.8	34.8	57.6	26.2	11.5	14.3	12.9	21.2	30.4	11.1	14.0	14.6	26.2	36.2
Unspecified	34.2	67.6	25.6	59.8	0.0	0.2	0.1	0.8	0.5	0.0	0.1	0.2	0.7	0.7	0.0
Among those employed,															
Economic activity															
Agriculture	53.5	54.2	39.1	46.1	18.2	53.4	44.1	36.4	32.6	2.1	60.7	51.3	46.3	32.1	1.8
Industry	33.4	41.3	33.1	44.7	27.0	7.3	13.3	14.9	12.3	19.0	5.1	11.8	16.0	11.7	23.4
Services	29.9	33.6	16.5	36.4	14.1	20.2	21.5	29.5	25.2	42.1	12.8	15.5	15.8	19.6	27.1
Unspecified	49.6	30.8	26.1	50.0	32.5	2.0	2.9	2.0	4.5	2.1	2.1	1.9	1.7	4.9	3.2
Sector of employment															
Herders	53.2	54.3	32.3	46.6	29.5	47.7	41.7	25.7	28.4	0.8	53.9	48.6	27.0	28.4	1.1
Private	40.3	41.1	31.1	47.6	19.6	23.5	24.8	37.3	25.9	47.2	20.1	21.9	37.8	26.4	42.1
Public	27.2	36.2	20.2	32.3	12.3	10.5	9.6	11.7	13.2	12.6	6.0	7.4	7.7	9.1	7.0
State	0.0	14.3	15.7	19.1	13.4	0.4	4.5	4.9	4.5	3.1	0.0	1.4	2.5	1.8	1.9
Unspecified	42.0	45.9	46.3	47.5	42.1	0.9	1.1	3.2	2.5	1.7	0.8	1.1	4.8	2.6	3.3

Source: HSES 2007/08.

Table D.8: Poverty profile by characteristics of the dwelling and urban and rural areas

	Headcount			Share of population			Share of poor		
	Urban	Rural	National	Urban	Rural	National	Urban	Rural	National
Total	26.9	46.6	35.2	100.0	100.0	100.0	100.0	100.0	100.0
Dwelling									
Ger	46.7	50.1	48.8	28.8	68.6	45.7	50.0	73.8	63.3
Apartment	6.7	22.0	8.5	30.9	5.3	20.0	7.7	2.5	4.8
House	27.9	42.4	32.6	39.8	25.7	33.8	41.3	23.4	31.3
Other 1/	46.1	41.3	44.3	0.5	0.4	0.5	0.9	0.4	0.6
Water supply									
Central, hot and cold	5.2	22.6	6.2	28.0	2.4	17.1	5.4	1.1	3.0
Central, only cold	17.3	21.7	18.4	3.6	1.7	2.8	2.3	0.8	1.4
Protected well	33.3	42.6	37.9	22.6	29.7	25.6	28.0	27.1	27.5
Unprotected well	44.2	43.3	43.4	1.8	17.9	8.6	2.9	16.7	10.6
Tanker trucks 2/	36.9	50.0	38.3	42.6	7.2	27.6	58.4	7.7	30.0
Other 3/	53.5	52.7	52.7	1.5	41.2	18.3	3.0	46.6	27.4
Improved water sources 4/									
No	37.7	49.8	44.0	45.8	66.3	54.5	64.3	70.9	68.0
Yes	17.7	40.1	24.8	54.2	33.7	45.5	35.7	29.1	32.0
Improved sanitation 5/									
No	44.4	51.2	48.8	26.9	65.1	43.1	44.4	71.5	59.6
Yes	20.4	38.0	25.0	73.1	34.9	56.9	55.6	28.5	40.4
Heating									
Central	11.0	30.2	13.3	36.4	6.8	23.8	14.8	4.4	9.0
Simple unit 6/	36.3	48.1	42.4	62.2	90.0	74.0	84.0	93.0	89.1
Other 7/	21.1	37.3	31.1	1.5	3.2	2.2	1.1	2.6	2.0
Electricity									
Central	25.8	40.1	28.9	93.6	35.8	69.1	89.8	30.8	56.7
Local	37.1	44.4	40.2	5.2	5.1	5.2	7.2	4.8	5.9
Solar	49.9	47.8	47.8	0.6	35.8	15.6	1.1	36.8	21.1
Other 8/	53.6	48.7	48.8	0.1	10.2	4.4	0.2	10.7	6.1
None	85.8	60.3	61.6	0.5	13.0	5.8	1.8	16.9	10.2

1/ Other includes student residences, company dormitories and any other building designed not to be inhabited by households.
2/ Includes also water storage sites.
3/ Spring, river, snow, ice, others.
4/ It refers to the percentage of the population with access to an improved water source such as household connection, public standpipe or protected well or spring. Unimproved sources include vendors, tanker trucks, water storage sites and unprotected wells and springs.
5/ Sanitation refers to the percentage of the population with access to improved sanitation facilities such as adequate excreta disposal facilities (private or shared but not public). They can range from simple but protected pit latrines to flush toilets with sewerage connection.
6/ Simple heating units fueled by firewood, coal or dung.
7/ Electric heating unit, private low pressure stove, others.
8/ Wind systems, small gen-sets, others.
Source: HSES 2007/08.

Table D.9: Poverty profile by characteristics of the dwelling and analytical domain

	Headcount				Share of population				Share of poor			
	Ulaan-baatar	Aimag centers	Soum centers	Country-side	Ulaan-baatar	Aimag centers	Soum centers	Country-side	Ulaan-baatar	Aimag centers	Soum centers	Country-side
Total	21.9	34.9	42.0	49.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dwelling												
Ger	43.3	50.6	50.1	50.1	24.9	35.1	47.5	83.3	49.1	50.9	56.6	83.8
Apartment	3.9	12.5	20.9	25.0	33.5	26.6	9.4	2.4	6.0	9.5	4.7	1.2
House	23.5	35.7	37.8	52.0	41.2	37.6	42.4	14.1	44.2	38.5	38.2	14.7
Other 1/	40.2	51.1	33.2	59.7	0.4	0.7	0.7	0.2	0.7	1.1	0.5	0.2
Water supply												
Central, hot and cold	3.9	8.6	20.9	25.9	33.4	19.2	3.9	1.3	6.0	4.7	1.9	0.7
Central, only cold	19.0	16.8	14.6	39.1	1.3	7.2	2.9	0.8	1.1	3.5	1.0	0.6
Protected well	29.7	37.1	41.0	46.4	18.9	28.6	51.1	14.8	25.7	30.4	49.9	13.8
Unprotected well	34.6	47.2	46.3	42.1	0.7	3.5	12.3	21.8	1.1	4.8	13.6	18.5
Tanker trucks 2/	31.8	46.7	47.9	54.6	45.4	38.0	12.1	3.8	65.9	50.8	13.8	4.1
Other 3/	19.7	58.1	47.0	53.9	0.3	3.5	17.6	57.5	0.3	5.8	19.8	62.2
Improved water sources 4/												
No	31.8	47.6	47.1	50.8	46.4	44.9	42.1	83.0	67.2	61.4	47.1	84.8
Yes	13.4	24.5	38.3	44.4	53.6	55.1	57.9	17.0	32.8	38.6	52.9	15.2
Improved sanitation 5/												
No	38.5	54.0	49.5	51.7	26.8	27.0	38.5	83.5	47.0	41.8	45.4	86.8
Yes	15.9	27.8	37.3	39.8	73.2	73.0	61.5	16.5	53.0	58.2	54.6	13.2
Heating												
Central	8.2	16.6	26.7	39.8	39.7	31.0	12.2	3.1	14.9	14.8	7.7	2.4
Simple unit 6/	31.3	43.4	44.5	50.4	58.6	67.8	85.2	93.3	83.8	84.3	90.4	94.6
Other 7/	17.8	28.3	30.8	40.5	1.6	1.2	2.6	3.7	1.3	1.0	1.9	3.0
Electricity												
Central	21.3	34.1	38.8	44.9	98.1	86.2	69.4	12.6	95.3	84.1	64.1	11.4
Local	57.7	31.8	46.0	39.2	1.7	10.9	9.6	2.0	4.6	9.9	10.5	1.5
Solar	0.0	54.4	39.0	49.0	0.1	1.4	10.2	53.6	0.0	2.2	9.4	52.8
Other 8/	0.0	73.7	59.2	46.3	0.0	0.2	4.6	14.1	0.0	0.3	6.5	13.1
None	100.0	85.4	63.6	59.4	0.0	1.4	6.2	17.7	0.1	3.4	9.4	21.2

1/ Other includes student residences, company dormitories and any other building designed not to be inhabited by households.
2/ Includes also water storage sites.
3/ Spring, river, snow, ice, others.
4/ It refers to the percentage of the population with access to an improved water source such as household connection, public standpipe or protected well or spring. Unimproved sources include vendors, tanker trucks, water storage sites and unprotected wells and springs.
5/ Sanitation refers to the percentage of the population with access to improved sanitation facilities such as adequate excreta disposal facilities (private or shared but not public). They can range from simple but protected pit latrines to flush toilets with sewerage connection.
6/ Simple heating units fueled by firewood, coal or dung.
7/ Electric heating unit, private low pressure stove, others.
8/ Wind systems, small gen-sets, others.
Source: HSES 2007/08.

Table D.10: Poverty profile by characteristics of the dwelling and region

	Headcount					Share of population					Share of poor				
	West	High-lands	Central	East	Ulaan-baatar	West	High-lands	Central	East	Ulaan-baatar	West	High-lands	Central	East	Ulaan-baatar
Total	47.1	46.6	30.7	46.7	21.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dwelling															
Ger	50.1	55.0	37.6	55.0	43.3	65.6	64.6	42.8	48.7	24.9	69.7	76.3	52.3	57.4	49.1
Apartment	19.5	9.2	11.8	28.2	3.9	4.6	9.0	21.5	20.3	33.5	1.9	1.8	8.2	12.3	6.0
House	44.1	38.6	34.3	45.6	23.5	29.3	26.1	35.0	30.2	41.2	27.4	21.6	39.0	29.5	44.2
Other 1/	84.6	44.5	20.0	48.8	40.2	0.5	0.3	0.8	0.7	0.4	0.9	0.3	0.5	0.8	0.7
Water supply															
Central, hot and cold	21.8	9.1	8.0	17.9	3.9	2.1	7.2	12.7	13.4	33.4	1.0	1.4	3.3	5.2	6.0
Central, only cold	27.7	12.7	15.2	29.3	19.0	2.0	1.3	8.4	3.3	1.3	1.2	0.3	4.1	2.1	1.1
Protected well	44.3	48.1	28.7	45.1	29.7	39.2	21.1	33.0	24.6	18.9	36.9	21.8	30.9	23.7	25.7
Unprotected well	50.2	43.8	39.5	52.6	34.6	4.0	11.7	22.4	15.7	0.7	4.3	11.0	28.8	17.7	1.1
Tanker trucks 2/	44.5	45.3	43.2	56.7	31.8	4.1	19.7	19.0	37.4	45.4	3.9	19.1	26.6	45.4	65.9
Other 3/	51.2	55.4	42.8	49.6	19.7	48.5	38.9	4.5	5.5	0.3	52.8	46.3	6.3	5.9	0.3
Improved water sources 4/															
No	50.7	50.6	41.3	55.0	31.8	56.7	70.3	45.9	58.7	46.4	61.0	76.4	61.7	69.0	67.2
Yes	42.4	37.0	21.8	35.0	13.4	43.3	29.7	54.1	41.3	53.6	39.0	23.6	38.3	31.0	32.8
Improved sanitation 5/															
No	54.2	56.6	38.9	53.3	38.5	59.7	54.1	43.1	49.5	26.8	68.7	65.7	54.6	56.5	47.0
Yes	36.6	34.8	24.6	40.2	15.9	40.3	45.9	56.9	50.5	73.2	31.3	34.3	45.4	43.5	53.0
Heating															
Central	25.2	21.9	14.8	30.8	8.2	6.0	13.0	24.5	19.8	39.7	3.2	6.1	11.8	13.0	14.9
Simple unit 6/	48.7	50.5	36.6	51.1	31.3	92.4	83.1	73.7	78.2	58.6	95.6	90.0	87.8	85.5	83.8
Other 7/	36.8	46.3	7.5	31.7	17.8	1.6	3.9	1.9	2.1	1.6	1.2	3.8	0.5	1.4	1.3
Electricity															
Central	38.3	39.7	30.7	44.2	21.3	34.7	52.1	73.2	50.9	98.1	28.2	44.4	73.2	48.1	95.3
Local	49.1	45.7	14.9	37.6	57.7	11.9	2.2	6.8	11.5	1.7	12.4	2.2	3.3	9.2	4.6
Solar	52.6	51.9	28.8	39.4	0.0	31.1	30.4	13.3	14.1	0.1	34.7	33.9	12.4	11.9	0.0
Other 8/	51.8	45.5	33.4	45.6	0.0	16.7	3.8	1.2	6.4	0.0	18.4	3.8	1.3	6.3	0.0
None	53.2	64.4	54.4	66.8	100.0	5.6	11.4	5.5	17.1	0.0	6.3	15.7	9.8	24.5	0.1

1/ Other includes student residences, company dormitories and any other building designed not to be inhabited by households.
2/ Includes also water storage sites.
3/ Spring, river, snow, ice, others.
4/ It refers to the percentage of the population with access to an improved water source such as household connection, public standpipe or protected well or spring. Unimproved sources include vendors, tanker trucks, water storage sites and unprotected wells and springs.
5/ Sanitation refers to the percentage of the population with access to improved sanitation facilities such as adequate excreta disposal facilities (private or shared but not public). They can range from simple but protected pit latrines to flush toilets with sewerage connection.
6/ Simple heating units fueled by firewood, coal or dung.
7/ Electric heating unit, private low pressure stove, others.

Table D.11: Highest educational attainment of the population 18 years and older (%)

	None	Primary	Lower secondary	Complete secondary	Vocational	Higher diploma	University	Other	Total
National	4.3	9.9	19.1	37.3	11.1	8.8	9.0	0.6	100.0
Location									
Urban	2.2	4.0	13.1	42.0	12.9	12.1	12.9	0.9	100.0
Rural	7.3	18.7	27.9	30.3	8.5	4.0	3.2	0.2	100.0
Ulaanbaatar	1.6	3.0	10.7	42.0	13.1	15.0	13.6	1.0	100.0
Aimag centers	3.3	5.8	17.2	41.9	12.5	6.9	11.8	0.7	100.0
Soum centers	4.6	10.7	21.0	37.9	13.0	7.2	5.4	0.3	100.0
Countryside	9.1	24.2	32.6	25.0	5.5	1.8	1.7	0.1	100.0
West	6.5	15.1	21.7	36.4	9.0	4.9	6.1	0.3	100.0
Highlands	5.8	16.6	26.4	32.7	7.5	4.1	6.6	0.4	100.0
Central a/	4.5	10.4	21.1	37.7	13.0	7.0	6.1	0.3	100.0
East	7.8	13.3	28.9	28.1	12.0	3.7	5.7	0.5	100.0
Gender									
Men	4.4	10.3	22.3	36.8	10.0	8.7	7.0	0.5	100.0
Women	4.2	9.7	16.2	37.6	12.1	8.9	10.7	0.6	100.0
Quintile									
Poorest	8.7	15.8	30.6	33.7	6.8	1.9	2.3	0.2	100.0
Q2	5.7	12.9	25.0	39.1	9.3	3.8	4.1	0.1	100.0
Q3	3.8	11.1	19.6	39.8	12.2	6.6	6.8	0.2	100.0
Q4	2.6	8.0	15.5	38.7	12.6	10.7	11.4	0.6	100.0
Richest	1.7	3.9	8.3	34.8	13.6	18.3	17.9	1.6	100.0
Poverty									
Non-poor	2.8	7.8	14.7	37.9	12.6	11.6	11.8	0.8	100.0
Poor	7.4	14.6	28.7	35.9	7.8	2.6	2.8	0.2	100.0

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.12 Highest educational attainment of the population 18 years and older by poverty status (%)

	None	Primary	Lower secondary	Complete secondary	Vocational	Higher diploma	University	Other	Total
National	4.3	9.9	19.1	37.3	11.1	8.8	9.0	0.6	100.0
Poverty									
Non-poor	2.8	7.8	14.7	37.9	12.6	11.6	11.8	0.8	100.0
Poor	7.4	14.6	28.7	35.9	7.8	2.6	2.8	0.2	100.0
Location									
Urban non-poor	1.5	3.1	9.6	40.7	13.8	14.8	15.5	1.1	100.0
Urban poor	4.7	6.9	24.3	46.1	9.8	3.4	4.7	0.2	100.0
Rural non-poor	5.5	17.0	24.6	32.5	10.3	5.5	4.6	0.1	100.0
Rural poor	9.7	21.0	32.4	27.3	6.1	2.0	1.3	0.2	100.0
Ulaanbaatar non-poor	1.1	2.3	8.3	39.9	13.8	17.6	15.8	1.2	100.0
Ulaanbaatar poor	3.6	5.8	20.6	50.3	10.2	4.6	4.7	0.2	100.0
Aimag centers non-poor	2.1	4.7	12.1	42.1	13.9	9.1	15.1	1.0	100.0
Aimag centers poor	5.9	8.0	28.4	41.5	9.4	2.0	4.6	0.2	100.0
Soum centers non-poor	2.6	8.3	17.7	39.9	14.9	9.3	7.2	0.3	100.0
Soum centers poor	8.0	14.8	26.4	34.7	9.8	3.8	2.5	0.2	100.0
Countryside non-poor	7.7	23.8	30.0	26.7	6.7	2.5	2.6	0.0	100.0
Countryside poor	10.8	24.7	35.9	23.0	4.0	0.9	0.5	0.1	100.0
West non-poor	6.2	14.2	16.9	36.3	10.4	6.4	9.2	0.4	100.0
West poor	7.0	16.3	28.4	36.6	7.1	2.7	1.8	0.2	100.0
Highlands non-poor	3.9	14.1	21.1	35.8	9.1	6.1	9.4	0.5	100.0
Highlands poor	8.4	20.0	33.5	28.4	5.4	1.5	2.8	0.2	100.0
Central non-poor a/	3.0	9.6	18.4	38.4	14.1	8.5	7.6	0.4	100.0
Central poor a/	8.4	12.7	28.4	35.7	9.9	2.9	2.0	0.0	100.0
East non-poor	3.9	9.8	24.8	31.3	15.1	5.7	8.8	0.7	100.0
East poor	12.9	17.9	34.3	24.0	8.1	1.0	1.7	0.2	100.0
Gender									
Men non-poor	2.7	7.6	18.0	38.5	11.4	11.7	9.4	0.7	100.0
Men poor	7.9	15.9	31.7	33.2	6.9	2.4	1.8	0.2	100.0
Women non-poor	2.9	8.0	11.8	37.3	13.7	11.6	13.9	0.8	100.0
Women poor	7.0	13.4	26.1	38.3	8.6	2.8	3.7	0.2	100.0

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.13: Population 18 years and older by highest educational attainment (%)

	None	Primary	Lower secondary	Complete secondary	Vocational	Higher diploma	University	Other	Total
National	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Location									
Urban	31.2	24.1	40.9	67.1	69.0	81.7	85.6	89.9	59.6
Rural	68.8	75.9	59.1	32.9	31.1	18.3	14.4	10.1	40.4
Ulaanbaatar	14.4	11.5	21.3	42.6	44.5	64.6	57.0	63.2	37.8
Aimag centers	16.8	12.6	19.6	24.5	24.4	17.1	28.6	26.7	21.8
Soum centers	17.9	17.9	18.3	16.9	19.4	13.5	9.9	7.4	16.6
Countryside	50.9	58.0	40.8	16.0	11.7	4.8	4.5	2.8	23.8
West	23.3	23.0	17.3	14.8	12.3	8.4	10.3	7.8	15.2
Highlands	30.5	37.6	31.1	19.7	15.1	10.5	16.4	15.4	22.5
Central a/	17.8	17.8	18.8	17.1	19.8	13.4	11.4	7.7	16.9
East	14.0	10.2	11.6	5.8	8.3	3.2	4.8	5.9	7.6
Gender									
Men	47.8	48.0	54.4	46.0	41.7	46.1	36.2	41.7	46.5
Women	52.3	52.0	45.6	54.0	58.3	53.9	63.8	58.3	53.5
Quintile									
Poorest	35.5	27.5	27.8	15.7	10.6	3.8	4.4	5.9	17.3
Q2	24.7	24.1	24.4	19.5	15.6	8.0	8.5	2.8	18.6
Q3	18.0	22.4	20.7	21.5	22.1	15.0	15.2	8.0	20.1
Q4	13.0	17.1	17.3	22.2	24.1	26.0	26.9	22.9	21.3
Richest	8.8	8.9	9.9	21.2	27.7	47.2	45.1	60.5	22.7
Poverty									
Non-poor	45.4	54.1	52.9	69.9	78.0	90.7	90.3	91.3	68.7
Poor	54.6	45.9	47.1	30.1	22.0	9.3	9.7	8.7	31.3

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.14: Population 18 years and older by highest educational attainment and poverty status (%)

	None	Primary	Lower secondary	Complete secondary	Vocational	Higher diploma	University	Other	Total
National	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Poverty									
Non-poor	45.4	54.1	52.9	69.9	78.0	90.7	90.3	91.3	68.7
Poor	54.6	45.9	47.1	30.1	22.0	9.3	9.7	8.7	31.3
Location									
Urban non-poor	15.5	14.2	22.8	49.5	56.4	76.2	78.3	85.6	45.4
Urban poor	15.7	9.8	18.2	17.6	12.6	5.5	7.4	4.2	14.2
Rural non-poor	29.9	39.9	30.1	20.4	21.6	14.5	12.0	5.7	23.4
Rural poor	38.9	36.1	29.0	12.5	9.4	3.8	2.4	4.5	17.1
Ulaanbaatar non-poor	8.1	7.1	13.3	32.6	37.7	60.7	53.1	60.7	30.4
Ulaanbaatar poor	6.3	4.4	8.0	10.1	6.8	3.9	3.9	2.5	7.4
Aimag centers non-poor	7.4	7.1	9.5	17.0	18.7	15.5	25.1	25.0	15.0
Aimag centers poor	9.4	5.5	10.1	7.6	5.7	1.6	3.5	1.7	6.8
Soum centers non-poor	6.2	8.5	9.6	11.0	13.8	10.8	8.2	5.2	10.3
Soum centers poor	11.8	9.4	8.7	5.9	5.6	2.7	1.7	2.2	6.3
Countryside non-poor	23.7	31.3	20.5	9.4	7.9	3.7	3.8	0.5	13.1
Countryside poor	27.1	26.7	20.3	6.6	3.8	1.2	0.7	2.3	10.7
West non-poor	12.8	12.6	7.8	8.6	8.3	6.4	9.0	6.2	8.8
West poor	10.5	10.5	9.5	6.3	4.1	1.9	1.3	1.7	6.4
Highlands non-poor	11.7	18.3	14.3	12.4	10.5	8.9	13.5	11.9	12.9
Highlands poor	18.8	19.3	16.8	7.3	4.6	1.6	2.9	3.4	9.6
Central non-poor a/	8.8	11.9	11.9	12.7	15.7	11.9	10.4	7.7	12.4
Central poor a/	9.0	5.9	6.8	4.4	4.1	1.5	1.0	0.0	4.6
East non-poor	4.0	4.2	5.6	3.6	5.9	2.8	4.2	4.9	4.3
East poor	10.0	6.0	6.0	2.1	2.4	0.4	0.6	1.1	3.3
Gender									
Men non-poor	20.3	24.3	29.9	32.8	32.5	42.1	33.2	38.0	31.7
Men poor	27.5	23.7	24.5	13.2	9.2	4.0	3.0	3.7	14.8
Women non-poor	25.1	29.8	23.0	37.1	45.6	48.5	57.0	53.3	37.0
Women poor	27.2	22.2	22.6	17.0	12.7	5.3	6.7	5.0	16.5

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.15: Enrollment rates for primary and lower secondary (%)

	Net enrollment rates						Gross enrollment rates					
	Primary			Lower secondary			Primary			Lower secondary		
	Total	Non-poor	Poor	Total	Non-poor	Poor	Total	Non-poor	Poor	Total	Non-poor	Poor
National	86	85	86	79	83	73	103	100	107	100	104	94
Location												
Urban	85	84	87	81	83	78	102	98	109	103	106	97
Rural	86	87	85	75	82	70	104	102	105	96	101	91
Ulaanbaatar	86	85	87	80	82	73	100	96	111	102	105	93
Aimag centers	84	83	87	83	84	81	103	101	108	104	107	100
Soum centers	88	89	88	81	85	76	108	106	110	102	105	99
Countryside	85	86	83	71	78	65	101	100	103	91	98	85
West	85	86	84	76	80	73	104	102	105	95	97	93
Highlands	87	90	84	76	83	71	107	108	107	95	101	91
Central a/	85	84	86	82	84	79	98	95	103	108	111	103
East	85	78	90	78	84	73	106	103	109	100	108	92
Gender												
Men	85	85	85	77	82	70	102	99	106	97	102	90
Women	86	86	86	80	83	76	104	100	108	102	106	97

a/ Excludes Ulaanbaatar.
Note: The net enrollment rate for a particular level is defined as the ratio of the number of students in the relevant age group attending that level with respect to the number of children in the relevant age group for that level. The gross enrolment rate for a certain level is the ratio of the number of students attending that level irrespective of their age with respect to the total number of children in the relevant age group for that level.
The age group for primary are children aged 7 to 11, while for lower secondary are those aged 12 to 15.
Source: HSES 2007/08.

Figure D.4: Participation rates

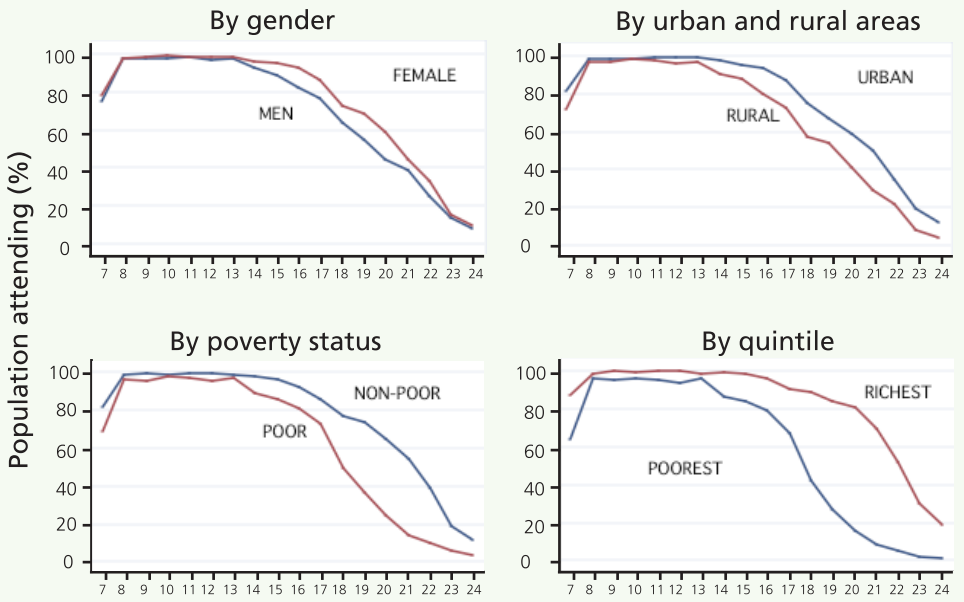


Table D.16: Educational level attended by current students (%)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	33.8	30.6	13.2	1.9	19.9	0.6	100.0
Location							
Urban	29.6	29.5	14.1	1.9	24.2	0.7	100.0
Rural	39.9	32.2	11.9	2.0	13.6	0.4	100.0
Ulaanbaatar	28.7	28.6	13.3	1.5	27.1	0.9	100.0
Aimag centers	30.9	30.7	15.3	2.5	20.1	0.5	100.0
Soum centers	35.0	32.3	14.3	1.9	15.9	0.5	100.0
Countryside	44.3	32.1	9.6	2.1	11.6	0.3	100.0
West	40.6	32.2	12.8	0.7	13.6	0.2	100.0
Highlands	36.8	30.5	13.1	2.5	16.7	0.5	100.0
Central a/	32.1	31.3	14.1	3.0	18.8	0.6	100.0
East	36.4	34.9	11.9	2.7	13.5	0.6	100.0
Gender							
Men	35.5	31.7	12.5	2.1	17.6	0.7	100.0
Women	32.3	29.7	13.9	1.8	22.0	0.4	100.0
Quintile							
Poorest	46.6	35.7	10.9	2.2	4.2	0.4	100.0
Q2	38.2	34.5	13.4	2.4	10.9	0.6	100.0
Q3	33.1	30.3	14.0	2.4	19.8	0.3	100.0
Q4	29.5	28.6	13.9	1.9	25.6	0.6	100.0
Richest	22.8	24.6	13.7	0.8	37.0	1.1	100.0
Poverty							
Non-poor	28.8	28.2	13.9	1.8	26.7	0.6	100.0
Poor	43.4	35.2	11.8	2.3	6.8	0.5	100.0

a/ Excludes Ulaanbaatar.

Source: HSES 2007/08.

Table D.17: Educational level attended by current students by poverty status (%)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	33.8	30.6	13.2	1.9	19.9	0.6	100.0
Poverty							
Non-poor	28.8	28.2	13.9	1.8	26.7	0.6	100.0
Poor	43.4	35.2	11.8	2.3	6.8	0.5	100.0
Location							
Urban non-poor	26.2	27.5	14.4	1.6	29.6	0.7	100.0
Urban poor	39.5	35.2	13.2	2.7	8.6	0.8	100.0
Rural non-poor	34.0	29.6	12.9	2.1	20.9	0.5	100.0
Rural poor	46.6	35.2	10.7	1.9	5.4	0.3	100.0
Ulaanbaatar non-poor	25.9	27.0	13.5	1.4	31.4	0.8	100.0
Ulaanbaatar poor	40.1	35.1	12.2	1.6	9.9	1.0	100.0
Aimag centers non-poor	26.7	28.3	16.1	1.9	26.7	0.4	100.0
Aimag centers poor	38.9	35.3	14.0	3.6	7.6	0.6	100.0
Soum centers non-poor	29.8	29.1	15.8	1.4	23.2	0.7	100.0
Soum centers poor	42.4	36.8	12.2	2.7	5.7	0.3	100.0
Countryside non-poor	38.7	30.2	9.7	2.9	18.3	0.3	100.0
Countryside poor	49.7	34.0	9.5	1.3	5.1	0.3	100.0
West non-poor	34.7	29.2	13.8	0.7	21.4	0.3	100.0
West poor	47.3	35.5	11.7	0.6	4.8	0.1	100.0
Highlands non-poor	30.5	27.1	15.1	2.4	24.6	0.5	100.0
Highlands poor	44.7	34.8	10.7	2.6	6.8	0.4	100.0
Central non-poor a/	28.9	29.0	14.5	2.2	24.5	0.8	100.0
Central poor a/	39.1	36.2	13.2	4.8	6.5	0.2	100.0
East non-poor	29.9	35.4	11.6	3.0	20.1	0.0	100.0
East poor	43.7	34.4	12.2	2.5	6.0	1.2	100.0
Gender							
Men non-poor	29.7	29.9	13.5	1.9	24.3	0.7	100.0
Men poor	46.4	34.9	10.4	2.6	4.7	0.9	100.0
Women non-poor	27.9	26.6	14.3	1.7	29.0	0.6	100.0
Women poor	40.6	35.5	13.1	2.0	8.7	0.2	100.0

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.18: Current students by educational level attended (%)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Location							
Urban	51.8	56.9	63.3	57.8	71.9	70.5	59.1
Rural	48.2	43.1	36.8	42.2	28.1	29.5	40.9
Ulaanbaatar	29.2	32.2	34.6	25.9	47.0	51.1	34.4
Aimag centers	22.5	24.7	28.7	31.9	24.9	19.3	24.6
Soum centers	20.3	20.7	21.2	19.4	15.6	17.8	19.6
Countryside	28.0	22.4	15.6	22.8	12.5	11.8	21.4
West	20.3	17.7	16.4	5.7	11.5	5.0	16.9
Highlands	25.8	23.6	23.7	30.5	20.0	18.1	23.7
Central a/	16.3	17.5	18.3	26.9	16.2	18.3	17.1
East	8.4	8.9	7.1	11.1	5.3	7.6	7.8
Gender							
Men	50.4	49.7	45.4	52.7	42.5	60.8	48.1
Women	49.6	50.3	54.6	47.3	57.5	39.2	51.9
Quintile							
Poorest	26.2	22.2	15.6	21.3	4.0	12.2	19.0
Q2	22.8	22.7	20.4	25.3	11.1	19.8	20.2
Q3	19.4	19.6	21.0	25.0	19.8	11.2	19.8
Q4	17.2	18.4	20.8	19.4	25.4	18.7	19.8
Richest	14.3	17.0	22.1	9.0	39.6	38.1	21.2
Poverty							
Non-poor	55.8	60.4	69.2	59.5	88.2	69.8	65.5
Poor	44.2	39.6	30.8	40.5	11.8	30.2	34.5

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.19: Current students by educational level attended and poverty status (%)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Poverty							
Non-poor	55.8	60.4	69.2	59.5	88.2	69.8	65.5
Poor	44.2	39.6	30.8	40.5	11.8	30.2	34.5
Location							
Urban non-poor	33.8	39.2	47.8	36.1	65.2	50.3	43.7
Urban poor	18.0	17.7	15.4	21.7	6.7	20.2	15.4
Rural non-poor	22.0	21.1	21.3	23.4	22.9	19.5	21.8
Rural poor	26.3	21.9	15.4	18.8	5.2	10.0	19.1
Ulaanbaatar non-poor	21.1	24.4	28.3	20.3	43.6	39.4	27.6
Ulaanbaatar poor	8.1	7.8	6.3	5.7	3.4	11.7	6.8
Aimag centers non-poor	12.7	14.9	19.6	15.9	21.6	10.9	16.1
Aimag centers poor	9.8	9.9	9.1	16.0	3.3	8.5	8.6
Soum centers non-poor	10.0	10.8	13.6	7.9	13.3	13.9	11.4
Soum centers poor	10.3	9.8	7.6	11.5	2.3	3.9	8.2
Countryside non-poor	12.0	10.3	7.7	15.5	9.6	5.6	10.5
Countryside poor	16.0	12.1	7.9	7.4	2.8	6.2	10.9
West non-poor	9.1	8.5	9.3	3.2	9.6	3.8	8.9
West poor	11.1	9.2	7.1	2.5	1.9	1.1	8.0
Highlands non-poor	11.9	11.7	15.1	16.3	16.4	10.4	13.2
Highlands poor	13.9	11.9	8.6	14.2	3.6	7.6	10.5
Central non-poor a/	10.0	11.1	12.9	13.5	14.4	16.1	11.7
Central poor a/	6.3	6.5	5.5	13.4	1.8	2.2	5.5
East non-poor	3.7	4.8	3.7	6.4	4.2	0.0	4.1
East poor	4.8	4.2	3.4	4.7	1.1	7.6	3.7
Gender							
Men non-poor	27.7	30.9	32.3	30.7	38.6	36.2	31.6
Men poor	22.7	18.8	13.1	22.1	3.9	24.6	16.5
Women non-poor	28.0	29.5	36.8	28.8	49.6	33.6	34.0
Women poor	21.6	20.8	17.8	18.4	7.9	5.6	18.0

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.20: Share of current students in public institutions by educational level (%)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	96.1	97.2	94.7	90.7	70.6	57.6	90.8
Location							
Urban	94.0	96.0	92.9	87.8	69.1	51.7	88.0
Rural	98.3	98.8	97.9	94.8	74.3	71.8	95.0
Ulaanbaatar	92.7	94.8	90.7	76.8	66.4	59.2	85.4
Aimag centers	95.7	97.5	95.5	96.7	74.4	31.8	91.7
Soum centers	97.7	98.5	98.1	100.0	74.0	72.9	94.1
Countryside	98.8	99.0	97.8	90.4	74.7	70.0	95.7
West	98.3	97.7	95.7	94.7	84.1	77.4	95.8
Highlands	97.7	98.5	97.4	97.0	74.8	47.8	93.9
Central a/	96.6	98.0	96.8	96.5	68.7	52.4	91.5
East	96.4	99.5	97.9	90.0	68.5	70.0	93.6
Gender							
Men	96.1	97.4	94.4	89.7	74.0	62.1	92.0
Women	96.1	96.9	95.0	91.8	68.1	50.7	89.8
Quintile							
Poorest	98.4	99.3	98.3	89.0	69.6	74.3	97.2
Q2	98.1	98.6	98.3	93.2	70.8	43.5	94.9
Q3	97.8	99.0	96.9	89.0	69.1	86.6	92.1
Q4	94.5	98.4	94.3	94.7	70.3	64.8	89.2
Richest	88.2	89.2	87.3	84.1	71.6	47.6	81.7
Poverty							
Non-poor	94.4	96.0	93.3	91.3	70.7	57.2	88.1
Poor	98.2	99.0	98.0	90.0	69.7	58.6	96.1

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.21: Share of current students in public institutions by educational level and poverty status (%)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	96.1	97.2	94.7	90.7	70.6	57.6	90.8
Poverty							
Non-poor	94.4	96.0	93.3	91.3	70.7	57.2	88.1
Poor	98.2	99.0	98.0	90.0	69.7	58.6	96.1
Location							
Urban non-poor	92.0	94.5	91.4	88.8	69.3	50.0	85.5
Urban poor	97.7	99.2	97.6	86.1	68.1	55.9	95.0
Rural non-poor	98.0	98.8	97.6	95.1	74.8	75.8	93.2
Rural poor	98.6	98.8	98.5	94.5	71.9	63.9	97.0
Ulaanbaatar non-poor	91.0	93.4	89.6	81.3	66.6	61.7	83.4
Ulaanbaatar poor	97.2	99.1	95.7	60.7	64.0	50.8	93.3
Aimag centers non-poor	93.8	96.4	93.9	98.4	74.7	7.7	89.2
Aimag centers poor	98.1	99.2	98.9	95.0	72.4	62.9	96.3
Soum centers non-poor	97.3	98.5	97.9	100.0	74.5	74.2	92.3
Soum centers poor	98.0	98.6	98.3	100.0	70.7	68.6	96.7
Countryside non-poor	98.6	99.1	97.0	92.6	75.2	80.0	94.1
Countryside poor	98.9	99.0	98.6	85.8	72.9	61.0	97.3
West non-poor	97.9	97.5	93.7	100.0	84.4	100.0	94.3
West poor	98.7	97.9	98.5	88.1	82.5	0.0	97.4
Highlands non-poor	96.7	97.6	97.4	97.5	75.2	33.6	91.5
Highlands poor	98.7	99.5	97.3	96.5	73.3	67.1	96.9
Central non-poor a/	96.3	97.6	95.4	98.1	69.7	51.4	89.7
Central poor a/	97.1	98.8	100.0	95.0	60.3	60.2	95.5
East non-poor	92.8	99.0	95.9	88.3	68.3		90.3
East poor	99.2	100.0	100.0	92.3	69.1	70.0	97.3
Gender							
Men non-poor	94.7	96.5	93.0	91.6	74.0	62.6	89.7
Men poor	97.7	98.9	97.8	87.2	74.0	61.4	96.4
Women non-poor	94.1	95.4	93.5	90.9	68.1	51.5	86.5
Women poor	98.7	99.1	98.2	93.3	67.6	46.0	95.9

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.22: Distance to school among current students by educational level attended (km)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	1.6	1.6	1.9	3.6	6.4	5.0	2.5
Location							
Urban	1.9	1.9	2.3	4.5	6.8	5.8	3.1
Rural	1.3	1.3	1.2	2.1	4.8	2.7	1.6
Ulaanbaatar	2.5	2.4	3.2	8.1	7.8	7.5	4.1
Aimag centers	1.2	1.2	1.2	1.6	3.8	1.3	1.6
Soum centers	1.1	0.9	0.9	2.8	4.9	0.6	1.5
Countryside	1.4	1.6	1.6	1.5	4.7	5.2	1.7
West	1.2	1.3	1.1	3.6	3.8	9.7	1.5
Highlands	1.1	1.2	1.4	2.0	4.9	1.2	1.6
Central a/	1.4	1.1	1.0	1.7	4.4	1.3	1.6
East	1.6	1.6	1.3	1.0	3.3	1.1	1.7
Gender							
Men	1.6	1.7	1.8	4.0	6.5	4.9	2.4
Women	1.6	1.6	2.0	3.2	6.3	5.2	2.6
Quintile							
Poorest	1.2	1.1	1.3	1.9	6.0	1.7	1.3
Q2	1.6	1.4	1.7	3.1	6.3	4.4	1.9
Q3	1.6	1.8	1.9	4.0	6.7	6.7	2.6
Q4	1.9	1.8	2.1	4.4	6.6	5.3	2.9
Richest	2.1	2.3	2.5	5.3	6.1	6.0	3.7
Poverty							
Non-poor	1.8	1.9	2.2	4.2	6.4	5.8	3.0
Poor	1.4	1.2	1.4	2.6	6.2	3.4	1.6

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.23: Distance to school among current students by educational level attended and poverty status (km)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	1.6	1.6	1.9	3.6	6.4	5.0	2.5
Poverty							
Non-poor	1.8	1.9	2.2	4.2	6.4	5.8	3.0
Poor	1.4	1.2	1.4	2.6	6.2	3.4	1.6
Location							
Urban non-poor	2.1	2.1	2.5	5.2	6.8	7.0	3.5
Urban poor	1.6	1.6	1.7	3.4	7.3	3.4	2.1
Rural non-poor	1.3	1.6	1.4	2.5	5.0	2.2	2.0
Rural poor	1.2	1.0	1.0	1.4	3.7	3.4	1.2
Ulaanbaatar non-poor	2.6	2.5	3.4	8.1	7.7	8.5	4.4
Ulaanbaatar poor	2.0	2.1	2.6	8.4	9.2	5.0	2.9
Aimag centers non-poor	1.2	1.3	1.3	1.5	3.8	1.4	1.7
Aimag centers poor	1.2	1.2	1.1	1.7	3.9	1.1	1.3
Soum centers non-poor	1.0	0.9	0.9	4.6	5.0	0.6	1.7
Soum centers poor	1.1	1.0	1.0	1.3	4.0	0.4	1.1
Countryside non-poor	1.6	2.3	2.2	1.4	4.9	5.6	2.4
Countryside poor	1.3	0.9	0.9	1.6	3.4	4.9	1.2
West non-poor	1.6	1.7	1.2	5.7	4.1	10.0	1.9
West poor	0.9	1.0	1.0	0.6	2.3	9.0	1.0
Highlands non-poor	1.1	1.2	1.5	1.9	4.9	0.5	1.9
Highlands poor	1.1	1.1	1.1	2.0	5.0	2.2	1.3
Central non-poor a/	1.2	1.2	1.0	2.1	4.5	1.1	1.8
Central poor a/	1.6	1.0	1.1	1.3	3.2	3.0	1.3
East non-poor	1.6	2.3	1.7	0.9	3.3	-	2.1
East poor	1.6	0.7	0.8	1.1	3.5	1.1	1.3
Gender							
Men non-poor	1.8	1.9	2.0	4.3	6.4	6.8	2.9
Men poor	1.4	1.3	1.3	3.4	7.0	2.6	1.5
Women non-poor	1.9	1.9	2.3	4.0	6.4	4.8	3.1
Women poor	1.3	1.2	1.4	1.8	5.8	6.8	1.6

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.24: Time to get to school among current students by educational level attended (Minutes)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	14.0	13.9	14.8	19.6	26.4	22.5	16.3
Location							
Urban	16.3	15.8	16.6	23.7	28.0	25.6	18.9
Rural	11.4	11.2	11.5	13.3	20.9	13.2	12.3
Ulaanbaatar	17.2	16.4	17.4	28.9	31.0	29.7	20.9
Aimag centers	15.2	15.1	15.5	19.5	18.9	13.8	15.8
Soum centers	12.0	11.8	11.8	13.6	20.4	7.3	12.9
Countryside	10.9	10.6	11.0	13.1	21.5	20.3	11.7
West	12.4	13.0	14.0	11.3	19.5	18.5	13.4
Highlands	12.8	13.1	13.7	17.9	19.8	10.7	14.0
Central a/	12.5	12.0	13.0	15.3	19.6	13.3	13.6
East	12.7	12.4	11.7	15.5	23.0	15.5	13.5
Gender							
Men	13.9	13.5	14.6	21.2	26.5	19.6	15.9
Women	14.1	14.3	15.0	17.8	26.3	26.6	16.7
Quintile							
Poorest	13.3	13.3	14.3	14.9	24.8	22.2	13.8
Q2	13.2	13.5	14.6	20.8	26.0	23.4	14.7
Q3	14.5	14.3	14.4	22.7	26.8	13.5	16.6
Q4	14.8	13.9	14.7	22.2	28.3	25.2	17.6
Richest	15.0	14.8	15.8	13.4	25.4	23.4	18.7
Poverty							
Non-poor	14.6	14.2	15.1	20.3	26.6	22.0	17.5
Poor	13.2	13.4	14.3	18.4	24.9	23.6	14.1

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.25: Time to get to school among current students by educational level attended and poverty status

(Minutes)

	Primary	Lower secondary	Upper secondary	Vocational	College, university	Other	Total
National	14.0	13.9	14.8	19.6	26.4	22.5	16.3
Poverty							
Non-poor	14.6	14.2	15.1	20.3	26.6	22.0	17.5
Poor	13.2	13.4	14.3	18.4	24.9	23.6	14.1
Location							
Urban non-poor	16.3	15.6	16.4	24.2	27.9	26.2	19.4
Urban poor	16.3	16.5	17.0	23.0	28.9	24.2	17.6
Rural non-poor	11.7	11.6	11.5	14.3	21.6	8.4	13.3
Rural poor	11.1	10.8	11.4	11.7	16.1	21.8	11.2
Ulaanbaatar non-poor	17.4	16.2	17.3	28.0	30.8	29.5	21.4
Ulaanbaatar poor	16.6	16.8	17.7	32.4	32.9	30.6	18.8
Aimag centers non-poor	14.5	14.5	15.1	19.5	18.6	13.1	15.4
Aimag centers poor	16.0	16.2	16.4	19.6	21.6	14.5	16.5
Soum centers non-poor	12.6	11.4	11.6	16.8	21.2	7.6	13.7
Soum centers poor	11.6	12.2	12.3	11.0	14.0	6.4	12.0
Countryside non-poor	11.0	11.8	11.5	13.0	22.2	10.1	12.9
Countryside poor	10.8	9.6	10.5	13.1	18.2	29.1	10.6
West non-poor	13.7	14.1	14.7	15.1	19.3	17.8	14.8
West poor	11.5	11.9	13.2	5.7	20.3	20.0	12.1
Highlands non-poor	13.1	13.1	14.0	18.8	20.2	10.7	14.6
Highlands poor	12.6	13.1	13.1	16.8	17.4	10.6	13.1
Central non-poor a/	12.0	11.8	12.3	13.9	19.7	8.4	13.5
Central poor a/	13.3	12.5	14.7	16.9	19.1	60.0	13.6
East non-poor	12.0	12.6	11.6	16.5	23.9		14.0
East poor	13.2	12.3	11.9	14.2	16.3	15.5	12.8
Gender							
Men non-poor	14.3	13.8	14.9	22.5	26.5	20.8	17.0
Men poor	13.4	12.9	14.0	19.2	27.7	18.0	13.9
Women non-poor	14.9	14.7	15.3	18.0	26.7	23.1	18.0
Women poor	13.1	13.9	14.5	17.4	23.7	44.3	14.4

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.26: Spending per pupil in public primary schools
(2007/08 real Tugrug per month)

	Tution			Room, dormitory	Books	Uniform	Transport	Food	Others	Assistance for other expenses	Total
	Own expenses	From loan	From assistance								
National	809	172	97	65	2 447	1 019	584	757	895	361	7 207
Location											
Urban	1 371	129	127	88	2 471	989	589	668	748	438	7 618
Rural	233	216	66	42	2 423	1 050	579	849	1 046	282	6 785
Ulaanbaatar	2 094	169	182	7	2 526	1 064	975	1 065	830	506	9 418
Aimag centers	463	78	58	189	2 402	894	105	171	646	352	5 357
Soum centers	369	421	38	47	2 379	1 043	127	387	968	355	6 132
Countryside	135	70	87	39	2 455	1 055	902	1 180	1 102	229	7 253
West	243	388	137	58	2 446	1 012	601	560	959	687	7 090
Highlands	120	0	37	10	2 266	1 012	414	826	1 281	35	6 002
Central a/	420	125	0	57	2 529	1 076	418	681	621	221	6 148
East	803	276	91	463	2 595	795	89	152	291	356	5 911
Gender											
Men	816	169	111	26	2 474	1 010	539	758	873	286	7 062
Women	802	175	82	105	2 421	1 028	630	757	918	436	7 354
Quintile											
Poorest	66	0	0	8	1 972	881	307	373	623	197	4 427
Q2	195	64	0	13	2 230	943	481	657	796	275	5 654
Q3	230	22	123	10	2 467	1 018	526	628	973	204	6 202
Q4	901	228	61	253	2 876	1 192	753	819	1 040	177	8 300
Richest	4 169	867	474	114	3 220	1 214	1 201	1 835	1 324	1 317	15 735
Poverty											
Non-poor	1 364	287	177	109	2 763	1 119	767	1 008	1 072	463	9 129
Poor	136	33	0	12	2 065	898	362	454	680	236	4 877

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.27: Spending per pupil in public primary schools by poverty status

(2007/08 real Tugrug per month)

	Tution			Room, dormitory	Books	Uniform	Transport	Food	Others	Assistance for other expenses	Total
	Own expenses	From loan	From assistance								
National	809	172	97	65	2 447	1 019	584	757	895	361	7 207
Poverty											
Non-poor	1 364	287	177	109	2 763	1 119	767	1 008	1 072	463	9 129
Poor	136	33	0	12	2 065	898	362	454	680	236	4 877
Location											
Urban non-poor	2 000	201	198	137	2 778	1 111	801	944	896	582	9 649
Urban poor	254	0	0	0	1 926	771	214	180	486	180	4 012
Rural non-poor	445	410	146	69	2 742	1 129	718	1 101	1 328	291	8 378
Rural poor	56	56	0	20	2 159	984	463	639	812	274	5 463
Ulaanbaatar non-poor	2 786	239	256	10	2 823	1 204	1 220	1 423	959	708	11 628
Ulaanbaatar poor	409	0	0	0	1 801	723	380	192	516	13	4 034
Aimag centers non-poor	734	141	105	342	2 704	962	127	171	794	380	6 460
Aimag centers poor	128	0	0	0	2 028	811	77	170	462	317	3 994
Soum centers non-poor	681	804	76	95	2 704	1 095	212	599	1 245	457	7 968
Soum centers poor	66	50	0	0	2 063	993	44	181	699	256	4 352
Countryside non-poor	250	84	204	47	2 773	1 158	1 136	1 516	1 396	154	8 716
Countryside poor	50	59	0	33	2 220	978	729	930	884	285	6 166
West non-poor	460	760	305	71	2 744	1 087	549	507	1 180	790	8 453
West poor	66	86	0	47	2 204	951	643	602	779	603	5 981
Highlands non-poor	239	0	80	22	2 523	1 075	596	1 057	1 568	10	7 170
Highlands poor	21	0	0	0	2 051	959	260	632	1 040	57	5 021
Central non-poor a/	522	152	0	93	2 818	1 112	477	851	826	238	7 089
Central poor a/	261	82	0	0	2 077	1 021	324	416	301	195	4 677
East non-poor	1 902	661	218	1 109	3 134	885	176	257	450	394	9 185
East poor	16	0	0	0	2 209	731	26	76	177	329	3 563
Gender											
Men non-poor	1 443	311	205	37	2 812	1 101	688	1 017	1 051	321	8 984
Men poor	72	0	0	14	2 073	902	362	450	663	246	4 782
Women non-poor	1 286	262	149	181	2 715	1 137	845	999	1 094	605	9 274
Women poor	203	68	0	10	2 057	894	363	457	699	226	4 976

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.28: Spending per pupil in public lower secondary schools

(2007/08 real Tugrug per month)

	Tution			Room, dormitory	Books	Uniform	Transport	Food	Others	Assistance for other expenses	Total
	Own expenses	From loan	From assistance								
National	483	55	66	62	2 909	1 113	720	1 145	1 059	351	7 964
Location											
Urban	737	35	84	31	2 808	1 068	853	1 290	938	329	8 174
Rural	157	80	43	103	3 038	1 171	549	960	1 215	378	7 695
Ulaanbaatar	1 070	63	84	55	2 823	1 155	1 374	2 095	976	80	9 777
Aimag centers	316	0	85	0	2 788	958	194	269	890	644	6 144
Soum centers	249	152	90	143	3 012	1 185	147	377	1 166	486	7 007
Countryside	73	14	0	67	3 063	1 157	918	1 495	1 260	280	8 326
West	277	179	223	29	2 922	1 016	496	610	1 106	1 336	8 194
Highlands	144	0	0	47	2 837	1 112	458	987	1 576	97	7 258
Central a/	268	18	1	116	2 986	1 270	409	595	763	140	6 565
East	172	0	0	91	3 217	857	199	405	472	432	5 846
Gender											
Men	609	97	114	107	2 871	1 139	694	1 213	1 011	328	8 181
Women	358	13	19	18	2 946	1 087	746	1 078	1 108	373	7 749
Quintile											
Poorest	26	0	1	7	2 363	944	337	448	621	163	4 910
Q2	90	0	13	3	2 702	1 053	566	728	934	347	6 437
Q3	248	6	6	11	2 859	1 060	623	1 054	1 064	281	7 211
Q4	423	100	105	36	3 215	1 230	814	1 421	1 152	500	8 996
Richest	2 099	224	271	329	3 703	1 375	1 515	2 561	1 764	538	14 379
Poverty											
Non-poor	775	92	106	101	3 199	1 198	925	1 562	1 273	410	9 641
Poor	52	0	8	6	2 481	988	418	530	744	263	5 488

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.29: Spending per pupil in public lower secondary schools by poverty status

(2007/08 real Tugrug per month)

	Tution			Room, dormitory	Books	Uniform	Transport	Food	Others	Assistance for other expenses	Total
	Own expenses	From loan	From assistance								
National	483	55	66	62	2 909	1 113	720	1 145	1 059	351	7 964
Poverty											
Non-poor	775	92	106	101	3 199	1 198	925	1 562	1 273	410	9 641
Poor	52	0	8	6	2 481	988	418	530	744	263	5 488
Location											
Urban non-poor	1 044	52	116	45	3 054	1 159	1 028	1 708	1 100	366	9 672
Urban poor	88	0	17	0	2 288	876	485	405	596	250	5 006
Rural non-poor	297	163	88	200	3 456	1 267	742	1 302	1 580	488	9 584
Rural poor	22	0	0	10	2 636	1 078	364	632	863	273	5 877
Ulaanbaatar non-poor	1 388	85	113	73	3 029	1 230	1 543	2 553	1 083	100	11 198
Ulaanbaatar poor	137	0	0	0	2 221	936	878	756	664	23	5 615
Aimag centers non-poor	497	0	121	0	3 093	1 046	209	367	1 127	789	7 250
Aimag centers poor	49	0	31	0	2 342	829	172	126	543	431	4 522
Soum centers non-poor	475	290	172	273	3 453	1 189	246	651	1 483	694	8 926
Soum centers poor	0	0	0	0	2 527	1 181	38	75	817	257	4 895
Countryside non-poor	112	30	0	124	3 460	1 349	1 259	1 982	1 682	273	10 271
Countryside poor	40	0	0	18	2 725	994	627	1 081	900	286	6 671
West non-poor	495	374	431	42	3 215	1 074	597	678	1 404	1 925	10 235
West poor	79	0	32	17	2 654	964	404	547	834	796	6 328
Highlands non-poor	274	0	0	96	3 211	1 216	640	1 418	2 040	98	8 993
Highlands poor	19	0	0	0	2 477	1 012	283	573	1 131	95	5 591
Central non-poor a/	425	29	0	184	3 313	1 304	453	700	992	150	7 550
Central poor a/	2	0	2	0	2 433	1 211	336	418	377	123	4 903
East non-poor	324	0	0	159	3 696	976	286	654	751	598	7 443
East poor	0	0	0	14	2 671	722	99	122	155	243	4 026
Gender											
Men non-poor	963	157	184	170	3 100	1 216	862	1 624	1 169	384	9 828
Men poor	43	0	0	5	2 505	1 015	425	556	758	238	5 545
Women non-poor	577	23	22	27	3 303	1 179	992	1 497	1 384	438	9 442
Women poor	60	0	15	6	2 459	963	411	507	731	285	5 436

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.30: Spending per pupil in public upper secondary schools
(2007/08 real Tugrug per month)

	Tution			Room, dormitory	Books	Uniform	Transport	Food	Others	Assistance for other expenses	Total
	Own expenses	From loan	From assistance								
National	1 137	111	120	65	3 095	994	1 094	1 471	1 462	415	9 964
Location											
Urban	1 717	163	194	21	2 860	871	1 227	1 599	1 315	474	10 442
Rural	190	25	0	136	3 478	1 194	878	1 262	1 702	318	9 185
Ulaanbaatar	2 900	141	177	32	2 831	929	2 129	2 735	1 204	394	13 472
Aimag centers	358	190	214	10	2 893	804	191	295	1 442	566	6 963
Soum centers	282	44	0	44	3 453	1 197	482	630	1 707	165	8 004
Countryside	65	0	0	261	3 513	1 191	1 419	2 125	1 694	528	10 796
West	160	0	37	117	3 325	1 017	635	741	1 599	1 239	8 870
Highlands	226	225	225	42	3 188	939	703	1 196	1 932	73	8 749
Central a/	496	52	5	115	3 122	1 272	501	677	1 341	179	7 759
East	21	0	0	47	3 391	705	264	337	1 063	387	6 215
Gender											
Men	1 584	208	155	54	3 100	986	1 100	1 589	1 385	336	10 499
Women	768	31	92	74	3 090	1 000	1 089	1 374	1 525	480	9 523
Quintile											
Poorest	172	0	6	21	2 793	693	448	549	735	291	5 708
Q2	242	0	0	22	2 873	951	814	1 007	1 204	249	7 363
Q3	381	14	16	67	2 763	927	737	892	1 416	440	7 654
Q4	726	47	13	129	3 221	1 120	1 276	1 715	1 561	280	10 086
Richest	4 048	482	556	77	3 788	1 218	2 093	3 051	2 255	798	18 365
Poverty											
Non-poor	1 563	163	175	84	3 225	1 077	1 339	1 842	1 691	482	11 641
Poor	228	0	3	25	2 817	815	572	680	972	273	6 386

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.31: Spending per pupil in public upper secondary schools by poverty status
(2007/08 real Tugrug per month)

	Tution			Room, dormitory	Books	Uniform	Transport	Food	Others	Assistance for other expenses	Total
	Own expenses	From loan	From assistance								
National	1 137	111	120	65	3 095	994	1 094	1 471	1 462	415	9 964
Poverty											
Non-poor	1 563	163	175	84	3 225	1 077	1 339	1 842	1 691	482	11 641
Poor	228	0	3	25	2 817	815	572	680	972	273	6 386
Location											
Urban non-poor	2 154	220	259	29	3 012	966	1 449	1 988	1 474	541	12 090
Urban poor	448	0	6	0	2 419	593	581	471	851	282	5 651
Rural non-poor	321	44	0	199	3 674	1 311	1 108	1 536	2 147	358	10 698
Rural poor	11	0	0	50	3 211	1 035	564	887	1 092	264	7 113
Ulaanbaatar non-poor	3 354	174	219	39	2 995	1 009	2 331	3 172	1 307	465	15 065
Ulaanbaatar poor	1 008	0	0	0	2 144	596	1 286	911	774	100	6 819
Aimag centers non-poor	499	282	314	14	3 034	908	234	354	1 705	645	7 989
Aimag centers poor	69	0	10	0	2 605	592	103	173	904	404	4 860
Soum centers non-poor	426	68	0	66	3 530	1 206	660	866	2 064	195	9 081
Soum centers poor	22	0	0	6	3 313	1 182	164	206	1 066	111	6 069
Countryside non-poor	134	0	0	438	3 931	1 499	1 913	2 736	2 296	651	13 597
Countryside poor	0	0	0	93	3 113	895	946	1 539	1 117	410	8 112
West non-poor	242	0	67	180	3 570	1 146	791	820	1 755	1 583	10 153
West poor	56	0	0	39	3 020	855	441	642	1 404	808	7 265
Highlands non-poor	353	353	353	65	3 204	1 030	841	1 389	2 309	78	9 974
Highlands poor	0	0	0	0	3 159	779	459	854	1 266	66	6 583
Central non-poor a/	686	75	0	152	3 309	1 268	577	768	1 711	242	8 788
Central poor a/	71	0	17	31	2 704	1 279	330	473	513	37	5 455
East non-poor	41	0	0	0	3 825	934	292	419	1 647	406	7 564
East poor	0	0	0	94	2 947	470	235	254	464	368	4 832
Gender											
Men non-poor	2 192	296	221	65	3 239	1 049	1 426	2 053	1 608	369	12 518
Men poor	154	0	0	28	2 776	839	335	498	862	259	5 750
Women non-poor	1 014	47	135	100	3 213	1 102	1 264	1 658	1 764	580	10 877
Women poor	283	0	5	23	2 847	798	746	814	1 053	283	6 851

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.32: Population reporting health complaints

	National	Urban	Rural	Analytical domains				Regions			
				Ulaanbaatar	Aimag centers	Soum centers	Countryside	West	Highlands	Central a/	East
Complaints (% population)	6.2	6.8	5.3	6.8	6.8	6.4	4.6	4.7	4.4	8.0	7.7
Among those with complaints (%),											
Type of health complaint b/											
Respiratory system	27	26	29	27	26	29	28	25	25	30	29
Digestive system	16	16	15	16	15	15	15	18	16	13	16
Urinary/sexual organ	11	10	12	9	12	12	11	16	12	10	12
Blood circulation	24	28	19	28	27	17	20	27	26	20	15
Damage/intoxication by external impact	18	18	18	19	17	18	19	19	18	17	19
Other	16	16	17	16	15	19	15	14	16	18	17
Disrupted daily activities (%)	45	40	55	40	40	55	54	62	53	41	43
Days in the last month (days)	12	12	12	13	10	12	11	12	11	10	11
Sought treatment? (%)	74	78	68	79	77	73	63	65	71	71	80
Among them, place of treatment was											
Central hospital or clinic	25	28	18	39	11	19	16	11	15	16	16
Aimag or district clinic	35	43	20	30	63	18	22	49	43	29	39
Soum center family clinic	33	19	59	20	19	59	59	37	38	47	42
Abroad	1	1	1	1	0	0	1	0	0	0	0
Other private hospital	7	9	3	10	7	3	3	2	3	8	2
Visited public facilities	88	86	92	84	89	91	94	91	91	89	95
Not sought treatment (%)	26	22	32	21	23	27	37	35	29	29	20
Reasons for not seeking											
Not serious enough	62	63	59	61	67	62	57	50	58	77	50
Treated myself	21	20	22	19	21	26	20	20	30	14	32
Other	17	17	18	19	13	12	23	30	12	9	18

a/ Excludes Ulaanbaatar.
b/ Combines up to two responses.
Source: HSES 2007/08.

Table D.33: Population reporting health complaints by urban and rural areas and poverty status

	National		Urban		Rural	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Complaints (% population)	7.5	3.7	7.7	4.4	7.1	3.2
Among those with complaints (%),						
Type of health complaint a/						
Respiratory system	26	30	26	28	27	32
Digestive system	16	12	17	11	16	13
Urinary/sexual organ	10	12	10	11	11	13
Blood circulation	25	22	28	26	19	17
Damage/intoxication by external impact	18	20	17	23	19	17
Other	16	15	16	16	18	15
Disrupted daily activities (%)	46	44	42	32	53	57
Days in the last month (days)	12	10	12	11	12	10
Sought treatment? (%)	76	66	80	68	69	64
Among them, place of treatment was						
Central hospital or clinic	27	17	29	27	22	7
Aimag or district clinic	35	35	42	46	19	24
Soum center family clinic	30	46	18	27	56	68
Abroad	1	0	1	0	1	0
Other private hospital	8	1	10	1	3	2
Visited public facilities	86	97	84	98	91	96
Not sought treatment (%)	24	34	20	32	31	36
Reasons for not seeking						
Not serious enough	62	61	65	58	57	64
Treated myself	23	17	22	15	24	19
Other	16	22	13	27	19	17

a/ Combines up to two responses.
Source: HSES 2007/08.

Table D.34: Population reporting health complaints by analytical domain and poverty status

	National		Ulaanbaatar		Aimag centers		Soum centers		Countryside	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Complaints (% population)	7.5	3.7	7.3	4.7	8.3	4.1	8.2	3.9	6.3	2.8
Among those with complaints (%),										
Type of health complaint a/										
Respiratory system	26	30	26	31	26	25	27	35	28	30
Digestive system	16	12	17	11	16	12	16	13	16	13
Urinary/sexual organ	10	12	9	7	12	15	10	17	12	10
Blood circulation	25	22	28	28	28	25	18	15	20	19
Damage/intoxication by external impact	18	20	18	27	16	19	19	13	18	21
Other	16	15	17	14	14	17	20	16	15	14
Disrupted daily activities (%)	46	44	42	33	43	30	54	57	52	58
Days in the last month (days)	12	10	13	13	10	7	13	10	12	10
Sought treatment? (%)	76	66	80	72	80	63	74	71	65	58
Among them, place of treatment was										
Central hospital or clinic	27	17	38	44	13	3	24	4	19	9
Aimag or district clinic	35	35	31	28	62	70	16	26	22	22
Soum center family clinic	30	46	19	26	17	27	56	69	55	67
Abroad	1	0	1	0	0	0	1	0	1	0
Other private hospital	8	1	12	2	8	0	3	1	3	2
Visited public facilities	86	97	82	97	87	99	89	98	94	94
Not sought treatment (%)	24	34	20	28	20	37	26	29	35	42
Reasons for not seeking										
Not serious enough	62	61	63	54	69	61	62	64	54	64
Treated myself	23	17	21	11	22	18	28	22	21	18
Other	16	22	16	35	9	20	11	14	25	18

a/ Combines up to two responses.
Source: HSES 2007/08.

Table D.35: Population reporting health complaints by region and poverty status

	National		West		Highlands		Central a/		East		Ulaanbaatar	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Complaints (% population)	7.5	3.7	6.3	3.0	5.9	2.6	9.5	4.7	9.9	5.3	7.3	4.7
Among those with complaints (%),												
Type of health complaint b/												
Respiratory system	26	30	24	27	26	23	28	41	29	30	26	31
Digestive system	16	12	20	13	17	14	13	11	18	12	17	11
Urinary/sexual organ	10	12	14	20	12	12	10	10	11	15	9	7
Blood circulation	25	22	28	23	25	30	21	13	17	9	28	28
Damage/intoxication by external impact	18	20	18	21	19	13	17	18	18	21	18	27
Other	16	15	16	10	14	20	19	13	15	20	17	14
Disrupted daily activities (%)	46	44	64	55	55	49	39	47	43	41	42	33
Days in the last month (days)	12	10	12	10	12	9	10	9	11	10	13	13
Sought treatment? (%)	76	66	70	52	76	57	72	71	81	79	80	72
Among them, place of treatment was												
Central hospital or clinic	27	17	12	8	18	5	19	3	21	7	38	44
Aimag or district clinic	35	35	53	37	40	53	31	22	36	43	31	28
Soum center family clinic	30	46	32	55	37	41	41	73	40	48	19	26
Abroad	1	0	1	0	0	0	0	0	1	0	1	0
Other private hospital	8	1	2	0	4	1	9	1	3	1	12	2
Visited public facilities	86	97	90	93	89	97	87	98	93	99	82	97
Not sought treatment (%)	24	34	30	48	24	43	28	29	19	21	20	28
Reasons for not seeking												
Not serious enough	62	61	43	61	59	57	77	77	43	63	63	54
Treated myself	23	17	24	14	33	26	14	11	35	25	21	11
Other	16	22	34	25	8	16	9	13	22	11	16	35

a/ Excludes Ulaanbaatar.
b/ Combines up to two responses.
Source: HSES 2007/08.

Table D.36: Population reporting health complaints by gender and poverty status

	National		Men		Women	
	Men	Women	Non-poor	Poor	Non-poor	Poor
Complaints (% population)	5.3	7.0	6.5	3.0	8.4	4.4
Among those with complaints (%),						
Type of health complaint a/						
Respiratory system	29	26	28	32	25	29
Digestive system	13	18	13	10	19	14
Urinary/sexual organ	9	12	9	12	12	12
Blood circulation	20	28	20	18	29	24
Damage/intoxication by external impact	23	15	23	21	14	20
Other	16	16	17	16	16	15
Disrupted daily activities (%)	48	44	48	47	44	42
Days in the last month (days)	12	11	12	10	12	10
Sought treatment? (%)	73	75	76	64	77	68
Among them, place of treatment was						
Central hospital or clinic	28	23	29	21	25	15
Aimag or district clinic	35	35	35	34	35	37
Soum center family clinic	32	33	29	46	30	46
Abroad	1	0	1	0	1	0
Other private hospital	5	8	6	0	10	2
Visited public facilities	90	87	88	99	85	96
Not sought treatment (%)	27	25	24	36	23	32
Reasons for not seeking						
Not serious enough	63	60	63	63	61	59
Treated myself	19	23	20	15	24	19
Other	18	17	17	22	15	22

a/ Combines up to two responses.
Source: HSES 2007/08.

Table D.37: Incidence of illnesses and disabilities

	National	Urban	Rural	Analytical domains				Regions			
				Ulaanbaatar	Aimag centers	Soum centers	Countryside	West	Highlands	Central a/	East
Chronic illness (% population)	12	12	13	12	12	13	13	12	12	13	14
Among those (%),											
Respiratory system	11	11	11	11	11	13	9	9	10	13	14
Digestive system	19	20	18	20	20	17	19	20	19	18	19
Urinary, sexual organ	10	10	10	10	10	10	11	12	8	11	11
Blood circulation	30	31	29	33	28	27	30	36	32	22	19
Damage/intoxication by external impact	14	14	13	14	15	13	13	12	15	14	11
Other	16	13	19	12	15	21	17	11	15	23	26
Disabilities (% population)	4	4	4	3	4	5	4	3	4	5	6
Among those (%),											
Physical	35	39	31	42	36	35	28	33	35	37	22
Mental	17	15	19	17	13	17	20	19	19	14	15
Speaking	8	8	7	7	8	4	10	12	6	7	7
Sight	14	14	14	12	18	15	13	15	12	17	19
Hearing	12	11	13	11	11	11	14	14	9	11	16
Other	14	13	16	12	14	17	15	8	18	14	21
Infectious diseases,											
last 12 months (% population)											
Respiratory	11	12	11	9	16	11	10	8	14	14	14
Hepatitis	1	1	1	1	0	1	1	3	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	1

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.38: Incidence of illnesses and disabilities by urban and rural areas and poverty status

	National		Urban		Rural	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Chronic illness (% population)	14	10	13	9	16	10
Among those (%),						
Respiratory system	11	10	11	13	12	8
Digestive system	20	19	21	17	18	20
Urinary, sexual organ	11	9	11	8	11	10
Blood circulation	31	28	32	27	29	29
Damage/intoxication by external impact	13	14	14	15	12	14
Other	14	19	12	20	19	19
Disabilities (% population)	4	4	3	4	4	4
Among those (%),						
Physical	41	27	45	26	34	28
Mental	13	23	12	22	15	24
Speaking	6	10	6	11	6	9
Sight	14	14	14	16	16	12
Hearing	10	14	10	14	11	14
Other	16	12	14	11	19	13
Infectious diseases,						
last 12 months (% population)						
Respiratory	12	10	11	12	12	9
Hepatitis	1	1	1	0	1	1
Other	0	0	0	0	1	0

Source: HSES 2007/08.

Table D.39: Incidence of illnesses and disabilities by analytical domain and poverty status

	National		Ulaanbaatar		Aimag centers		Soum centers		Countryside	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Chronic illness (% population)	14	10	13	9	13	9	15	10	16	10
Among those (%),										
Respiratory system	11	10	11	12	10	14	15	10	10	7
Digestive system	20	19	21	15	21	19	18	16	18	22
Urinary, sexual organ	11	9	11	8	10	8	9	11	12	9
Blood circulation	31	28	33	29	30	25	27	26	30	31
Damage/intoxication by external impact	13	14	13	14	15	16	12	15	13	14
Other	14	19	10	22	14	18	20	24	18	17
Disabilities (% population)	4	4	3	4	4	5	4	5	4	4
Among those (%),										
Physical	41	27	45	32	46	22	36	34	32	24
Mental	13	23	13	29	10	17	12	24	16	24
Speaking	6	10	7	8	5	13	3	6	8	12
Sight	14	14	14	8	14	23	17	13	15	12
Hearing	10	14	9	15	10	12	11	10	12	16
Other	16	12	13	8	15	13	20	14	17	12
Infectious diseases,										
last 12 months (% population)										
Respiratory	12	10	9	8	16	17	12	10	13	8
Hepatitis	1	1	1	1	0	0	1	1	2	1
Other	0	0	0	0	0	0	0	0	1	0

Source: HSES 2007/08.

Table D.40: Incidence of illnesses and disabilities by region and poverty status

	National		West		Highlands		Central a/		East		Ulaanbaatar	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Chronic illness (% population)	14	10	14	10	14	9	15	9	16	12	13	9
Among those (%),												
Respiratory system	11	10	9	8	10	9	14	10	15	13	11	12
Digestive system	20	19	19	21	19	21	18	18	21	16	21	15
Urinary, sexual organ	11	9	13	10	8	8	11	8	11	12	11	8
Blood circulation	31	28	37	36	32	33	23	17	21	14	33	29
Damage/intoxication by external impact	13	14	11	14	16	15	13	18	11	12	13	14
Other	14	19	11	11	15	15	21	28	21	33	10	22
Disabilities (% population)	4	4	3	4	4	4	4	6	5	7	3	4
Among those (%),												
Physical	41	27	35	31	40	29	41	28	32	14	45	32
Mental	13	23	17	20	15	24	9	24	12	18	13	29
Speaking	6	10	9	15	4	10	6	9	5	9	7	8
Sight	14	14	17	14	11	12	18	15	15	22	14	8
Hearing	10	14	14	13	10	8	11	12	8	22	9	15
Other	16	12	7	8	20	16	15	11	27	16	13	8
Infectious diseases, last 12 months (% population)												
Respiratory	12	10	8	7	16	12	15	14	14	13	9	8
Hepatitis	1	1	3	2	0	0	0	1	0	1	1	1
Other	0	0	1	0	0	0	0	0	1	0	0	0

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.41: Incidence of illnesses and disabilities by gender and poverty status

	National		Men		Women	
	Men	Women	Non-poor	Poor	Non-poor	Poor
Chronic illness (% population)	11	13	12	9	15	11
Among those (%),						
Respiratory system	12	10	12	11	11	9
Digestive system	19	20	20	18	20	19
Urinary, sexual organ	9	11	9	9	12	9
Blood circulation	27	33	29	22	32	33
Damage/intoxication by external impact	17	11	17	19	11	11
Other	16	16	14	21	14	19
Disabilities (% population)	5	3	4	5	3	4
Among those (%),						
Physical	37	33	42	29	39	25
Mental	16	18	14	21	12	26
Speaking	8	7	7	11	5	8
Sight	12	17	13	12	17	16
Hearing	12	12	11	14	10	14
Other	14	14	15	13	17	10
Infectious diseases,						
last 12 months (% population)						
Respiratory	10	12	11	10	13	11
Hepatitis	1	1	1	1	1	1
Other	0	0	0	0	0	0

Source: HSES 2007/08.

Table D.42: Reproductive health indicators

	National	Urban	Rural	Analytical domains				Regions			
				Ulaanbaatar	Aimag centers	Soum centers	Countryside	West	Highlands	Central a/	East
Answering by themselves (%)	71	74	66	77	69	62	69	71	65	67	70
Among those, ever had sexual relationship? (%)	82	78	88	76	82	87	88	85	87	85	83
Among those,											
Currently using a contraception method? (%)	43	40	47	41	39	46	48	46	43	43	48
Among those, which? (%),											
Pill, drugs	23	22	24	24	20	29	21	29	19	27	13
Patch	45	44	45	39	54	40	48	39	55	43	55
Injection	9	7	13	6	9	12	13	11	8	12	20
Condom	9	9	8	11	6	7	8	15	5	6	3
Calendar	8	12	4	15	6	5	3	2	5	8	3
Other	6	5	6	5	5	6	6	5	8	4	7
Ever had any abortion? (%)	18	20	15	21	18	20	11	14	12	21	16
Among those, why? (%),											
Due to health	28	26	31	26	27	28	35	37	29	23	37
Family circumstances, lack of money	17	20	11	22	15	13	9	9	13	17	5
Too soon to give birth again	26	24	30	23	25	30	32	27	29	24	40
Do not want a child	20	21	20	20	23	21	18	16	21	26	14
Other	9	9	8	8	10	9	6	10	8	10	3

a/ Excludes Ulaanbaatar.
Note: All reproductive health information refers to women aged 15 to 49 years.
Source: HSES 2007/08.

Table D.43: Reproductive health indicators by urban and rural areas and poverty status

	National		Urban		Rural	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Answering by themselves (%)	72	68	76	70	66	67
Among those, ever had sexual relationship? (%)	81	83	78	79	88	87
Among those,						
Currently using a contraception method? (%)	42	45	41	38	46	50
Among those, which? (%),						
Pill, drugs	24	22	23	21	26	23
Patch	43	48	43	49	43	47
Injection	8	12	5	11	13	13
Condom	10	7	11	5	8	9
Calendar	11	4	14	7	5	2
Other	5	6	5	6	6	7
Ever had any abortion? (%)	21	12	23	11	16	12
Among those, why? (%),						
Due to health	29	24	27	23	35	25
Family circumstances, lack of money	15	25	17	37	8	16
Too soon to give birth again	26	27	24	21	30	32
Do not want a child	21	17	22	12	19	21
Other	9	6	9	7	9	6

Note: All reproductive health information refers to women aged 15 to 49 years.
Source: HSES 2007/08.

Table D.44: Reproductive health indicators by analytical domain and poverty status

	National		Ulaanbaatar		Aimag centers		Soum centers		Countryside	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Answering by themselves (%)	72	68	79	70	70	69	63	61	69	70
Among those, ever had sexual relationship? (%)	81	83	76	78	82	80	87	88	90	87
Among those,										
Currently using a contraception method? (%)	42	45	41	41	40	36	45	47	46	51
Among those, which? (%),										
Pill, drugs	24	22	23	24	21	18	31	26	21	21
Patch	43	48	38	43	53	56	39	42	46	50
Injection	8	12	5	9	6	14	10	15	15	11
Condom	10	7	12	7	7	4	8	7	7	9
Calendar	11	4	16	11	8	3	7	2	4	2
Other	5	6	5	6	5	5	6	8	6	6
Ever had any abortion? (%)	21	12	23	13	21	10	23	15	11	11
Among those, why? (%),										
Due to health	29	24	27	18	26	32	30	23	43	26
Family circumstances, lack of money	15	25	19	42	11	31	10	20	6	13
Too soon to give birth again	26	27	24	21	26	22	32	23	25	38
Do not want a child	21	17	21	13	26	10	18	27	19	17
Other	9	6	9	7	11	7	10	7	6	6

Note: All reproductive health information refers to women aged 15 to 49 years.
Source: HSES 2007/08.

Table D.45: Reproductive health indicators by region and poverty status

	National		West		Highlands		Central a/		East		Ulaanbaatar	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Answering by themselves (%)	72	68	69	74	65	64	68	64	71	69	79	70
Among those, ever had sexual relationship? (%)	81	83	85	85	86	88	85	83	86	80	76	78
Among those,												
Currently using a contraception method? (%)	42	45	40	51	44	42	43	43	48	48	41	41
Among those, which? (%),												
Pill, drugs	24	22	28	29	19	19	29	23	19	7	23	24
Patch	43	48	36	42	55	55	44	42	49	62	38	43
Injection	8	12	12	10	7	10	10	19	18	21	5	9
Condom	10	7	15	16	5	4	6	4	5	1	12	7
Calendar	11	4	3	1	7	3	9	5	3	1	16	11
Other	5	6	7	2	7	9	3	8	6	8	5	6
Ever had any abortion? (%)	21	12	13	15	17	7	23	17	21	10	23	13
Among those, why? (%),												
Due to health	29	24	49	27	31	22	24	17	30	54	27	18
Family circumstances, lack of money	15	25	6	12	10	21	13	33	3	11	19	42
Too soon to give birth again	26	27	21	32	27	36	25	20	45	29	24	21
Do not want a child	21	17	12	20	23	14	26	25	17	6	21	13
Other	9	6	12	9	8	7	12	4	5	0	9	7

a/ Excludes Ulaanbaatar.
Note: All reproductive health information refers to women aged 15 to 49 years.
Source: HSES 2007/08.

Table D.46: Health spending per person per month
(2007/08 real Tugrug per month)

	Outpatient visits		Self-prescribed medicines	Hospitalizations						Total
				In public hospitals		In private hospital		In hospitals abroad		
	Service, medicines	Transportation, gifts, food		Service	Transportation, gifts	Service	Transportation, gifts	Service	Transportation, gifts	
National	1 824	757	1 291	316	200	136	45	76	31	4 676
Location										
Urban	2 130	649	1 329	362	158	175	37	118	42	5 000
Rural	1 409	903	1 239	253	258	84	55	19	16	4 236
Ulaanbaatar	2 151	552	1 348	390	142	188	37	158	57	5 023
Aimag centers	2 097	806	1 299	315	184	153	37	52	19	4 963
Soum centers	2 112	1 312	1 368	306	294	115	69	24	11	5 610
Countryside	922	620	1 150	217	233	62	46	15	20	3 285
West	1 218	1 073	1 429	228	225	87	76	58	19	4 413
Highlands	1 082	857	1 165	233	219	101	46	13	12	3 728
Central a/	2 895	652	1 473	377	225	141	31	22	6	5 823
East	1 515	948	725	277	303	98	39	38	50	3 992
Gender										
Men	1 510	646	978	286	180	117	40	99	38	3 893
Women	2 116	859	1 582	343	219	155	49	54	25	5 403
Quintile										
Poorest	139	77	411	99	70	18	4	2	1	821
Q2	334	135	567	157	131	45	15	3	2	1 391
Q3	723	289	894	239	165	71	29	13	11	2 432
Q4	1 790	748	1 460	352	227	123	43	31	14	4 788
Richest	6 137	2 534	3 125	732	408	425	133	329	127	13 951
Poverty										
Non-poor	2 708	1 124	1 740	421	258	197	65	116	47	6 675
Poor	200	82	465	122	94	25	8	2	2	1 001

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.47: Health spending per person per month by poverty status

(2007/08 real Tugrug per month)

	Outpatient visits		Self-prescribed medicines	Hospitalizations						Total
				In public hospitals		In private hospital		In hospitals abroad		
	Service, medicines	Transportation, gifts, food		Service	Transportation, gifts	Service	Transportation, gifts	Service	Transportation, gifts	
National	1 824	757	1 291	316	200	136	45	76	31	4 676
Poverty										
Non-poor	2 708	1 124	1 740	421	258	197	65	116	47	6 675
Poor	200	82	465	122	94	25	8	2	2	1 001
Location										
Urban non-poor	2 816	851	1 638	436	191	227	47	161	58	6 426
Urban poor	264	97	489	160	67	33	10	1	0	1 121
Rural non-poor	2 507	1 630	1 930	393	382	140	97	32	27	7 138
Rural poor	149	69	447	93	115	20	7	3	3	907
Ulaanbaatar non-poor	2 671	665	1 595	450	167	234	46	203	72	6 103
Ulaanbaatar poor	299	147	469	180	53	24	6	0	0	1 178
Aimag centers non-poor	3 099	1 214	1 722	410	239	214	49	79	29	7 054
Aimag centers poor	229	46	509	139	81	41	14	2	0	1 062
Soum centers non-poor	3 495	2 217	1 967	441	426	179	113	39	15	8 892
Soum centers poor	201	63	541	119	110	28	8	3	4	1 079
Countryside non-poor	1 718	1 161	1 900	355	346	110	85	26	36	5 737
Countryside poor	119	73	392	78	118	15	7	3	3	807
West non-poor	2 153	1 987	2 205	330	335	159	142	105	35	7 451
West poor	167	47	558	113	101	7	2	5	0	1 000
Highlands non-poor	1 940	1 551	1 784	365	314	154	71	25	22	6 227
Highlands poor	97	60	456	81	110	41	18	0	0	864
Central non-poor a/	4 060	913	1 945	472	282	191	44	30	9	7 947
Central poor a/	270	66	411	161	97	29	1	3	1	1 039
East non-poor	2 615	1 691	1 038	443	468	170	66	65	79	6 637
East poor	259	99	368	86	115	15	9	7	16	974
Gender										
Men non-poor	2 254	962	1 301	391	234	167	57	153	58	5 577
Men poor	170	77	397	97	84	25	10	2	0	862
Women non-poor	3 123	1 272	2 143	448	280	224	72	82	36	7 680
Women poor	228	85	531	147	103	25	7	3	3	1 133

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.48: Population by labor force status

	As % of the variable of interest				As % of the labor force status			
	Employed	Unemployed	Out of the labor force	Total	Employed	Unemployed	Out of the labor force	Total
National	67.1	6.0	26.9	100.0	100.0	100.0	100.0	100.0
Location								
Urban	59.9	7.0	33.2	100.0	52.8	68.1	73.0	59.1
Rural	77.6	4.7	17.7	100.0	47.2	31.9	27.0	40.9
Ulaanbaatar	59.1	6.3	34.7	100.0	32.7	38.6	47.9	37.2
Aimag centers	61.2	8.1	30.7	100.0	20.0	29.5	25.1	22.0
Soum centers	65.4	8.4	26.3	100.0	16.7	23.8	16.7	17.1
Countryside	86.4	2.1	11.6	100.0	30.6	8.1	10.2	23.7
West	73.2	6.7	20.2	100.0	16.9	17.1	11.6	15.5
Highlands	71.0	5.8	23.2	100.0	24.2	21.8	19.8	22.9
Central a/	73.1	5.5	21.4	100.0	18.4	15.5	13.4	16.9
East	68.8	5.6	25.7	100.0	7.8	7.0	7.3	7.6
Quintile								
Poorest	63.3	11.4	25.3	100.0	17.4	34.7	17.4	18.4
Q2	69.5	6.7	23.8	100.0	19.6	20.9	16.7	18.9
Q3	67.2	5.5	27.3	100.0	20.1	18.3	20.4	20.0
Q4	67.5	4.5	28.0	100.0	20.7	15.4	21.4	20.6
Richest	67.7	2.9	29.4	100.0	22.3	10.7	24.1	22.1
Poverty								
Non-poor	67.6	4.4	28.0	100.0	67.8	49.6	70.2	67.4
Poor	66.2	9.3	24.5	100.0	32.2	50.4	29.8	32.6
Gender								
Men	68.3	6.7	25.0	100.0	49.3	53.8	45.0	48.4
Women	66.0	5.4	28.6	100.0	50.7	46.2	55.0	51.6
Age								
16-24	38.2	6.6	55.1	100.0	18.5	35.6	66.5	32.4
25-34	82.9	6.8	10.2	100.0	31.8	29.1	9.8	25.7
35-44	84.4	6.2	9.4	100.0	29.6	24.3	8.2	23.5
45-54	74.7	3.8	21.5	100.0	18.3	10.4	13.1	16.4
55-59 b/	65.6	1.9	32.6	100.0	1.9	0.6	2.3	1.9
Education								
None	64.1	5.8	30.2	100.0	3.4	3.4	3.9	3.5
Primary	70.3	2.7	27.0	100.0	8.6	3.7	8.2	8.2
Lower secondary	62.5	5.4	32.1	100.0	21.5	20.7	27.6	23.1
Complete secondary	59.4	7.4	33.3	100.0	33.8	46.7	47.3	38.2
Vocational	79.3	5.1	15.6	100.0	11.7	8.4	5.7	9.9
Higher diploma	82.3	4.9	12.8	100.0	9.2	6.1	3.6	7.5
University	82.3	7.3	10.4	100.0	11.1	11.0	3.5	9.1
Other	90.2	1.0	8.9	100.0	0.8	0.1	0.2	0.6

a/ Excludes Ulaanbaatar.
b/ Includes only men.
Source: HSES 2007/08.

Table D.49: Population by labor force status and poverty status

	As % of the variable of interest				As % of the labor force status			
	Employed	Unemployed	Out of the labor force	Total	Employed	Unemployed	Out of the labor force	Total
National	67.1	6.0	26.9	100.0	100.0	100.0	100.0	100.0
Poverty								
Non-poor	67.6	4.4	28.0	100.0	67.8	49.6	70.2	67.4
Poor	66.2	9.3	24.5	100.0	32.2	50.4	29.8	32.6
Location								
Urban non-poor	61.9	5.2	32.9	100.0	41.0	38.1	54.4	44.4
Urban poor	53.6	12.3	34.1	100.0	11.8	30.0	18.7	14.7
Rural non-poor	78.4	3.0	18.6	100.0	26.8	11.5	15.8	23.0
Rural poor	76.5	6.9	16.7	100.0	20.4	20.4	11.1	17.9
Ulaanbaatar non-poor	60.8	5.0	34.3	100.0	26.8	24.3	37.7	29.6
Ulaanbaatar poor	52.4	11.4	36.2	100.0	5.9	14.3	10.2	7.6
Aimag centers non-poor	64.2	5.6	30.2	100.0	14.2	13.8	16.7	14.8
Aimag centers poor	55.0	13.3	31.7	100.0	5.9	15.7	8.4	7.1
Soum centers non-poor	68.6	4.7	26.7	100.0	10.7	8.0	10.4	10.4
Soum centers poor	60.3	14.2	25.5	100.0	6.0	15.8	6.4	6.7
Countryside non-poor	86.6	1.7	11.7	100.0	16.2	3.5	5.5	12.5
Countryside poor	86.1	2.5	11.4	100.0	14.4	4.6	4.8	11.2
West non-poor	74.1	4.2	21.8	100.0	9.5	6.0	7.0	8.6
West poor	72.0	9.8	18.2	100.0	7.3	11.1	4.6	6.8
Highlands non-poor	70.7	3.7	25.6	100.0	13.5	7.9	12.2	12.8
Highlands poor	71.5	8.4	20.1	100.0	10.7	13.9	7.5	10.0
Central non-poor a/	74.1	4.2	21.7	100.0	13.4	8.5	9.8	12.1
Central poor a/	70.7	8.7	20.6	100.0	5.1	6.9	3.7	4.8
East non-poor	73.4	4.1	22.5	100.0	4.6	2.8	3.5	4.2
East poor	63.0	7.4	29.6	100.0	3.2	4.2	3.8	3.4
Gender								
Men non-poor	68.7	5.1	26.2	100.0	33.2	27.3	31.6	32.5
Men poor	67.5	10.0	22.5	100.0	16.1	26.5	13.4	16.0
Women non-poor	66.5	3.8	29.7	100.0	34.6	22.3	38.6	34.9
Women poor	64.9	8.7	26.5	100.0	16.1	24.0	16.4	16.7

a/ Excludes Ulaanbaatar.
Source: HSES 2007/08.

Table D.50: Labor force participation rate and unemployment rate by poverty status

	Labor force participation rate			Unemployment rate		
	Non-poor	Poor	Total	Non-poor	Poor	Total
National	72.0	75.5	73.1	6.2	12.3	8.2
Location						
Urban	67.1	65.9	66.8	7.7	18.7	10.4
Rural	81.5	83.3	82.3	3.7	8.2	5.7
Ulaanbaatar	65.7	63.8	65.3	7.5	17.9	9.6
Aimag centers	69.8	68.3	69.3	8.0	19.5	11.7
Soum centers	73.3	74.5	73.7	6.3	19.0	11.4
Countryside	88.3	88.6	88.4	1.9	2.8	2.3
West	78.2	81.8	79.8	5.3	12.0	8.4
Highlands	74.4	79.9	76.8	5.0	10.5	7.5
Central a/	78.3	79.4	78.7	5.4	11.0	7.0
East	77.5	70.4	74.3	5.3	10.4	7.5
Gender						
Men	73.8	77.5	75.0	6.9	12.9	8.9
Women	70.3	73.6	71.4	5.5	11.8	7.6
Age						
16-24	39.5	55.5	44.9	11.9	18.8	14.8
25-34	90.4	88.6	89.8	5.9	11.0	7.6
35-44	91.4	89.2	90.6	4.8	10.9	6.9
45-54	79.9	74.7	78.5	4.0	7.6	4.9
55-59 b/	67.7	66.4	67.4	2.0	5.1	2.7
Education						
None	73.5	67.6	69.9	5.0	10.4	8.3
Primary	73.0	73.0	73.0	2.0	5.3	3.7
Lower secondary	64.2	72.2	67.9	5.2	10.8	8.0
Complete secondary	61.9	77.8	66.7	7.8	17.0	11.1
Vocational	84.3	84.8	84.4	5.1	9.2	6.1
Higher diploma	88.2	77.5	87.2	5.4	7.0	5.6
University	89.5	90.6	89.6	7.2	16.8	8.2
Other	92.8	74.8	91.1	0.4	9.0	1.1

a/ Excludes Ulaanbaatar.
b/ Includes only men.
Source: HSES 2007/08.

Table D.51: Labor force participation rate and unemployment rate by gender

	Labor force participation rate			Unemployment rate		
	Men	Women	Total	Men	Women	Total
National	75.0	71.4	73.1	8.9	7.6	8.2
Location						
Urban	68.0	65.8	66.8	12.0	8.9	10.4
Rural	84.6	79.9	82.3	5.5	5.9	5.7
Ulaanbaatar	66.7	64.2	65.3	11.5	7.8	9.6
Aimag centers	70.1	68.5	69.3	12.8	10.6	11.7
Soum centers	75.9	71.7	73.7	11.9	10.8	11.4
Countryside	90.6	86.2	88.4	1.9	2.9	2.3
West	80.9	78.8	79.8	8.5	8.2	8.4
Highlands	79.7	74.0	76.8	7.7	7.3	7.5
Central a/	80.5	76.9	78.7	7.1	7.0	7.0
East	75.6	73.0	74.3	7.6	7.3	7.5
Poverty status						
Non-poor	73.8	70.3	72.0	6.9	5.5	6.2
Poor	77.5	73.6	75.5	12.9	11.8	12.3
Age						
16-24	48.8	41.1	44.9	15.2	14.3	14.8
25-34	90.3	89.3	89.8	8.8	6.5	7.6
35-44	91.5	89.9	90.6	7.1	6.6	6.9
45-54	83.3	74.3	78.5	5.6	4.2	4.9
55-59 b/	67.4	-	67.4	2.7		2.7
Education						
None	72.9	65.4	69.9	7.1	10.2	8.3
Primary	76.8	67.9	73.0	3.9	3.5	3.7
Lower secondary	71.5	63.5	67.9	8.9	6.6	8.0
Complete secondary	69.7	64.2	66.7	11.9	10.3	11.1
Vocational	85.3	83.8	84.4	6.6	5.6	6.1
Higher diploma	86.3	87.9	87.2	5.2	5.9	5.6
University	90.4	89.2	89.6	10.7	6.8	8.2
Other	96.3	87.3	91.1	1.5	0.7	1.1

a/ Excludes Ulaanbaatar.
b/ Includes only men.
Source: HSES 2007/08.

Table D.52: Industry, sector of employment and occupation by poverty status

	Urban			Rural			National		
	Non-poor	Poor	Total	Non-poor	Poor	Total	Non-poor	Poor	Total
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Industry									
Agriculture	4.1	9.8	5.4	65.2	79.7	71.5	28.3	54.1	36.6
Industry	23.3	30.7	25.0	7.2	6.0	6.7	16.9	15.0	16.3
Services	64.9	45.2	60.5	24.9	11.4	19.1	49.1	23.7	40.9
Unknown	7.7	14.4	9.2	2.7	2.9	2.8	5.7	7.1	6.2
Agriculture, herding	4.1	9.8	5.4	65.2	79.6	71.4	28.3	54.1	36.6
Mining	4.3	2.1	3.8	2.7	1.9	2.4	3.7	2.0	3.1
Manufacturing	9.1	11.7	9.7	2.6	2.3	2.4	6.5	5.7	6.3
Electricity, water	3.1	4.6	3.4	0.8	0.5	0.7	2.2	2.0	2.1
Contruction	6.6	12.1	7.8	1.0	1.2	1.1	4.4	5.2	4.6
Trade	16.0	12.5	15.2	4.9	1.8	3.6	11.6	5.7	9.7
Hotels, restaurants, tourism	3.9	5.0	4.2	0.7	0.8	0.7	2.7	2.3	2.5
Transportation	7.3	4.6	6.7	2.8	0.7	1.9	5.5	2.1	4.4
Financial, insurance, real estate	2.2	0.8	1.8	0.8	0.3	0.6	1.6	0.5	1.3
Public administration	7.1	4.1	6.4	3.4	1.2	2.4	5.6	2.3	4.5
Education	9.2	5.2	8.3	5.9	2.8	4.6	7.9	3.7	6.6
Health	5.0	2.8	4.5	2.1	1.4	1.8	3.9	1.9	3.2
Other	12.1	9.7	11.5	3.5	2.3	3.0	8.7	5.0	7.5
Unspecified	10.0	15.2	11.2	3.6	3.1	3.4	7.5	7.6	7.5
Sector									
Private	66.2	72.1	67.5	82.5	90.8	86.1	72.7	84.0	76.3
Public	21.9	13.2	19.9	13.8	6.4	10.6	18.7	8.9	15.5
State	6.4	3.1	5.7	2.4	0.9	1.8	4.8	1.7	3.8
Unspecified	5.5	11.6	6.9	1.3	1.9	1.5	3.8	5.4	4.3
Occupation									
Managers, senior officials and legislators	7.1	1.1	5.7	3.0	0.5	1.9	5.5	0.7	3.9
Professionals	18.2	5.9	15.4	6.5	2.2	4.6	13.6	3.5	10.3
Technicians and associate professionals	8.0	3.3	7.0	3.5	1.5	2.7	6.3	2.2	5.0
Clerks	3.6	1.8	3.2	1.3	0.5	1.0	2.7	1.0	2.1
Service workers, shop and market salespeople	19.9	19.9	19.9	6.6	4.0	5.4	14.6	9.8	13.1
Skilled agricultural and fishery workers	3.3	8.8	4.6	58.7	69.7	63.5	25.3	47.5	32.4
Craft and related trader workers	15.1	23.5	17.0	4.5	4.6	4.5	10.9	11.5	11.1
Plant and machine operators	10.4	8.6	10.0	3.8	2.1	3.1	7.8	4.5	6.7
Elementary occupations	8.7	15.5	10.2	10.8	13.1	11.8	9.5	14.0	11.0
Unspecified	5.6	11.6	7.0	1.3	1.8	1.5	3.9	5.4	4.4

Source: HSES 2007/08.

Table D.53: Industry, sector of employment and occupation by gender

	Urban			Rural			National		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Industry									
Agriculture	6.4	4.5	5.4	74.2	68.5	71.5	39.9	33.4	36.6
Industry	32.8	17.9	25.0	8.4	4.9	6.7	20.7	12.0	16.3
Services	57.6	63.1	60.5	15.7	22.7	19.1	36.9	44.9	40.9
Unknown	3.2	14.5	9.2	1.7	3.9	2.8	2.5	9.7	6.2
Agriculture, herding	6.4	4.5	5.4	74.2	68.5	71.4	39.9	33.4	36.6
Mining	5.9	2.0	3.8	3.3	1.4	2.4	4.6	1.7	3.1
Manufacturing	9.2	10.2	9.7	2.4	2.5	2.4	5.8	6.7	6.3
Electricity, water	4.5	2.5	3.4	1.0	0.4	0.7	2.7	1.5	2.1
Contruction	13.0	3.2	7.8	1.6	0.5	1.1	7.4	2.0	4.6
Trade	13.7	16.6	15.2	2.8	4.5	3.6	8.3	11.1	9.7
Hotels, restaurants, tourism	1.6	6.5	4.2	0.2	1.3	0.7	0.9	4.1	2.5
Transportation	10.6	3.2	6.7	2.6	1.1	1.9	6.6	2.3	4.4
Financial, insurance, real estate	1.6	2.1	1.8	0.3	0.9	0.6	1.0	1.5	1.3
Public administration	8.7	4.3	6.4	2.8	2.1	2.4	5.8	3.3	4.5
Education	4.4	11.8	8.3	2.7	6.6	4.6	3.6	9.5	6.6
Health	1.7	7.0	4.5	1.1	2.6	1.8	1.4	5.0	3.2
Other	13.5	9.8	11.5	2.8	3.2	3.0	8.2	6.9	7.5
Unspecified	5.4	16.4	11.2	2.4	4.5	3.4	3.9	11.0	7.5
Sector									
Private	75.3	60.6	67.5	89.5	82.5	86.1	82.3	70.5	76.3
Public	17.2	22.4	19.9	8.1	13.3	10.6	12.7	18.3	15.5
State	6.7	4.8	5.7	2.1	1.4	1.8	4.4	3.3	3.8
Unspecified	0.8	12.3	6.9	0.3	2.8	1.5	0.6	8.0	4.3
Occupation									
Managers, senior officials and legislators	6.9	4.7	5.7	2.3	1.5	1.9	4.6	3.3	3.9
Professionals	10.2	20.1	15.4	2.3	7.2	4.6	6.3	14.3	10.3
Technicians and associate professionals	6.0	7.9	7.0	1.7	3.7	2.7	3.9	6.0	5.0
Clerks	1.5	4.7	3.2	0.6	1.4	1.0	1.0	3.2	2.1
Service workers, shop and market salespeople	15.3	24.0	19.9	3.4	7.7	5.4	9.4	16.7	13.1
Skilled agricultural and fishery workers	5.2	4.0	4.6	66.7	60.1	63.5	35.7	29.2	32.4
Craft and related trader workers	23.9	10.9	17.0	5.9	3.0	4.5	15.0	7.3	11.1
Plant and machine operators	19.0	2.0	10.0	5.6	0.4	3.1	12.3	1.3	6.7
Elementary occupations	11.2	9.3	10.2	11.4	12.2	11.8	11.3	10.6	11.0
Unspecified	0.9	12.4	7.0	0.2	2.9	1.5	0.6	8.1	4.4

Source: HSES 2007/08.

APPENDIX E: STANDARD ERRORS AND CONFIDENCE INTERVALS OF POVERTY ESTIMATES

Table E.1: Poverty by urban and rural areas

Observations	11,172
Strata	3
PSUs	1,249

	Estimate	Standard error	[95% confidence interval]		Obs.
Headcount					
National	35.2	0.8	33.6	36.8	11 172
Urban	26.9	1.1	24.8	29.0	6 192
Rural	46.6	1.2	44.2	49.0	4 980
Poverty gap					
National	10.1	0.3	9.5	10.7	11 172
Urban	7.7	0.4	6.9	8.4	6 192
Rural	13.4	0.5	12.5	14.3	4 980
Severity					
National	4.0	0.2	3.7	4.3	11 172
Urban	3.1	0.2	2.7	3.5	6 192
Rural	5.2	0.2	4.8	5.7	4 980

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.2: Poverty by analytical domain

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
Headcount					
Ulaanbaatar	21.9	1.4	19.3	24.6	3 571
Aimag centers	34.9	1.8	31.5	38.3	2 621
Soum centers	42.0	1.8	38.6	45.4	2 021
Countryside	49.7	1.6	46.6	52.8	2 959
Poverty gap					
Ulaanbaatar	6.3	0.5	5.3	7.3	3 571
Aimag centers	9.9	0.7	8.6	11.2	2 621
Soum centers	12.7	0.7	11.4	14.0	2 021
Countryside	13.9	0.6	12.7	15.1	2 959
Severity					
Ulaanbaatar	2.6	0.2	2.1	3.1	3 571
Aimag centers	3.9	0.3	3.3	4.6	2 621
Soum centers	5.2	0.3	4.5	5.8	2 021
Countryside	5.3	0.3	4.7	5.8	2 959

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.3: Poverty by region

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
Headcount					
West	47.1	2.0	43.1	51.1	1 836
Highlands	46.6	1.8	43.1	50.0	2 566
Central	30.7	1.7	27.5	34.0	2 179
East	46.7	2.8	41.2	52.2	1 020
Ulaanbaatar	21.9	1.4	19.3	24.6	3 571
Poverty gap					
West	12.8	0.7	11.4	14.2	1 836
Highlands	13.6	0.7	12.3	14.9	2 566
Central	8.4	0.6	7.2	9.5	2 179
East	14.9	1.3	12.4	17.5	1 020
Ulaanbaatar	6.3	0.5	5.3	7.3	3 571
Severity					
West	4.7	0.3	4.0	5.3	1 836
Highlands	5.3	0.3	4.7	6.0	2 566
Central	3.3	0.3	2.7	3.8	2 179
East	6.6	0.7	5.1	8.0	1 020
Ulaanbaatar	2.6	0.2	2.1	3.1	3 571

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.4: Poverty by quarter

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
Headcount					
July - September 2007	25.1	1.5	22.2	28.0	2 775
October - December 2007	33.3	1.6	30.2	36.4	2 796
January - March 2008	40.5	1.8	37.0	44.0	2 797
April - June 2008	42.1	1.8	38.6	45.6	2 804
Poverty gap					
July - September 2007	6.9	0.5	5.8	7.9	2 775
October - December 2007	9.3	0.6	8.2	10.4	2 796
January - March 2008	11.5	0.6	10.3	12.8	2 797
April - June 2008	12.7	0.7	11.3	14.0	2 804
Severity					
July - September 2007	2.8	0.3	2.2	3.3	2 775
October - December 2007	3.6	0.3	3.1	4.2	2 796
January - March 2008	4.5	0.3	3.9	5.1	2 797
April - June 2008	5.1	0.3	4.5	5.8	2 804

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.5: Poverty by age of the household head

Observations	11,172
Strata	3
PSUs	1,249

	Estimate	Standard error	[95% confidence interval]		Obs.
Headcount					
<30	33.9	1.6	30.7	37.0	1 471
30-39	38.3	1.2	36.0	40.7	3 019
40-49	36.3	1.1	34.0	38.5	3 115
50-59	31.9	1.5	28.9	34.9	1 743
60+	31.6	1.6	28.5	34.7	1 824
Poverty gap					
<30	9.4	0.6	8.2	10.6	1 471
30-39	10.9	0.4	10.0	11.7	3 019
40-49	10.7	0.5	9.8	11.6	3 115
50-59	9.4	0.6	8.2	10.5	1 743
60+	8.5	0.5	7.4	9.6	1 824
Severity					
<30	3.6	0.3	3.0	4.2	1 471
30-39	4.2	0.2	3.8	4.7	3 019
40-49	4.4	0.3	3.9	4.9	3 115
50-59	3.8	0.3	3.2	4.4	1 743
60+	3.2	0.3	2.6	3.7	1 824

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.6: Poverty by gender of the household head

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
National					
Headcount					
Men	35.3	0.9	33.7	37.0	8 768
Women	34.7	1.4	32.0	37.4	2 404
Poverty gap					
Men	10.0	0.3	9.4	10.7	8 768
Women	10.3	0.6	9.3	11.4	2 404
Severity					
Men	4.0	0.2	3.6	4.3	8 768
Women	4.2	0.3	3.6	4.8	2 404
Urban and rural areas					
Headcount					
Men urban	25.8	1.1	23.6	28.1	4 605
Men rural	46.8	1.3	44.3	49.3	4 163
Women urban	30.6	1.7	27.3	34.0	1 587
Women rural	45.0	2.4	40.4	49.6	817
Poverty gap					
Men urban	7.3	0.4	6.5	8.1	4 605
Men rural	13.3	0.5	12.4	14.2	4 163
Women urban	8.9	0.7	7.6	10.2	1 587
Women rural	14.0	1.0	12.1	15.9	817
Severity					
Men urban	2.9	0.2	2.5	3.4	4 605
Men rural	5.2	0.2	4.7	5.6	4 163
Women urban	3.6	0.4	2.9	4.3	1 587
Women rural	5.7	0.5	4.8	6.7	817

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.7: Poverty by highest educational attainment of the household head

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
Headcount					
None	58.0	2.8	52.6	63.5	537
Primary	51.5	1.7	48.2	54.8	1 529
Lower secondary	48.1	1.4	45.4	50.8	2 502
Complete secondary	34.6	1.2	32.2	37.1	3 332
Vocational	25.3	1.6	22.3	28.4	1 380
Higher diploma	9.5	1.1	7.3	11.8	1 102
University	8.8	1.4	6.0	11.6	727
Other	6.1	4.5	-2.7	15.0	63
Poverty gap					
None	19.8	1.4	17.1	22.5	537
Primary	16.0	0.7	14.5	17.4	1 529
Lower secondary	14.1	0.5	13.0	15.2	2 502
Complete secondary	9.3	0.4	8.4	10.1	3 332
Vocational	6.9	0.5	5.8	7.9	1 380
Higher diploma	2.1	0.3	1.5	2.7	1 102
University	2.3	0.5	1.3	3.3	727
Other	0.6	0.4	-0.2	1.3	63
Severity					
None	8.9	0.9	7.2	10.6	537
Primary	6.7	0.4	5.9	7.5	1 529
Lower secondary	5.6	0.3	5.1	6.2	2 502
Complete secondary	3.5	0.2	3.1	3.9	3 332
Vocational	2.6	0.3	2.1	3.1	1 380
Higher diploma	0.6	0.1	0.4	0.9	1 102
University	0.8	0.2	0.4	1.3	727
Other	0.1	0.0	0.0	0.2	63

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.8: Poverty by migrant status of the household head

Observations	11,172
Strata	3
PSUs	1,249

	Estimate	Standard error	[95% confidence interval]		Obs.
National					
Headcount					
Non-migrant	40.1	1.0	38.2	42.0	6 987
Migrant	27.8	1.2	25.5	30.0	4 185
Poverty gap					
Non-migrant	11.7	0.4	10.9	12.4	6 987
Migrant	7.7	0.4	6.9	8.5	4 185
Severity					
Non-migrant	4.6	0.2	4.3	5.0	6 987
Migrant	3.1	0.2	2.6	3.5	4 185
Urban and rural areas					
Headcount					
Non-migrant urban	27.6	1.4	24.9	30.3	2 928
Non-migrant rural	49.4	1.3	46.8	52.0	4 059
Migrant urban	26.3	1.3	23.7	28.9	3 264
Migrant rural	33.9	2.3	29.4	38.4	921
Poverty gap					
Non-migrant urban	8.0	0.5	7.0	9.1	2 928
Non-migrant rural	14.4	0.5	13.4	15.4	4 059
Migrant urban	7.4	0.5	6.5	8.3	3 264
Migrant rural	9.1	0.8	7.6	10.6	921
Severity					
Non-migrant urban	3.3	0.3	2.8	3.8	2 928
Non-migrant rural	5.6	0.3	5.1	6.1	4 059
Migrant urban	2.9	0.2	2.5	3.4	3 264
Migrant rural	3.5	0.4	2.8	4.2	921

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.9: Poverty by ownership of livestock

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
National					
Headcount					
Non-herder	29.6	1.0	27.6	31.5	6 878
Herder	44.8	1.3	42.3	47.3	4 294
Poverty gap					
Non-herder	8.8	0.4	8.1	9.5	6 878
Herder	12.3	0.5	11.3	13.2	4 294
Severity					
Non-herder	3.7	0.2	3.3	4.0	6 878
Herder	4.6	0.2	4.1	5.0	4 294
Urban and rural areas					
Headcount					
Non-herder urban	26.4	1.1	24.3	28.6	5 609
Non-herder rural	46.2	2.1	42.1	50.2	1 269
Herder urban	31.7	3.0	25.7	37.6	583
Herder rural	46.7	1.4	44.0	49.4	3 711
Poverty gap					
Non-herder urban	7.6	0.4	6.8	8.5	5 609
Non-herder rural	15.0	0.8	13.4	16.6	1 269
Herder urban	8.0	0.9	6.1	9.8	583
Herder rural	12.9	0.5	11.9	13.9	3 711
Severity					
Non-herder urban	3.1	0.2	2.7	3.5	5 609
Non-herder rural	6.5	0.4	5.7	7.3	1 269
Herder urban	2.8	0.4	2.0	3.6	583
Herder rural	4.8	0.3	4.4	5.3	3 711

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.10: Poverty by possession of savings

Observations	11,172
Strata	3
PSUs	1,249

	Estimate	Standard error	[95% confidence interval]		Obs.
National					
Headcount					
Non-saver	40.6	0.9	38.9	42.4	8 559
Saver	18.3	1.1	16.2	20.4	2 613
Poverty gap					
Non-saver	11.9	0.3	11.2	12.5	8 559
Saver	4.5	0.3	3.9	5.2	2 613
Severity					
Non-saver	4.8	0.2	4.4	5.1	8 559
Saver	1.6	0.2	1.3	1.9	2 613
Urban and rural areas					
Headcount					
Non-saver urban	32.6	1.2	30.2	34.9	4 589
Non-saver rural	51.0	1.3	48.5	53.5	3 970
Saver urban	10.7	1.1	8.6	12.9	1 603
Saver rural	30.6	1.9	26.9	34.4	1 010
Poverty gap					
Non-saver urban	9.5	0.5	8.5	10.4	4 589
Non-saver rural	15.0	0.5	14.0	16.0	3 970
Saver urban	2.6	0.4	1.9	3.3	1 603
Saver rural	7.7	0.6	6.5	8.9	1 010
Severity					
Non-saver urban	3.8	0.2	3.4	4.3	4 589
Non-saver rural	6.0	0.3	5.4	6.5	3 970
Saver urban	0.9	0.2	0.6	1.3	1 603
Saver rural	2.6	0.3	2.1	3.2	1 010

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.11: Poverty by type of dwelling

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
National					
Headcount					
Ger	48.8	1.1	46.6	51.0	5 341
Apartment	8.5	0.8	6.8	10.1	2 304
House	32.6	1.3	30.1	35.1	3 464
Other	44.3	7.7	29.3	59.4	63
Poverty gap					
Ger	14.6	0.4	13.7	15.5	5 341
Apartment	2.2	0.3	1.6	2.8	2 304
House	8.6	0.4	7.8	9.5	3 464
Other	12.9	2.7	7.6	18.3	63
Severity					
Ger	5.9	0.2	5.5	6.4	5 341
Apartment	0.9	0.2	0.6	1.2	2 304
House	3.3	0.2	2.8	3.7	3 464
Other	4.7	1.2	2.4	7.0	63
Urban and rural areas					
Headcount					
Ger urban	46.7	1.8	43.2	50.2	1 831
Ger rural	50.1	1.4	47.2	52.9	3 510
Apartment urban	6.7	0.8	5.1	8.4	2 018
Apartment rural	22.0	3.1	15.9	28.1	286
House urban	27.9	1.5	24.9	30.8	2 303
House rural	42.4	2.2	38.2	46.6	1 161
Other urban	46.1	9.9	26.7	65.4	40
Other rural	41.3	12.2	17.3	65.2	23
Poverty gap					
Ger urban	14.2	0.7	12.7	15.6	1 831
Ger rural	14.8	0.6	13.7	15.9	3 510
Apartment urban	1.9	0.3	1.3	2.5	2 018
Apartment rural	5.0	0.9	3.2	6.8	286
House urban	7.4	0.5	6.3	8.4	2 303
House rural	11.4	0.7	9.9	12.8	1 161
Other urban	14.7	3.6	7.6	21.9	40
Other rural	9.6	3.8	2.2	17.0	23
Severity					
Ger urban	5.9	0.4	5.2	6.7	1 831
Ger rural	5.9	0.3	5.3	6.5	3 510
Apartment urban	0.8	0.2	0.5	1.1	2 018
Apartment rural	1.7	0.4	1.0	2.5	286
House urban	2.8	0.3	2.3	3.3	2 303
House rural	4.2	0.4	3.5	4.9	1 161
Other urban	5.6	1.6	2.4	8.7	40
Other rural	3.2	1.5	0.2	6.2	23

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.12: Poverty by access to improved water sources

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
National					
Headcount					
No	44.0	1.1	41.9	46.1	6 020
Yes	24.8	1.1	22.6	26.9	5 152
Poverty gap					
No	12.6	0.4	11.8	13.4	6 020
Yes	7.1	0.4	6.3	7.9	5 152
Severity					
No	4.9	0.2	4.5	5.3	6 020
Yes	2.9	0.2	2.5	3.3	5 152
Urban and rural areas					
Headcount					
No urban	37.7	1.6	34.6	40.8	2 751
No rural	49.8	1.4	47.0	52.7	3 269
Yes urban	17.7	1.3	15.2	20.2	3 441
Yes rural	40.1	1.8	36.5	43.8	1 711
Poverty gap					
No urban	10.8	0.6	9.6	12.0	2 751
No rural	14.2	0.6	13.1	15.3	3 269
Yes urban	5.0	0.5	4.1	5.9	3 441
Yes rural	11.7	0.7	10.3	13.1	1 711
Severity					
No urban	4.4	0.3	3.7	5.0	2 751
No rural	5.5	0.3	5.0	6.0	3 269
Yes urban	2.0	0.2	1.6	2.5	3 441
Yes rural	4.7	0.4	4.0	5.4	1 711

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.13: Poverty by access to improved sanitation

				Observations	11,172
				Strata	3
				PSUs	1,249
	Estimate	Standard error		[95% confidence interval]	Obs.
National					
Headcount					
No	48.8	1.2	46.4	51.2	4 819
Yes	25.0	0.9	23.1	26.9	6 353
Poverty gap					
No	14.4	0.5	13.5	15.4	4 819
Yes	6.8	0.3	6.1	7.5	6 353
Severity					
No	5.8	0.2	5.3	6.3	4 819
Yes	2.6	0.2	2.3	3.0	6 353
Urban and rural areas					
Headcount					
No urban	44.4	2.1	40.3	48.6	1 582
No rural	51.2	1.5	48.3	54.1	3 237
Yes urban	20.4	1.1	18.3	22.6	4 610
Yes rural	38.0	1.7	34.7	41.3	1 743
Poverty gap					
No urban	13.6	0.9	11.9	15.3	1 582
No rural	14.9	0.6	13.8	16.0	3 237
Yes urban	5.5	0.4	4.7	6.2	4 610
Yes rural	10.5	0.6	9.3	11.8	1 743
Severity					
No urban	5.8	0.5	4.9	6.7	1 582
No rural	5.8	0.3	5.3	6.4	3 237
Yes urban	2.1	0.2	1.7	2.5	4 610
Yes rural	4.2	0.3	3.5	4.8	1 743

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.14: Poverty by access to electricity

Observations	11,172
Strata	3
PSUs	1,249

	Estimate	Standard error	[95% confidence interval]		Obs.
National					
Headcount					
No	51.1	1.5	48.1	54.2	3 046
Yes	29.7	0.9	27.9	31.5	8 126
Poverty gap					
No	14.8	0.6	13.6	16.0	3 046
Yes	8.5	0.3	7.8	9.1	8 126
Severity					
No	5.8	0.3	5.2	6.4	3 046
Yes	3.4	0.2	3.1	3.7	8 126
Urban and rural areas					
Headcount					
No urban	66.3	7.0	52.5	80.1	96
No rural	50.7	1.6	47.6	53.8	2 950
Yes urban	26.4	1.1	24.3	28.5	6 096
Yes rural	40.6	1.7	37.3	43.9	2 030
Poverty gap					
No urban	24.8	4.2	16.5	33.0	96
No rural	14.5	0.6	13.3	15.7	2 950
Yes urban	7.5	0.4	6.7	8.2	6 096
Yes rural	11.8	0.6	10.6	13.0	2 030
Severity					
No urban	12.6	3.2	6.3	19.0	96
No rural	5.6	0.3	5.0	6.2	2 950
Yes urban	3.0	0.2	2.6	3.4	6 096
Yes rural	4.7	0.3	4.1	5.4	2 030

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

Table E.15: Poverty by access to improved water sources, improved sanitation and electricity

Observations	11,172
Strata	3
PSUs	1,249

	Estimate	Standard error	[95% confidence interval]		Obs.
National					
Headcount					
No	43.9	1.0	42.0	45.9	7 353
Yes	18.3	1.1	16.1	20.4	3 819
Poverty gap					
No	12.7	0.4	12.0	13.5	7 353
Yes	5.0	0.4	4.2	5.8	3 819
Severity					
No	5.1	0.2	4.7	5.4	7 353
Yes	1.9	0.2	1.5	2.3	3 819
Urban and rural areas					
Headcount					
No urban	37.7	1.5	34.8	40.6	3 240
No rural	49.5	1.3	46.9	52.0	4 113
Yes urban	14.3	1.2	11.9	16.6	2 952
Yes rural	32.7	2.2	28.4	37.1	867
Poverty gap					
No urban	10.9	0.6	9.7	12.0	3 240
No rural	14.3	0.5	13.4	15.3	4 113
Yes urban	3.9	0.4	3.1	4.8	2 952
Yes rural	8.8	0.8	7.2	10.4	867
Severity					
No urban	4.4	0.3	3.8	5.0	3 240
No rural	5.6	0.3	5.1	6.1	4 113
Yes urban	1.5	0.2	1.1	2.0	2 952
Yes rural	3.4	0.4	2.6	4.2	867

Note: Poverty measures were calculated taking into account the survey design i.e. strata, primary sampling units and population weights.
Source: HSES 2007/08.

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