

Basic Information Document

Republic Of Armenia Household Budget Survey -- 1996

(AHBS 1996)

**Development Research Group
Poverty and Human Resources Division
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PRINCIPAL ABBREVIATIONS AND ACRONYMS USED

AHBS	Armenian Household Budget Survey
LSMS	Living Standards Measurement Study
PSU	Primary Sampling Unit
PPS	Probability proportional to estimated size
ROA	The Republic of Armenia
SDS	State Department of Statistics

This document is part of an expanded program of documentation and further development of the Living Standards Measurement Study (LSMS), managed by Margaret Grosh, in the Poverty and Human Resources Team of the Development Research Group (DECRG). It was prepared by Tilahun Temesgen (DECRG) under the guidance of Margaret Grosh. Other necessary inputs were provided by Diane Steele (DECRG), and Ruslan Yemtsov (ECSPE).

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1. Introduction

The Armenian Household Budget Survey (AHBS 96) was designed to be a nationally representative survey capable of measuring the standard of living in the Republic of Armenia (ROA) through the collection of data on the family, demographic, socio-economic and financial status of households. The survey was conducted in November - December 1996, on the whole territory of the republic by the State Department of Statistics (SDS) of ROA with technical and financial assistance from the World Bank.

The data collected for AHBS 96 include information on household composition, housing conditions, education level of household members, employment and income, savings, borrowing, as well as details on levels of expenditure including those on food, non-food, health, tourism and business. The survey covered about 100 villages and 28 towns. The size of the sample was 5,040 households of which 4,920 responded which makes the survey the largest carried out in Armenia to date and one with a very high response rate for a transition economy. The expenditure part of the data was collected using two different methods administered for different households. The methods are: recall method in which households were asked, during the interview, about their expenditures made during the last 30 days preceding the date of the interview; and a diary method where households were given a diary they used to record details about their income and expenditure on a daily basis for 30 days during the interview period. About 25% of the total sample of interviewed households used diaries and 75% used the recall method. The unit of study in the survey was the household, defined as a group of co-resident individuals with a common living budget. As will be explained in detail, the AHBS 96 was generally designed as a two stage stratified sampling, but for large urban areas with an almost definite probability of being selected, a one stage sampling was adopted.

The AHBS 96 is not really a Living Standards Measurement Study (LSMS) survey - the questionnaire used is more limited in scope and much different in format from a typical LSMS; The AHBS 96 used no community or price questionnaires; it did not use most of LSMS' prototypical fieldwork and data quality procedures, and the technical assistance did not come from the LSMS group in the World Bank. Nonetheless, the goals are some what LSMS-like and the data certainly worth archiving. They are therefore being entered in to the LSMS archives to guarantee their future accessibility to World Bank and other users as allowed under the data access policy.

This document is organized as follows: Section 2 describes characteristics of the questionnaires used in AHBS 96 - both the traditional household level questionnaire and the diary part where households registered their daily income-expenditure economic activities. Section 3 discusses sampling issues such as the coverage, sampling frames, stratification, size, sample design and selection. Section 4 discusses how the survey implementation was carried out including the field activities. Section 5 describes how the AHBS 96 data should be used, and it specifically discusses the variable names, merging issues and data problems. Section 6 discusses the income and expenditure aggregates. Finally appendices follow.

2. Characteristics of survey questionnaires used in AHBS 96

The AHBS 96 questionnaire was designed to collect information on several aspects of household behavior -- demographic composition, housing, health, consumption expenditures as well as income by source and employment. Information was collected about all the household members, not just about the head of the household alone.

2.1. Household Questionnaire

The main household questionnaire used in AHBS 96 contained 13 sections, each of which covered a separate aspect of household activity. The various sections of the household questionnaire are described below followed by a brief description of the diary used to record the daily income and expenditure activities of participating households¹. All households completed sections A through J, L, and M. Households selected to receive the recall method for expenditures completed section K as well; the remainder filled out the diary instead of being interviewed for section K.

HOUSEHOLD QUESTIONNAIRE
<p>A . FAMILY CHARACTERISTICS AND HOUSING: This section collected basic demographic data such as name, age, sex, education, health, marital status and economic status of everyone living in the household, number of people in</p>

¹ As mentioned earlier, unlike most other LSMS - type surveys, no community or price questionnaires were used in AHBS 1996.

the household, etc. In addition, information collected included data on the type of educational institutions attended (private/public), special groups (disabled, single parents, orphan...), dwelling amenities and conditions of the household such as type of dwelling (apartment, house, hostel...) and available facilities (electricity, hot water, telephone...)

B. INCOME FROM EMPLOYMENT:

This section collected information on income from employment, type of industry each household member is engaged in, type of ownership of the organization where each person works, salary and other cash payments received, employment subsidies in terms of services (e.g. transport and health). The recall period covers the 30 days prior to the interview date.

C. INCOME FROM SELF EMPLOYMENT:

This section collected information about self-employed persons, their income from self-employment, costs of equipment and raw materials owned by their business, sector in which the individual is self-employed, etc. The recall period covers 30 days prior to the interview.

D. STATE BENEFITS:

This section included information on entitlements and receipt of state benefits such as pension, disability, child benefit, unemployment benefit, single-mother benefit, etc. during the last 30 days preceding the date of the interview.

E. OTHER CASH INCOMES:

Included in this section are approximate values of the various types of cash incomes such as those from sale of property, valuables, alimony, rent from properties, dividends and interest, help from relatives, etc. the household received during the last 30 days preceding the date of the interview.

F. AID (ASSISTANCE):

This section included information on whether food and non-food (e.g. medical help) assistance were received by the household in forms other than cash from friends, relatives,

<p>humanitarian organizations, etc. and the values of such assistance received during the last 30 days preceding the date of the interview.</p>
<p>G. SAVINGS, ASSETS AND LOANS:</p> <p>This section collected information on savings, assets and loans made by the household to others, amount of borrowing from others, and the associated interest rates during the past 30 days.</p>
<p>H. GENERAL ECONOMIC SITUATION:</p> <p>This section collected information about the current economic situation as perceived by the household, how it changed over the past 90 days and the household's future expectations over the next 90 days.</p>
<p>I. LAND OWNERSHIP AND AGRICULTURAL PRODUCE:</p> <p>This section collected information on the amount of land owned by the household in hectares, each crop type harvested and consumed, crop in storage for own household use, home produced food such as dairy products, milk, eggs, etc. and animal stock. The recall period for this section generally is the current year, but for the value of household consumption, and crops sold in the market, it uses a recall period of the past 30 days.</p>
<p>J. FOOD IN STOCK (RESERVES):</p> <p>This section collected data on the amount of food in stock the household currently has such as bread, meat, cereals vegetables, etc.</p>
<p>K. EXPENDITURE FOR 30 DAYS (RECALL METHOD):</p> <p>This section collected expenditure information for the last 30 days on food purchases by item; clothing and foot wear for adults; children's clothes; fabrics; household furniture, cars, carpets, and electrical appliances; household consumables such as soap and stationary; building materials, bathroom appliances and household tools; household utensils; household</p>

<p>services; utilities; leisure activities; health; transport; education; domestic animals; land; tourism; and business activities.</p>
<p>L. EMIGRATION:</p> <p>This section collected information on whether anybody in the household worked outside Armenia for more than three months over the past five years; if the emigrating household member is still abroad and his/her final destination country.</p>
<p>M. "PAROS" social program:²</p> <p>This section collected information on whether the household is in the PAROS program and points the family has in the PAROS system in their social passport.</p>
<p>Z. GUESTS AND EATING OUT</p> <p>This section collected information on how many people ate in the household during the 30 days prior to the interview, how many times the household invited guests for dinner; and was invited; amount of food given to friends and relatives by the household. The codes for these variables are available in the data dictionary.</p>

2.2. Diary Questionnaire

The diary questionnaire was used to collect daily income and expenditure activities of the participating households for 30 consecutive days during the interview period. It was administered to 25% of the households in the sample who also completed sections A through J, L and M from the household questionnaire. For participating households, this substitutes for section 'K' of the basic household questionnaire discussed above and has seven (7) sections. Participating households were instructed on the rules for keeping the diary namely: all expenditures should be recorded; the recording of information should be done every day; each person in the household should be covered;

² . The PAROS program is a proxy means testing program introduced in 1994-95 by the Armenian government to serve as the targeting mechanism for large quantities of humanitarian aid flowing in to the economy which was estimated to have been about 12% of the GDP in 1994, but declined to about 2% in 1996. For a detailed discussion of the Armenian PAROS program, see 'Armenia: Study on Poverty and Social Assistance', Human Development Unit, Country Unit III, Europe and Central Asia Region, The World Bank, November, 1998.

items brought by someone else into the household should be included; all food items whether bought, home produced or received for free should be recorded; wherever possible, documents and receipts should be used; and all non-food items and services as well as incomes should be recorded. The coverage of each of the seven sections is briefly described below.

DIARY QUESTIONNAIRE

1 . PROVISIONS:

This section records all purchased food brought home for consumption each day - whether it is consumed the same day or not.

2 . FOOD CONSUMPTION - Purchased:

This section records consumption of purchased food by members of the household and guests each day (no matter when the purchase took place, this section included only the amount consumed that specific day).

3 . FOOD CONSUMPTION - Non - Purchased:

This section records all non-purchased food and drinks (home produced and gifts from family and friends) consumed by members of the household and guests each day.

4 . FOOD CONSUMPTION - Outside home:

This section records all expenditure for eating outside home by members of the household each day such as dinner, coffee and cake, etc., and where the food was eaten.

5 . CONSUMER GOODS AND SERVICES - Purchased:

This section records all purchased goods and services by the household each day. It includes non-food purchases such as clothing, visits to theaters or cinema, education fees, etc.

6 . CONSUMER GOODS AND SERVICES - Non - Purchased:

This section records all non - purchased goods and services (freely received) by the household each day.

7 . INCOME:

This section records all types of income received by the household in each of the 30 days for which the diary is kept.

3. Sample

3.1. Coverage

The AHBS 96 covered the whole territory of the ROA which had an estimated population at the time of the survey of 3.75 million people and 875,000 households.³ According to the SDS records, about 61% of the households were classified as 'Urban Dwellers'. Approximately 253,000 households (i.e. 28.9% of the total in the republic and 47.7% of the urban households) were registered in the capital, Yerevan.

The whole ROA is divided in to 11 Marzes (administrative districts in the country) including the capital, Yerevan. The 11 Marzes are further divided in to 49 rayons. Of the 49 rayons, 12 are classified as wholly urban: 8 in Yerevan, 2 in Gumri and 1 each in the cities of Venadzor and Dilijan. The remaining 37 rayons are classified as either partly or wholly rural.

The rural sector is divided into 952 villages for each of which the number of households and number of persons is known and updated at least every year.⁴ The urban sector is divided in to towns which are further divided into Zheks (Housing Management Offices). Zheks are administrative divisions of around 15,000 to 20,000 population.

3.2. Sampling Frames

Accurate sampling frames for AHBS 96 were available at all levels down to the individual as lists are frequently updated in the Marzes, Zheks and Villages of the ROA⁵. The lists that were used as sampling frames for the survey were:

³ This excludes the enclave of Nagorni Karabakh within Azerbaijan, which is Armenian in population but not part of the Armenian Republic, and the Azerbaijanian territories of Nakhichevan and Artsvashen.

⁴ This included 10 'urbanized villages' which were expected to be classified as villages in the then review of administrative boundaries.

⁵ Their accuracy was largely a consequence of their extensive use for distribution of various benefits, ranging from food coupons to privatization vouchers. A visit to the earthquake zone confirmed that the legacy of disorganization resulting from the December 1988 earthquake has already been fully overcome. The lists were no different in Spitak (the epicenter) from any where else in the republic and in fact in Gumri, the other main victim town of the quake, they were even computerized.

- i) At the rayon level in rural areas: a list of villages (and village committee areas) with the number of households and persons in each. These are updated annually and sent to the statistics department in Yerevan.
- ii) At the rayon level in small towns: a list of households. Addresses are updated at least annually and were easily obtainable for any household selected.
- iii) At the rayon level in large towns: a list of households in private housing, produced separately by each household committee and each condominium.
- iv) At the Zhek level for urban public housing in large towns, a list of rent-payers with addresses including that of privatized apartments. This list is updated at least annually.
- v) At village level, a list of households. This list is also updated at least annually.

Current lists of households and dwellings were available covering the whole Republic of Armenia. Only in case (iv) above - i.e. urban public housing at the Zhek level - was it possible to select apartments which could contain more than one household. This was most likely to occur in Yerevan.

3.3. Stratification

Stratification is primarily a strategy for increasing the efficiency of sampling. Before actual sample selection is done, the overall sampling frame is divided into categories, or strata. The sample is then selected separately in each stratum. Without stratification, the number of units selected in any category is left to chance though, in the long run, and with a large enough sample, the categories will be approximately well represented. But in stratified sampling, the number of units needed in each stratum is calculated and that number is selected. This eliminates the chance element and results in a more closely representative sample with a reduced sampling error.

However, stratification improves the sampling efficiency only insofar as the strata are homogeneous. The technical requirement is that the population variance of the study variable should be smaller within strata than between strata. Suppose, for example, that one wishes to estimate mean household income, and that people in the south tend to be wealthier than those in the north. Two strata can be created, north and south, whose sizes in terms of number of households is known. If we now sample separately for each stratum, selecting exactly the computed numbers of households, this

will reduce the chance of getting too many rich or too many poor households in the sample. Without stratification one might have selected, by chance, too many households in the wealthier south, leading to an overestimate of average income.

In AHBS 96, thirty four (34) of the 37 rayons of the rural sector in ROA were stratified into 3 strata based on the rayons' altitude as follows:

Stratum	Altitude	# of Rayons	Rural Population ('000)	# of Households ('000)
Low	< 1300m	10	760	146
Medium	1300 - 1700m	13	790	84.4
High	> 1700m	11	550	114.5

3.4. Sample Size

With the sampling frame and coverage discussed above, a sample size of 5,000 households was originally recommended, and the final interviewed number was expected to deviate a bit from this (due to refusal and non-contacts, existence of more than one household because of subletting of rooms within apartments, etc.). Once the issue of sampling frame and the required sample size was resolved, the next step was how to design the appropriate method of selecting the samples.

3.5. Sample design

The State Department of Statistics specified 3 domains of interest for this study. These are Yerevan (the capital of ROA), Other Urban areas and Rural areas. Recent estimates of earthquake zones assigned almost equal populations to these domain zones of interest, and as a result there was no need for special targeting and no particular reason was implied for departing from a proportionate (or self-weighting) design.

A self-weighting sample was derived by selecting Primary Sampling Units (PSUs) with probability proportional to their size (where size is defined as the number of households) and then taking a constant number of households from each selected. The sample, therefore, was designed to be self-weighted and representative at the administrative regions (Marzes) level, for urban and rural areas, and within urban areas by the size of cities, and in rural areas by elevation. The number of

households to be selected in each PSU was 20, so 250 PSUs were required to make up 5000 households.

3.6. Sample selection

In summary, the procedure of sample selection for AHBS was done as follows:

1) All Villages and towns were first arranged in the following order:

- i) High altitude rayons: villages in the order of listing by the rayon office
- ii) Medium altitude rayons: villages in the order of listing by the rayon office
- iii) Low altitude rayons: villages in the order of listing by the rayon office
- iv) Towns by population size from smallest to largest
- v) Yerevan: List of Zheks in rayons 1 to 8
List of Private Committees in rayons from 1 to 8
List of condominiums in rayons 1 to 8

2) In the rural sector, villages were selected from the list of villages supplied by the rayons. The selection was made with probability proportional to the number of households in each village, with sampling interval of 3,500. Then, in the villages selected in the first stage twenty (20) households each were selected using systematic sampling with equal probability from the list of households.

Specifically, the method of sampling villages with PPS was done as follows:

- a) All villages were numbered in single sequence from 1 to N
- b) The corresponding number of households (m_i) for each village were listed and summed up. Then the cumulative size of the m_i as in the order was calculated for each village and was listed.
- c) The sampling interval was then computed as $L=3,500$.
- d) A random number (A) between 001 and the calculated value of $L=3,500$ was selected.
- e) Starting from that random number (A), a sampling sequence was written as:
 $A; A+L; A+2L; A+3L; \dots \dots \dots$ etc.
- f) For each term in the sequence, the first village whose cumulative m_i equals or exceeds that term was selected. Thus each term of the sequence selects one village.

For rural areas, considering villages as area units did not cause a problem. For urban areas, on the other hand, the only ready-made units appeared to be the Zheks and the question was if the Zheks, like villages, could be used as PSUs. If this were done, given the selection interval of 3,500, most of the Zheks would have been selected since most Zheks have 3,000 to 6,000 households with a total population of 15,000 to 20,000. This made Zheks less attractive as primary sampling units (PSUs). As a result, a single-stage sample of households was adopted in the cities where household units were selected from the Zhek's lists without any prior selection of Zheks, private committees or condominiums. Therefore, for larger towns that would have a higher probability of being selected in the above method, *a single-stage sampling method was adopted*. A town with a population larger than 3,500 households (15,000 individuals) was certain to be selected and therefore, this was the point at which 2-stage sampling became impractical. As a result, single-stage sampling was used for large towns with population size of more than 15,000 residents.

3) In towns with population size of less than 15,000, the same method was used as in number 2.

4) In large towns with population of more than 15,000, households were directly selected using a single stage, and at a fixed interval set at 3,500. Selection was made from Zhek lists of rent payers, from private committee lists and from condominium lists all obtained from rayons. In the Zhek lists, the interviewers were instructed to interview all the households living in the apartment selected, whether or not they appeared in the list.

3.7. Sub-sampling for the diary participants:

As mentioned earlier, AHBS 96 collected household expenditure in two ways: the recall method and the diary method. About 25% of the selected sample households had to participate in diary method to record their daily income and expenditure activities while the remaining 75% were interviewed using the traditional recall method. In selecting the 25% sub-sample households that had to be part of the diary method, a 1-in-4 systematic sample from among the selected households in each sampling area was adopted. The procedure followed was:

1) Number all the selected households consecutively starting from 1 with in each sampling area

2) Find a random number from 1 to 4

3) Select the household bearing that number; then select every 4th household from this point through to the end of the list.

3.8. Sample implemented:

With a two-stage sampling adopted for rural/small town areas and a one-stage for larger cities, a total of 5,040 households were involved in AHBS 96. The following table shows the distribution of those households by Marzes, villages and cities.

NAME OF MARZES	NO. OF SELECTED VILLAGES	NO. OF HOUSEHOLDS	NO. OF SELECTED CITIES	NO. OF HOUSEHOLDS
ARAGATSOTSN	8	160	2	80
ARARAT	17	340	2	81
ARMAVIR	17	340	3	152
GEGARKUNIK	14	280	3	120
LORI	10	200	4	297
HNTAYK	9	180	3	185
SHIRAK	11	200	2	353
SUNIK	3	60	3	147
VAYOTSDZOR	4	80	1	40
TAVUSH	7	140	4	160
YEREVAN			1	1,445
TOTAL	100	1,980	28	3,060
OVERALL TOTAL (HOUSEHOLDS)				5,040 (1,980+3,060)

Out of the 5,040 initially selected for the AHBS 96 survey, a total of 4,920 households were actually interviewed (i.e. 120 or 2.4% of the total sample either refused to answer or were not found). This makes AHBS 96 the largest one carried out in Armenia until that time and one with a very high response rate for a transition economy. The total number of individuals actually covered in the survey (members of the 4,920 households) was 20,088.

Out of the 4,920 households who answered questionnaires, 1,260 were systematically selected using the procedure discussed above to fill in the 'household income and expenditure diary'.

4. Survey Implementation

The whole exercise of AHBS 96 was undertaken through a work schedule that covered the period between January/February 1996 to July 1997.

Listing of the Urban/Rural areas and households for sample frame preparation was completed during January/February 1996 and the listing was entered in to a computer during March-April 1996. Selection of sample households for the survey was carried out in June 1996.

A two-weeks field test of questionnaires using a pilot survey was carried out during the first two weeks of September 1996. The pilot survey covered a total of 150 households (110 from Yerevan, 16 from Horom village in Shirak Marz, and 24 from Parpi village in Aragatsotsn Marz. A total of 19 enumerators participated in the pilot survey.

Comments and suggestions based on the pilot survey were incorporated in to the main and diary questionnaires. The field work on the main survey took place during the two months period of November and December 1996. A total of 234 enumerators were involved in the main survey (of which 94 were from rural areas and 140 from urban areas). Supervision of the survey activities was done by SDS staff through frequent visits to various regions of the Republic.

Data entry was done between January and March 1997 by 14 data entry operators and 10 supervisors using 12 computers. A brief poverty report based on the survey data was completed in November 1997. For a detailed information on the time table of survey activities, refer to the AHBS 1996 Project Completion Report.

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5. Using the AHBS data files

The AHBS 1996 data is divided into a total of 21 files representing the different sections of the questionnaires involved and files containing constructed variables. There are 13 household level files representing sections of the questionnaire and 5 individual level files representing the information collected at the individual level data in the questionnaire. There is one file containing the data collected from households using the diary for income and expenditure reports and two other files containing constructed variables.

The 13 household level data files are named as HHSECP.XXX where the extension .XXX represents the various formats in which the data is stored. That is, .DTA stands for STATA format, .SSP for SAS portable and .ASC for ASCII format. HH indicates that the file consists of household level variables, SECP stands for the section in the questionnaire the data file represents. The value of 'P' varies from A to Z representing sections A to Z. Similarly, individual level data files are named as INDSECP.XXX. The diary file is named SOCDRY.XXX. The two constructed files are AGGV_IND.XXX and AGGV_HH.XXX representing the individual level and household level aggregates respectively. The data files and their descriptions are listed below:

File Name	Level	Description
HHSECA	household	Health condition of the respondent, type and size of dwelling of the household; and available facilities.
HHSECB	household	Whether there any member of the household worked as an employee; and whether the household received other cash payments from employers.
HHSECC	household	Whether anybody in the household undertook any form of self-employment
HHSECE	household	Approximate values of cash income received by the household from other sources such as rent, sale of valuables, alimony, charity, dividends, etc.
HHSECF	household	Aid assistance: Whether the family received food, medical, etc. assistance and the value of such aid.
HHSECG	household	Whether the household saved any income, the value of such savings, and place of savings.

HHSECH	household	Current economic situation of the household, changes over the past 90 days and expectation for the next 90 days; Minimum monthly income with which the household can live well.
HHSECI	household	Whether the family owns land; and how much used for different purposes; Amount of crop harvested by the household, value of sales; value stored; dairy produce such as milk, eggs, livestock etc. produced, consumed and available in stock.
HHSECJ	household	Amount of food currently available for household consumption excluding home produced food items.
HHSECK	household	Food expenditure spent on each expenditure item group; expenditure on clothing for adults; expenditure on children's clothes, furniture, utensils, services, utilities, leisure, health, transport, education, tourism, etc.
HHSECL	household	Whether anybody in the household lived/worked outside Armenia for more than 3 months over past 5 years.
HHSECM	household	Whether the household participates in the PAROS program, and points the family has under the program.
HHSECZ	household	How many people ate in the household during the last 30 days; whether the household invited guests or was invited; whether the household gave food to friends or relatives and the amount.
INDSECA	individual	Demographic data of individuals in the household such as name, sex, age, marital status, special group (disabled, orphan, refugee...)
INDSECB	individual	Type of industry each employed household member works in, values of subsidies received (if any), salary to which individual was entitled, but not received, if any; and payment received in kind.
INDSECC	individual	Persons employed in each self-employment activity; basic net income, cost of equipment, cost of reserves of raw material, unsold production etc.

INDSECD	individual	Entitlement and receipts of state benefits for each individual such as disability, child benefit, single mother benefit, etc.
INDSECL	individual	Household members who lived and worked abroad; whether still working or living abroad and countries where they are currently living.
AGGV_HH	household	Household level constructed variables such as total household income, total household expenditure, total amount of land owned by the household, per capita consumption, food line, poverty line, population deciles for the households using total consumption and expenditure levels, etc. as well as whether the household is categorized as ‘poor’ or ‘very poor’ in the poverty analysis discussed in section 6.4. For variables in section K of the questionnaire, the aggregations are done for the diary participants and the recall participants separately. For the rest, the aggregates include all the households (4,920 households). Whenever the aggregates include only the diary participant, the number of observations in the second column of the means table (see p.42-43) is 1,260 while that of recall is 3,660.
AGGV_IND	individual	Individual level aggregates such as total income, age group, various type of state benefits such as pension, disability benefit, child benefit, single mother benefit, unemployment benefit, student stipend etc.
SOCDRY	household	Data collected using the diary method. The number of observations indicate that there are 30 observations representing 30 days for each household. That results in to 30 X 1,260=37,800 observations.

5.1. variable names and identifications

It is strongly recommended that the data be used with the questionnaires and data dictionaries provided with the data files. Care should be taken in identifying variable names and the corresponding description in the data dictionaries. The variable names usually start with a letter identifying the questionnaire section and question number. In most cases where the questions are put in a table format, the section and question number identifiers are followed by column and row identifiers corresponding to the appropriate table in the questionnaire.

For example, in the household level data files, the variable name A18 refers to question number 18 of section A. The variable name A19_r on the other hand requires a special care in identifying each cell of a table. The first column of the data dictionary immediately after this variable name points out that the value of _r_ ranges from 1 to 4 (i.e. there are 4 rows that go with this variable name). This tells us that we have four variables associated with question 19 and those variables are A19_1, A19_2, A19_3 and A19_4. It is indicated in the description column that r=1 represents kitchen, r=2 represents flush toilet, etc. Therefore, A19_1 should be read as ‘Does your family own/share kitchen?’ while A19_2 should be read as ‘Does your family own/share a flush toilet?’ etc. The same rule applies to read the rows when the _r_ is in the middle of a variable name. The following diagram illustrates how the questionnaire and data dictionary should be used together.

Fig. I. Identifying variables using questionnaire and data dictionary

Questionnaire

A18 Please tell me the size of your dwelling space [] sq. metres

A19 Indicate whether you own or share the following items (Select only one from each item).

	Item	Belongs to one family 1=Yes 2=No 3=Does not have
1	A Kitchen	
2	A flush toilet (W.C.)	
3	A bathtub or shower	
4	A garage	

Data Dictionary

Section A					
	Question	Description	Type	Length	Decimals
Question	A18	The size of the dwelling	N	6	2
Table A19 columns		Your own or share the dwelling space	N	1	
	A19_r	Your own or share the dwelling space 1) Yes 2) No 3) Does not have			
	Rows (1 to 4)	r=1	1. kitchen		
		r=2	2. A flush toilet		
		r=3	3. A bathtub or shower		
	r=4	4. A garage			

As is indicated in each data dictionary, households are identified by the variable CODE (the questionnaire identification number) which is unique for each household. If domains of interest in data analysis are urban Vs rural, the variable TYPE_V should be used where a value of 1 represents urban and 2 represents rural. In the same way, the variable DIARY is used to identify whether a household has participated in the income-expenditure diary. A value of 1 for diary means that the household is one of the 1,260 who completed the diary and 2 refers to those who did not.

5.2. Merging files

Household and individual level files can be joined by the variable CODE which is the household identification number. To merge individual level files, the variable NUMB together with CODE should be used. NUMB is the identification code for individual members within a household.

It should also be noted that the structure of the diary file is different from that of the main interview. The diary was recorded daily for 30 days and as a result, each question ended up with 30 different values over the course of the diary period. The total number of observations for the diary file, therefore, is $1,260 \times 30 = 37,800$. The aggregates from the diary are included in the AGGV_HH file which consists of household level constructed variables. (See the data dictionary for these aggregated variables). Only if some one needs to work on the details of the diary would it be necessary to use the diary file.

5.3. Data related problems

No significant data problem has been encountered to date in using the AHBS 96 data files. However, the following are worth mentioning:

- i) Data for the PAROS scores is not reliable. According to Grosh and Glinskaya, only about 10% of the households reported their PAROS score, though 72% of households were registered in the program. Of the households who reported scores, a fair number of the observations were not in the plausible range indicating that the households had not remembered or had not read the score properly out of their social passport.
- ii) Section 'Z' of the household level data files: The variables in the file 'HHSECZ' report data on the number of people who ate at the household during the 30 days prior to the interview; how many times household members invited guests and were invited by other households; whether the household gave food to relatives and friends as well as the amount associated with these invitations and gifts. The part of the questionnaire corresponding to this section is missing. However, information on the questions and codes is available from page 15 of the household data dictionary (just next to that of section 'M'). Users of these variables should, therefore, refer to this section of the data dictionary.
- iii) In all the computations, there has been no regional or temporal price adjustments made.
- iv) Care has to be taken in using categorical variables. These variables (e.g. those with possible values of only 1 or 2), have zero values in place of the missing ones. Therefore, whenever there is a zero value for a categorical variable, it should be treated as missing. The same applies to most continuous numeric variables too.

6. Income and Expenditure Aggregates:

6.1. Conversion of currencies:

The AHBS 96 questionnaires collected income and expenditure data in one of the three currencies - Russian Roubles, US dollars or Armenian Drams. The majority of information was collected in Drams. The following exchange rates were used in creating the expenditure and income aggregates, based on exchange rates current at the time of the survey:

Dollar to Drams: 1Dram=0.002298 USD

Rouble to Drams: 1Dram=12.718 Rouble

6.2. Aggregated variables:

The following tables summarize the aggregates and their descriptions. The details of the variables included in each aggregate are attached in appendix B. The aggregates all refer to the 30 days prior to the interview.

a) Income

VARIABLE	DESCRIPTION
SUMB2	Net salary (income) from employment from all jobs.
SUMB6	Other cash income from employment
SUMB7	Value of subsidies in terms of food or product or services (transportation and health)
SUMB8	Salary the household failed to receive to which they were entitled
SUMB9	Other payments received in kind in lieu of their salary
SUMC2	Income from self employment (net of taxes)
SUMINCD	State Benefits (Pension, disability benefit, unemployment benefit, ...)
SUMF1A	Value of Aid Assistance (food, medical help, kerosene, ...) from friends or relatives
SUMF2A	Value of Aid Assistance (food, medical help, kerosene, ...) from humanitarian aid organizations

SUMF3A	Value of Aid Assistance (food, medical help, kerosene, ...) from any other body not described above
SUMF4A	Value of Aid Assistance the household gave out to friends or relatives
SUMF4B	Cash gift the household gave out to friends or relatives
SUME1 to SUME9	Other cash income for the household as a whole (from sale of property, sale of valuables, property rent, dividends and interest, alimony, charity,...)
SUMI1_5	Income from sale of agricultural produce in drams
SUMI2_3	Income from sale of dairy products (milk, eggs, ...) in drams
SUMI3_3	Income from sale of livestock in drams
SUMI1_7	The value of home produced consumption of agricultural produce in drams
SUMI2_5	Home produced consumption of dairy products (milk, eggs, ...) in drams
SUMI3_6	The value of home produced consumption of livestock in drams
SUMQ7_1	Total income from salary for diary participants (table 7 col. 1)
SUMQ7_2	Total income from self employment for diary participants (table 7 col. 2)
SUMQ7_3	Total value of various state benefits for diary participants (table 7 col. 3)
SUMQ7_4	Total income from sale of assets for diary participants (table 7 col. 4)
SUMQ7_5	Cash income from relatives/friends for diary participants (table 7 col.5)
SUMQ7_6	Total income from sale of crops for diary participants (table 7 col. 6)
SUMQ7_7	Income from sale of animals in stock for diary participants (table 7 col. 7)
SUMQ7_8	Income from repayment of loans/interest -diary participants (table 7 col. 8)
SUMQ7_9	Income from other sources above for diary participants (table 7 col. 9)

B) Expenditures

VARIABLE	DESCRIPTION
SUMK1	Food Expenditure such as on bread, meat, ... in drams
SUMK2A	Clothing and footwear expenditure for adults in drams
SUMK2B	Expenditure on children's clothing in drams
SUMK3	Expenditure on fabrics such as linens, curtains, ... in drams
SUMK4	Expenditure on household furniture and appliances in drams

SUMK5	Expenditure on household consumables such as soap, medicine in drams
SUMK6	Expenditures on building materials, bathroom appliances, in drams
SUMK7	Expenditures on household utensils such as glassware & cutlery in drams
SUMK8	Expenditure on household services such as tailoring & laundry in drams
SUMK9	Expenditure on household utilities such as electricity in drams
SUMK10	Expenditure on Leisure Activities such as cinema and theatre in drams
SUMK11	Expenditure on Health such as diagnosis & visit to a dentist in drams
SUMK12	Expenditure on Transport such as taxis, railway & air transport in drams
SUMK13	Expenditure on Education in drams
SUMK14	Expenditure on Domestic Animals such veterinary & food in drams
SUMK15	Land Expenditures such as for lease of land, pesticides, technical maintenance, hired labor, tax on land, etc. in drams
SUMK16	Tourism Expenditures such as hotel, camping, etc. in drams
SUMK17	Legal/Bank/Ritual and Other services Expenditures These include expenditures on notary, weddings, Funeral, legal/bank services, etc
SUMK18	Business expenditures such as lease of premises, equipment, ... in drams
SUMQ1	Total food expenditure for diary participants (table 1 col. 4) in drams
SUMQ4	Total expenditure on food consumed outside home for diary participants (table 4 col. 4) ... in drams
SUMQ5	Total expenditure on non-food purchases -diary participants (tab. 5 col. 3)
SUMQ6	Total value of consumer goods & services received free by diary participant households (table 6 col. 5) in drams

There are also other types of aggregates that have been included in the aggregate data files. The variable names and their self explanatory descriptions of these aggregates are available on the data dictionaries.

6.3. Issues in measuring consumption aggregates

Like in any other transition economy, measuring household expenditure and consumption was a complicated exercise in Armenia. The major concerns were dealing with socially-based,

publicly awarded in-kind benefits, including those received from enterprises or as private transfers; public housing; consumption of home-produced goods and those derived from common property resources. The following points should be kept in mind when dealing with the consumption/expenditure figures that were used in the estimation of poverty lines discussed in the next section. These are:

In-kind benefits: The AHBS 96 collected detailed information on goods received in-kind from the state, NGOs, employers and individuals as well as those given by each household to others. Individuals were asked to specify the monetary values of the benefits received in kind from employers (food, transportation, health care) and aid from humanitarian organizations (food, non-food goods, kerosene, medicine). The respondents' valuation of these in-kind benefits may, of course, be subjective. However, parallel market prices exist for most of these goods and services and most of the responses were found to be close to shadow values. Including the values of these consumption values as reported by the respondents posed no serious measurement error.

Housing and utility: Imputed rents for owner occupied housing and utility expenditures in arrears were omitted from expenditure aggregates. Currently, most of the houses in ROA have been privatized and utility prices are believed to be close to production costs. At the time of the survey, however, most of the houses were under public ownership and the difference in ownership and quality of housing between the poor and non-poor was small. As a result, it is believed that omitting the imputed rents for owner-occupied houses does not cause a significant measurement error. The question related to how the arrears on utility payments should be treated was, however, a major concern since many households reported the use of electricity and water, but did not report the amount of utility expenditures. It was also very difficult to quantify the amount they should have paid in order to get a rough estimate of their consumption. It should, therefore, be noted that omission of these expenditures might have under-estimated consumption and hence actual well-being, but the under-estimation is not likely to be significant.

In-kind consumption of home-produced goods: The questionnaire collected information about access to and use of land plots, and respondents recorded all products and corresponding amounts in detail. Respondents were also asked to evaluate the market value of home consumption. Since local prices derived from the expenditure segment of the questionnaires and diaries were available, this information was used to check the self-reported total value of agricultural produce consumed in-

kind, and the values for outliers were properly corrected. However, dealing with outputs from common property resources proved a bit more problematic mainly because the questionnaire did not specifically ask for goods that were obtained from land not owned by the households themselves. For example a fish caught from a river, or fuel collected from a forest, wild herbs collected in wastelands and then dried constitute an important component of consumption of the poor in some rural areas, but might not have been reported.

Consumption from food stock: The current total monthly expenditures used as a measure of consumption included: food and current non-food purchases; in kind production and consumption of food products; and the value of net-in-kind transfers. It does not include consumption from food stocks. Only households that participated in the diary method of data collection (25% of the sample) were asked to include all produce consumed from stocks in their total consumption, and as a result, data on consumption from stocks were unavailable for three-fourths of the sample. A test was carried out to determine the extent to which the omission of consumption from stock biased the total expenditure measure. Using the daily records of consumption in kind for about a dozen of main food staples (for diary participant households), it was possible to construct distributions for purchases, own production and consumption that included use of food stocks. For the month under consideration, the amounts consumed from the food stock and monthly purchases or production that are used to replenish food stocks were on aggregates found to be roughly equivalent. The consumption figures, therefore, were not significantly underestimated since they include all purchases regardless of whether they go to consumption or to stocks and consumed in subsequent months.

6.4. Poverty lines using AHBS 96

The file containing household level constructed variables (AGGV_HH) also contains variables that indicate whether a household is regarded as poor, very poor or non-poor. Like other constructed variables, these variables are being made available by the analysts who constructed them with the understanding that there will be no further information/documentation available about these variables and the methods used to construct them beyond what is included in this document. The construction of these variables requires several assumptions and involves many complex calculations. Data users, therefore, should review the information supplied below and determine whether they wish to use these constructed variables or create their own.

There is an extensive literature dealing with the issues of measuring poverty and setting the poverty lines. The following paragraphs summarize the concepts and methods used in the construction of these variables in the context of the Armenian data.

i) Definition: Poverty is defined as “the status of a person who falls short of a level of economic welfare deemed to constitute a reasonably minimum standard of living”. The generally preferred indicator of a household’s economic welfare is total per-capita current consumption which includes consumption from all sources (purchases, gifts, stocks and own production). Poverty therefore refers to the economic status of a person/household who falls short of the level of per capita food consumption that is sufficient to acquire the minimum daily calorie requirements and a reasonably minimum level of non-food consumption. Current expenditures that were used as a measure of consumption in the Armenian data consisted of food and current non-food purchases, in-kind production and consumption of food products as well as net in-kind transfers. A person/household whose average daily consumption is less than the minimum daily requirement (food and non-food) is therefore regarded as ‘POOR’.

ii) Assumption on intra-household sharing of resources: It is implicitly assumed that all members benefit equally from the household’s total income or expenditure. The unit of analysis in the preparation of the poverty line was the household and, therefore, if a household is considered as ‘POOR’, so are its members. In order to categorize households as poor/very poor or non-poor, poverty and food lines were specified as explained below. The food line is the cost of the minimum food bundle while the poverty line is the total of the food line plus the average non-food expenditures made by households which have per capita food spending close to the food line.

iii) Minimum food bundle and food line: Minimum food bundle is a normative food consumption bundle at which an average individual achieves the daily minimum ‘food energy requirement’. It was defined as a standard food bundle representing the consumption habit of the poor in Armenia and consisted of the 24 essential food staples in the diet of most poor households. These essential food staples were derived from the daily consumption records collected using the diary method. The observed amount of these essential staples was ‘blown up’ (see the table below) so as to give the 2,100 Kilocalories minimum value per capita per day.

The following table shows the 24 essential staples mentioned above, the average per capita daily consumption of each item, the corresponding monthly per capita cost and the kilocalories they contribute.

Poverty line basket structure and caloric value

#	Produce	Grams (per day, per capita)	Cost (drams per month, per capita)	KCal	KCal%
1	Rice	17.19	149	71	3.4%
2	Beans	18.03	169	44	2.1%
3	White flour	19.64	120	67	3.2%
4	White bread	427.39	2244	1124	53.5%
5	Macaroni products	25.62	187	89	4.2%
6	Lavash (national bread)	28.62	262	76	3.6%
7	Beef	17.82	513	39	1.9%
8	Poultry	4.07	117	3	0.2%
9	Fresh water fish	15.00	146	11	0.5%
10	Milk	27.12	143	18	0.9%
11	Yogurt	18.27	110	14	0.7%
12	Hard cheese, cow milk	12.48	317	51	2.4%
13	Eggs	7.60	223	10	0.5%
14	Butter	3.46	141	26	1.2%
15	Oil	6.53	98	59	2.8%
16	Melted butter	19.70	621	165	7.9%
17	Apples	44.24	159	19	0.9%
18	Grapes	4.96	28	3	0.1%
19	Citrus fruits	3.30	24	1	0.0%
20	Compots	14.92	45	11	0.5%
21	Cabbage	45.85	69	12	0.6%
22	Onions	12.19	33	4	0.2%
23	Potatoes	192.45	560	115	5.5%
24	Sugar	16.93	134	67	3.2%
TOTAL			6612	2100	100%
National Food Line (Drams)			6612		
Share of non-food goods & services			38.7%		
National Poverty Line (Drams)			10784		

iv) Food Lines: The value of the minimum food bundle discussed above was estimated using regional prices from purchase records so as to estimate regional food lines in Armenia. These regional food lines represent the value of the minimum food bundle consisting of the essential staples that can provide an individual in a given region with the 2,100 Kilocalories minimum daily requirement. Given the relatively small size of the Armenian economy and similarity between the regions, differences in the costs of the items in food bundles between regions and hence between food

lines were negligible. However, the food line is only part of the poverty line which measures the total minimum per capita consumption required. Therefore, the value of minimum non-food per capita consumption should also be computed.

v) *Minimum non-food consumption*: is defined as the minimum per capita consumption level of non-food items that are believed to be necessary for a reasonable minimum standard of living by a household. It is the expected non-food spending of those households who are capable of reaching the food component (i.e. the food line) and is obtained by looking at the non-food expenditure level of families whose food expenditure are closest to the food line. The following regression was used to estimate the share of food expenditure in the poverty line:

$$\text{Food Share}_{ij} = a_j + b_j \log(\text{current expenditures}/\text{Food line}) + u_{ij},$$

where the *i*-th household is located in the *j*-th region and *u* is an error term. Estimated coefficients for *a_j* are specific for each region and would give the share of food expenditures for those who could have just achieved a nutritional minimum. Using this method, the estimated share of food expenditure was calculated to be about 65% (the corresponding non-food share is shown in the table above) and was consistent with the spending pattern of the poor in the 3rd decile. Using the food and non-food shares, the value of non-food consumption was computed.

vi) *Poverty Line*: From the regional food lines and the corresponding average non-food expenditure for the poor, regional poverty lines were calculated. This was done by adding the value of the minimum non-food consumption requirement to the regional food line. From the regional poverty and food lines, the corresponding national lines were computed as averages using the number of households as weights (for more details on these issues, see 'Measuring Poverty in Armenia (draft)'. As shown in the previous table, these national lines are a per capita monthly expenditure of 6,612 drams for the food line; and 10,784 drams for the poverty line.

vi) *Who is poor/very poor in Armenia?* Once the national poverty and food lines were computed, the poverty status of households was determined by comparing their per capita household expenditure with these national lines as follows: If the per capita monthly expenditure of a household is below the national poverty line, that household (and hence its members) is classified as 'poor'. If, in addition, the household's per capita monthly expenditure is below the threshold of the national food line, then that household is classified as 'very poor'. As mentioned earlier, poverty/food lines together with other household level aggregates are contained in the file 'AGGV_HH'. Individual level aggregates are put in 'AGGV_IND'.

APPENDIX A: How to obtain the AHBS 96 data

The 1996 Armenian Household Budget Survey (AHBS) data are the property of the government of Armenia. Permission to use the AHBS 96 data sets must first be obtained from the State Department of Statistics (SDS) in Yerevan, Armenia. The request should be submitted to:

Juliett Maglouchiantz
Chief of Household Division
Department of Statistics
Government House 3
Republic Square,
Yerevan, Armenia 375010
Tel. (374 2) 523 997 or 523 863
Fax. (374 2) 521 921
e-mail: armstat@sci.am

The request should include a brief description of the proposed research to be undertaken using the AHBS 96 data and the policy relevance of the proposed research to the government and people of the Republic of Armenia.

After permission has been received, requests for the data should be directed to:

Living Standards Measurement Study
Poverty and Human Resources
Development Research Group
Attn: LSMS Database Administrator
The World Bank
1818 H Street, N.W.
Washington, D.C. 20433
USA
fax: (202) 522-1153
Email: LSMS@worldbank.org

The request should include a copy of the letter of permission from the State Department of Statistics and a copy of the research proposal, and the format in which users would like to get the data (SAS portable, STATA or ASCII). There is a nominal processing fee associated with the data, which will be distributed on 3½" diskettes or a CD-ROM.

The Poverty and Human Resources Division of the World Bank requests copies of all reports and documents resulting from research that uses the data. The researcher should further note that once received, the data cannot be passed on to a third party for any reason. Other researchers must follow the same procedure for access to these data. Any violation of this policy will result in the denial of future access to World Bank LSMS data.

For additional information on LSMS and the structure of processing fees, users can look at the LSMS Web Site:

<http://www.worldbank.org/prdph/lms/lsmshome.html>

APPENDIX B: Variables included in income and expenditure aggregates

I) Income and Transfers:

a) Net salary (income) from employment: This information is reported for up to three jobs for each working member of a household. The variables are: B2_1_5, B2_2_5, and B2_3_5 respectively for first, second and third jobs held. The currencies used were named as B2_1_6 for drams, B2_2_6 for Roubles and B2_3_6 for dollars. The variable name representing the aggregate of these salaries in drams is SUMB2.

b) Other cash income from employment by each working member of the household. The variable names representing these are: B6_2, B6_3 and B6_4 respectively for amounts in drams, Roubles and dollars. We converted them in to a common currency before adding up. The variable name representing the aggregate of these cash income in drams is SUMB6.

c) Value of subsidies in terms of food or product or services such as transportation and health. The variable names representing these are B7_1, B7_2 and B7_3 respectively for amounts in dram, Roubles and dollars. The variable name representing the aggregate of these subsidies in drams is SUMB7.

d) Salary the household failed to receive to which they were entitled; i.e. amount which is still owed for each person in the household. The variable names are B8_1, B8_2 and B8_3. The variable name representing the aggregate of these accrued salaries in drams is SUMB8.

e) Other payments received by any member of the household in kind in lieu of their salary: The variable names are B9_1, B9_2 and B9_3. The variable name representing the aggregate of these in-kind receipts in drams is SUMB9.

f) Income from self employment (net of taxes) for each self-employed household member and for each job. The variable names are C2_1_5, C2_2_5 and C2_3_5 with the corresponding currencies of C2_1_6 (for drams), C2_2_6 (for Roubles) and C2_3_6 (dollars). The variable name representing the aggregate of all income from self-employment in drams is SUMC2.

g) Transfers and in-kind benefits:

g1) 1) State Benefits: The variable names representing these various types of state benefits are: D1, D2, D3, D4, D5, D6 and D7 respectively representing the following transfers: Pension, Disability Benefit, Child benefit, Single Mother Benefit, Unemployment Benefit, Student Stipend and

Other benefits. The variable name representing the aggregate of such state benefits in drams is SUMINCD.

2) Value of Aid Assistance from friends or relatives such as Food (F1A_1), Medical (F1A_2), Non food benefits (F1A_3), kerosene (F1A_4) and Other (F1A_5). The variable name representing the aggregate value of such assistance in drams is SUMF1A.

3) Value of Aid Assistance from humanitarian aid organizations. The variable names are defined as follows: Food (F2A_1), Medical (F2A_2), Non food benefits (F2A_3), kerosene (F2A_4) and Other (F2A_5). The variable name representing the aggregate value of such assistance in drams is SUMF2A.

4) Value of Aid Assistance from any other body not described above. The variable names are defined as follows: Food (F3A_1), Medical (F3A_2), Non food benefits (F3A_3), kerosene (F3A_4) and Other (F3A_5). The variable name representing the aggregate value of such assistance in drams is SUMF3A.

g2) 1) Value of Aid Assistance the household gave out to friends or relatives. The variable names are defined as follows: Food (F4A_1), Medical (F4A_2), Non food benefits (F4A_3), kerosene (F4A_4) and Other (F4A_5). The variable name representing the aggregate value of such assistance in drams is SUMF4A.

2) Cash gift the household gave out to friends or relatives. The variable names are defined as follows: F4B_1, F4B_2, and F4B_3 for amounts in drams, Roubles and dollars. The variable name representing the aggregate value of such assistance in drams is SUMF4B. Note that the net transfers for each household can be calculated as a difference between the different types of transfers the household received and the amount it gave out as assistance to other households. This refers to the difference between **g1** and **g2** described above:

h) Other cash income for the household as a whole: These include income from property such as dacha, house, land (E1_1_1), from sale of valuables such as car, furniture and jewelry (E1_2_1), from rent of property (E1_3_1), from dividends and interest (E1_4_1), from help from relatives in Armenia (E1_5_1), help from relatives outside Armenia (E1_6_1), from alimony (E1_7_1), from charity (E1_8_1) and other income (E1_9_1). The variable names representing the aggregates of such incomes in drams respectively are SUME1 to SUME9.

I) Income from sale of agricultural produce, diary products and livestock in drams: The aggregates of incomes from the sale of agricultural items (section I1), from the sale of diary products (section I2), and from the sale of livestock (section I3) are named respectively as SUMI1_5, SUMI2_3 and SUMI3_3. The value of home produced consumption of these groups of items are named as SUMI1_7, SUMI2_5 and SUMI3_6 respectively for agricultural produce, diary products and livestock. For the details, see page 16-17 of the household level data dictionary.

J) Income aggregates from the diary data: The aggregated incomes from the diary data are named as SUMQ7_1 to SUMQ7_9 representing the sums of the values in column 1 to column 9 of table 7 on the last page of the diary questionnaire. These columns respectively represent incomes from the following sources: salary, income from self-employment, state benefits, sale of assets, cash from relatives/friends, sale of crops, sale of livestock, income from loan repayment, and other income.

II) Expenditures

a) Food Expenditure over the last 30 days: This includes expenditures on various food items classified as follows: Bread and Bread products (K1_1_1), Dairy products (K1_2_1), Butter and fats (K1_3_1), Meat products ((K1_4_1), Fish (K1_5_1), vegetables (K1_6_1), Fruit (K1_7_1), potatoes (K1_8_1), sugar (K1_9_1), cakes, sweets (K1_10_1), Eggs (K1_11_1), coffee, tea (K1_12_1), Non-alcoholic beverages (K1_13_1), Alcohol (K1_14_1), Eating out (K1_15_1), other food products (K1_16_1). The aggregated value of these expenditures is named as SUMK1.

b) Clothing and footwear expenditure for adults: This includes expenditure on eight categories of such items. Definitions of the office codes for these items are not available. The variable names in this category are: K2A_1_3, K2A_2_3, K2A_3_3, K2A_4_3, K2A_5_3, K2A_6_3, K2A_7_3, and K2A_8_3. Note that the corresponding currencies (K2A_1_4, K2A_2_4, K2A_3_4, K2A_4_4, K2A_5_4, K2A_6_4, K2A_7_4, and K2A_8_4) were applied to change the components in to a common currency as has been done for other variables. The aggregated value of these expenditures is named as SUMK2A.

c) Expenditure on children's clothing: This includes expenditure on eight categories of clothes for children. Here also, definitions of the office codes for the eight items are not available. The variable names in this category are: K2B_1_3, K2B_2_3, K2B_3_3, K2B_4_3, K2B_5_3, K2B_6_3, K2B_7_3, and K2B_8_3. The aggregated value of these expenditures is named as SUMK2B.

d) Expenditure on fabrics: This includes five categories of expenditures on fabrics including linen and curtains. The variable names representing these categories are: K3_1_2, K3_2_2, K3_3_2, K3_4_2, K3_5_2. The aggregated value of these expenditures is named as SUMK3.

e) Expenditure on household furniture: Included here are expenditures on items such as carpets, cars, musical instruments and electrical appliances. Because of the long term nature of such expenditures on durables, what is spent on these items during the 30 days prior to the interview period may not be representative of such expenditure patterns for other months. The variable names in this category are: K4_1_1, K4_1_2, K4_1_3, K4_1_4, and K4_1_5. The aggregated value of these expenditures is named as SUMK4.

f) Expenditure on household consumables: Includes expenditures on items such as soap, stationery, newspapers, etc. There are ten items in this category represented as K5_1_2, K5_2_2, K5_3_2, K5_4_2, K5_5_2, K5_6_2, K5_7_2, K5_8_2, K5_9_2, K5_10_2. The aggregated value of these expenditures is named as SUMK5.

g) Expenditures on building materials, bathroom appliances, and household tools: The aggregated value of these expenditures is named as SUMK6.

h) Expenditures on household utensils such as glassware, cutlery, etc.: The aggregated value of these expenditures is named as SUMK7.

i) Expenditure on household services such as tailoring, laundry, hairdressing and photography. There are 5 expenditure categories represented as K8_1_3, K8_2_3, K8_3_3, K8_4_3, K8_5_3. The aggregated value of these expenditures is named as SUMK8.

j) Expenditure on household utilities. Eight expenditure items in this category are included. They are Utilities (K9_1_1), Electricity (K9_2_1), Telephone (K9_3_1), Heating Oil (K9_4_1), Wood (K9_5_1), Bottled gas (K9_6_1), coal (K9_7_1), and others (K9_8_1). The aggregated value of these expenditures is named as SUMK9.

k) Expenditure on Leisure Activities. Six expenditure items in this category are included. They are represented by variable names K10_1_2, K10_2_2, K10_3_2, K10_4_2, K10_5_2 and K10_6_2. The aggregated value of these expenditures is named as SUMK10.

l) Expenditure on Health. Six expenditure items in this category are included. They are Diagnostics (K11_1_1), Hospital treatment (K11_2_1), Visit to a dentist (K11_3_1), Pregnancy related

(K11_4_1), Sanitorium (K11_5_1), Other services (K11_6_1). The aggregated value of these expenditures is named as SUMK11.

m) Expenditure on Transport. Ten expenditure items in this category are included. They are public transport in town (K12_1_1), inter-town transport (K12_2_1), car maintenance and others (K12_3_1), air transport (K12_4_1), railway (K12_5_1), taxis (K12_6_1), spare parts (K12_7_1), penalties, fines (K12_8_1), fuel (K12_9_1), other (K12_10_1). The aggregated value of these expenditures is named as SUMK12.

n) Expenditure on Education. Six expenditure items in this category are included. They are Kindergarten (K13_1_1), Elementary and Secondary (K13_2_1), Technicum (K13_3_1), higher education institute (K13_4_1), private lessons out of school (K13_5_1), and others (K13_6_1). The aggregated value of these expenditures is named as SUMK13.

o) Expenditure on Domestic Animals. Six expenditure items in this category are included. They are food for animals (K14_1_1), veterinary services (K14_2_1), transportation services (K14_3_1), purchase of animals (K14_4_1), insurance of animals (K14_5_1), and others (K14_6_1). The aggregated value of these expenditures is named as SUMK14.

p) Land Expenditures such as for lease of land, pesticides, technical maintenance, hired labor, tax on land, etc. The aggregated value of these expenditures is named as SUMK15.

q) Tourism Expenditures. Five expenditure items in this category are included. They are Hotel expenditures (K16_1_1), camping/travel (K16_2_1), travel abroad/tourism (K16_3_1), Excursions (K16_4_1), and others (K16_5_1). The aggregated value of these expenditures is named as SUMK16.

r) Legal/Bank/Ritual and Other services Expenditures. These include expenditures on notary, weddings, Funeral, legal/bank services, etc. The aggregated value of these expenditures is named as SUMK17.

s) Business expenditures. These include expenditures on lease of premises, equipment maintenance, purchase of raw materials, etc. The aggregated value of these expenditures is named as SUMK18.

APPENDIX C: DOCUMENTATIONS AVAILABLE WITH AHBS 96

The list of documents available with AHBS 1996 include:

- Basic Information document
- AHBS household questionnaire
- Armenia household Budget Survey Diary of Current Expenditures
- Means tables for AHBS data files
- Data dictionary for Household files
- Data dictionary for individual level files
- Data dictionary for diary files
- Household questionnaires in Russian
- Diary questionnaires in Russian

APPENDIX D: COMPARISON OF AGGREGATES FROM DIARY AND RECALL METHODS

As mentioned in the text, the income and expenditure data were collected using two different methods, namely the diary method conducted for a quarter of the sample of (1260 households) and a recall (oral interview) method conducted for the remaining three-fourth. It is worth to mention here that the aggregate variables on income and expenditure derived from these methods are different. For example, a comparison between the average expenditures based on the two methods of data collection reveal the following: The total expenditures for food reported from the diary participants, on average, were about a third higher than those recorded from the interview. For sub groups of food items, the pattern did not hold so strongly: Of the 15 groups (consisting of 1 to 19 items), the diary result was higher and significantly different in 8 cases, lower and significantly different in two cases and not significantly different from the recall method in the other four cases. The same pattern in mean expenditures were observed when the whole sample was divided in to rural and urban areas: The diary estimates for the total food expenditure were 43% higher than that of the recall in the rural areas, and 31% higher in the urban areas. The following table depicts the averages from the two methods by groups. For further discussion, see Grosh, Steele and Temesgen.

Household Monthly food expenditure by item group - recall Vs diary method

Variable	Expenditure Item / Group	All Obs.		URBAN		RURAL	
		Diary	Recall	Diary	Recall	Diary	Recall
ALLA101	A101-Bread and bread products	10,098.02	9052.8	10,926.4	10569.1	8,817.9	6633.2
ALLA102	A102-Meat products	3,552.17	1033.9	3,760.8	1001.8	3,229.7	1085.1
ALLA103	A103-Fish	554.43	1691.2	514.8	1594.9	615.6	1844.8
ALLA104	A104-Milk products, cheese	1,366.57	1438.2	1,680.6	1509.9	881.3	1323.9
ALLA105	A105-Eggs	632.16	396.6	817.9	359.9	345.2	455.0
ALLA106	A106-Butter and melted butter	2,508.27	329.3	2,484.1	392.2	2,545.7	228.9
ALLA107	A107-Fruit	970.91	625.5	1,164.1	755.6	672.4	417.8
ALLA108	A108-Vegetables	981.65	1165.5	1,084.2	1316.5	823.1	924.6
ALLA109	A109-Potato	1,243.28	903.3	1,503.8	760.1	840.7	1131.8
ALLA110	A110-Sugar	1,045.56	326.0	868.2	314.9	1,319.6	343.5
ALLA111	A111-Coffee, Tea	1,107.57	432.5	944.5	566.4	1,359.5	218.9
ALLA112	A112-Cakes, Sweets	849.47	878.6	845.9	815.6	855.0	979.1
ALLA113	A113-Other food products	182.79	123.9	116.1	104.4	285.9	154.9
ALLA200	A200-Drinks (Non Alcohol)	91.32	455.5	65.6	326.2	131.1	661.9
ALLA300	A300-Drinks (Alcohol)	780.40	364.2	489.6	370.9	1,229.8	353.5
ALLHHEXP	Total HH exp. excl. eating out	25,964.58	19,216.87	27,266.55	20,758.42	23,952.47	16,756.95

APPENDIX E: LIST OF PAPERS USING AHBS 1996

- World Bank, Human Development Unit, Country Unit III, Europe and Central Asia Region, “Armenia: Study on Poverty and Social Assistance”, November, 1998.
- Grosh, Margaret and Elena Glinskaya, “ Proxy Means Testing and Social Assistance in Armenia”, The World Bank, March 30, 1997 (Draft).
- Grosh, Steele and Temesgen