Ghana Living Standards Survey (GLSS), 1987-88 and 1988-89

Basic Information

Poverty and Human Resources Division
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Basic Information

1. Overview

As of 1993, Living Standards Measurement Study (LSMS) household surveys have been conducted in 11 countries. The purpose of these surveys is to collect individual, household, and community level data to measure levels and changes in living standards of the population, and to evaluate the effects of various government policies on these indicators of living standards in developing countries.

The Ghana Living Standards Survey (GLSS) was first conducted in 1987-88. This nationwide survey gathered individual and household level data using a multi-purpose household questionnaire. Community level data were collected using a community questionnaire in rural areas and a price questionnaire was used in both urban and rural areas. In 1988-89 the household, community and price questionnaires were repeated. Additional community level data were collected through a health and family planning facilities questionnaire, a pharmacy questionnaire, and a school questionnaire. Additional household and individual level data relevant to education were also collected, including testing of household members' mathematics, reading and abstract thinking skills.

This document describes the GLSS for potential users. Survey content, sample design and fieldwork are outlined in Sections 2 through 4. Section 5 discusses the extent to which the two years of data can be linked for panel use. Constructed data sets that are available are described in Sections 6. Appendix A describes the procedure for obtaining the data. Lists of the data sets and additional documentation are in Appendix B and C, respectively. Appendix D catalogs the research that has been conducted with the GLSS data. The remaining appendices provide details on using the data.

2. Survey Questionnaires

2.1 Household Questionnaire

The household survey contains modules (sections) to collect data on household demographic structure, housing conditions, schooling, health, employment, migration, expenditure and income, household non-agricultural businesses, agricultural activities, fertility and contraceptive use, savings and credit, and anthropometric (height and weight) measures. Half of the households in the 1988-89 phase also participated in the collection of cognitive test scores.

The individual designated by the household members as the household head provided

responses to questions on general household information, or indicated which member would know the answer. If the household head was not available, a member of the household who was able to provide information on household affairs was selected. In most sections of the questionnaire, each member of the household was asked to respond for himself or herself, except that parents were allowed to respond for younger children.

The household questionnaire was completed in two interviews two weeks apart: Sections 0-8, 16A, 17A and 17C were conducted in the first interview.[1] Sections 9-15, 16B and 17B were conducted in the second interview. The survey was designed so that more sensitive issues such as fertility and savings were discussed near the end. The content of each module is briefly described below. For complete details, the questionnaires can be obtained (see Appendix C).

I. FIRST INTERVIEW

Section 0 SURVEY INFORMATION
        0A HOUSEHOLD HEAD AND RESPONDENT INFORMATION
        0B SUMMARY OF SURVEY RESULTS
        0C OBSERVATIONS AND COMMENTS

The date of the interview, the religion and language of the household head, the language used by the respondent and other technical information related to the interview are noted. Section 0B and 0C are only available for 1988-89.

Section 1 HOUSEHOLD MEMBERSHIP
        1A HOUSEHOLD ROSTER
        1B INFORMATION ON PARENTS OF HOUSEHOLD MEMBERS
        1C CHILDREN RESIDING ELSEWHERE

The roster in Section 1A lists the age, sex, marital status and relation to household head of all people who spent the previous night in that household and for other household members. The household head is listed first and receives personal id # 1. Household members were defined to include "all the people who normally live and eat their meals together in this dwelling." Those who were absent more than nine of the last twelve months were excluded, except for the head of the household and infants less than three months old. An historical calendar prepared for the 1984 population census was used to help respondents accurately date births and other long-ago events for which documentation could not be produced.

Information on schooling and occupation for non-resident (including deceased) parents of household members and on the age, sex, and schooling of (currently living) non-resident children of household members were collected in Sections 1B and 1C, respectively.

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[1]Sections 17A, 17B, and 17C apply only to those households in the 1988-89 survey that participated in the collection of cognitive skill test score data.

Section 2 HOUSING
      2A TYPE OF DWELLING
      2B HOUSING EXPENSES

Section 2A contains the type of dwelling and years at current residence. Household expenses, including rent and utilities, source of water, cooking fuel and light, and type of toilet are in Section 2B.

Section 3 SCHOOLING
      3I ATTENDANCE
      3II EXPENSES

In Section 3I, data were collected for each household member 5 years or older on self-reported literacy and numeracy, school attendance, completion and current enrollment. For all individuals who attended school during the past 12 months, data were collected on expenses, scholarships, and distance and travel time to school in Section 3II. The translation of the highest grade completed into the number of years of schooling is provided in Appendix F.

Section 4 HEALTH

Individual members and parents of children were asked to respond to the health questions in Section 4. The respondent reported on at most one illness or injury, if any, sustained in the last four weeks, the type, location and cost of any care sought, and the amount spent in the last twelve months on vaccinations, Maternal and Child Health or other health consultations. Women age 15 and older were asked how many live births they have had.

Section 5 ECONOMIC ACTIVITIES
      5A TIME USE AND JOB SEARCH
      5B MAIN JOB DURING THE PAST SEVEN DAYS
      5C SECONDARY JOB DURING THE PAST SEVEN DAYS
      5D SEARCH FOR ADDITIONAL EMPLOYMENT
      5E MAIN JOB DURING THE PAST TWELVE MONTHS
      5F EMPLOYMENT HISTORY
      5G SECONDARY JOB DURING THE PAST TWELVE MONTHS
      5H OTHER ACTIVITIES

All individuals age seven and older were asked to respond to the economic activity questions in Section 5, beginning with the questions on the nature of their work in the last seven days. For persons that did not work in last seven days, data were collected on job search, reservation wage, and reason for not seeking employment. For work in last seven days, information was collected on hours, length of employment, type of employer, taxes, distance and travel time to work, money and in kind compensation, and benefits. Similar questions were asked on the secondary job in the last seven days. Questions were asked on search for additional employment, including the kind of work sought and the lowest acceptable wage. If main work

in the last twelve months was different from the main or secondary job in the last seven days, the complete set of questions was answered for that work as well. Type of work and years of experience at any work prior to that of the main job in the last twelve months were collected. Again, if there was a secondary job in the last twelve months different from the other jobs, data on work conditions and compensation were collected. Days and hours spent doing household chores were collected for each household member age seven and older.

Section 6   MIGRATION

All household members age seven or older also responded to the questions on migration in Section 6: If not born at current residence, was place of birth a village, town, city, or other? How old were the individuals when they left? What was the main reason for leaving? What was the main reason for coming to the current place of residence? From what region did the person come to the current place, was it a village, town or city? In how many places has the person lived for periods of more than three months in his or her life?

Section 7   RESPONDENTS CHOSEN FOR ROUND TWO (the second interview)

In Section 7, the principal respondent was asked to identify 1) the household member who knows the most about all the agricultural and livestock activities of the household, 2) the household member who shops for food and 3) the household member who knows the most about the other household expenses, income and savings of household members. The respondent was also asked to identify the three most important businesses and trades belonging to the household. Finally, a woman was selected at random from among the women in the household between the ages of 15 and 50 to respond to the fertility module. All these women would then be interviewed in the second round (interview) of the survey.

Section 8   CHARACTERISTICS OF HOUSING

Section 8 notes the construction material of the household's dwelling's walls, flooring, roof and windows, and the floor area in square meters.

Section 9   AGRO-PASTORAL ACTIVITIES   (BEGINNING OF SECOND INTERVIEW)
       9A LAND
       9B CROPS
       9C AGE OF TREE CROPS
       9D FARM INPUTS
       9E SALES OF FOOD PRODUCTS MADE FROM HOMEGROWN CROPS
       9F LIVESTOCK
       9G ANIMAL PRODUCTS
       9H EXTENSION CONTACTS FOR LIVESTOCK
       9I LIVESTOCK EXPENDITURES
       9J HAND TOOLS
       9K FARMING EQUIPMENT

In Section 9 the respondent was the household member identified in Section 7 as the one most knowledgeable about the household's agricultural and pastoral activities. Most questions refer to the past twelve months. Because interviews were conducted throughout the year, the period covered by the prior twelve months differs among households. This also means that crop production (harvest) over that time period may be from the previous agricultural cycle while the inputs may correspond to the current agricultural cycle. Section 9A covers land owned, rented and cultivated by the household, land sales, gifts and trades, and land sharecropped in and out. Section 9B collects information on acreage, production, distribution, loss to pests and market value of 32 crops. Section 9C notes the proportion of tree crops in each of the three categories: 1) too young to produce, 2) in full production, and 3) near the end of productive life. Section 9D surveys farm inputs, including seeds, young plants, fertilizer, manure, herbicides and insecticides, and twine and sacks. Information was collected on the amounts used, costs, and source of credit for purchase. Information on expenses for transport, storage, paid labor, rented animals, fuel, and machinery rental and repair was also collected. Sharecropping in and out, including the proportion of harvest exchanged, were also noted, as was contact with an extension agent.

Section 9E contains information on processing of homegrown crops for sale. Who did the processing? For how many months of the year? How often was it sold? How much was it sold for? How much was spent on tools, transport and labor? Section 9F contains data on the value, sale, consumption and purchase of livestock in the last twelve months. Section 9G asks about the processing for sale of animal products produced by the household, including the value of the amount sold. Contact with animal husbandry or veterinary extension workers in the past twelve months is covered in section 9H. Expenditures on, and source of, supplies and services for livestock are noted in Section 9I. Ownership of hand tools is surveyed in Section 9J. Section 9K surveys ownership, value, sale and purchase of heavier farm machinery including tractors, ploughs, cart, vehicles and draft bullocks.

Section 10 NON-FARM SELF-EMPLOYMENT
        10A WORKING CONDITIONS
        10B EXPENDITURES
        10C REVENUES
        10D BUSINESS ASSETS

Section 10 gathers data on Non-Farm Self-Employment for the three most important enterprises operated by the household. The respondent for each enterprise is the household member most familiar with its operation (as identified in Section 7). Data are gathered on the ownership, number of employees, and type of employee compensation for each enterprise. For each business, expenditures over the last twelve months on wages, raw materials, and taxes are collected. The respondent was asked how much, in money and goods, was received from sales and how much of the enterprise's product was consumed by the household since the first interview. Information on ownership, sales and purchases of assets--buildings, land, vehicles, tools and durable goods-- in the last twelve months is also collected.

Section 11 NON-FOOD EXPENDITURES & INVENTORY OF DURABLE GOODS
       11A DAILY EXPENSES
       11B ANNUAL EXPENSES
       11C INVENTORY OF DURABLE GOODS
       11D EXPENSES FOR REMITTANCES

Section 11 collects information on household expenditures from the household member identified in Section 7 as the one most able to answer non-food expenditure questions. Respondents were asked to recall the amount spent since the first interview (approximately two weeks) on daily expenses such as lottery tickets, cigarettes, soap, personal care products, cooking fuel, matches and candles, and gasoline. Expenditures on other goods, both in the last two weeks and the last twelve months, were collected for shoes, cloth, clothing repairs, public transport, paper supplies, furniture, kitchen equipment, medical services, domestic servants, jewelry, entertainment and other goods (see household questionnaire). Purchase price, length of ownership and resale value of durable goods owned were collected in Section 11C. Relation and location of the recipients of remittances sent out of the household were noted in Section 11D (remittances received by the household are recorded in Section 14A). Susu contributions are recorded in this section as an expense. ("Susu" is a rotating savings scheme in which participants contribute a fixed sum regularly. The total is then allocated among the participants in turn.) Income from susu is recorded in Section 14.

Section 12 FOOD EXPENSES AND HOME PRODUCTION
       12A FOOD EXPENSES
       12B CONSUMPTION OF HOME PRODUCTION

In Section 12A the amounts spent since the first interview (about two weeks) on 60 food items were collected. In addition, questions were asked on the number of months the item was purchased during the past twelve months, the frequency of purchases within a month, and the amount spent each time were collected for the same 60 food items. This allows for a rough calculation of annual expenditure. Section 12B asks the amount consumed and market value of foods grown or raised by the household in the last twelve months.

Section 13 FERTILITY
       13A FERTILITY HISTORY
       13B FAMILY PLANNING

In each household one woman, randomly selected as explained in Section 7, responded to the questions in Section 13. The woman was asked if she had been pregnant and, if so, had she given birth. Women who respond that they have are asked the birth date and sex of all children they have given birth to, including those who did not survive. If the child is not alive the woman is asked how long it survived. The woman is asked about the birth and breastfeeding of her last child, the age at which she started cohabiting, and the number of miscarriages she has had. Section 13B gathers information on knowledge, use, source and cost of six modern and six traditional methods of family planning.

Section 14 OTHER INCOME
      14A INCOME FROM REMITTANCES
      14B MISCELLANEOUS INCOME

Section 14 collects data on money and goods that come into the household as remittances or from other sources such as employee welfare funds, dowries or susu.

Section 15 CREDIT AND SAVING
      15A MONEY AND GOODS LENT AND BORROWED
      15B LOANS CONTRACTED
      15C SAVINGS

Section 15 collects information on the amount of indebtedness of household members to people or institutions outside the household. If money or goods have been borrowed and repaid by any household member in the last twelve months then the details of those loans are collected. Information includes the source and amount of loan, interest, side payments, collateral, repayment schedule, reason for borrowing, and number of loans from the same source. The household is asked to list the location of its savings, if any, including bank, housing saving bank, rural savings bank, foreign currency account, other bank accounts, bonds, stocks and home. The total value of all savings accounts is noted.

Section 16 ANTHROPOMETRICS
      16A ROUND ONE
      16B ROUND TWO

Anthropometric measurements are done for each household member. Section 16A measurements were taken in the Round One interview and Section 16B measurements were taken in the Round Two interview. Data were collected on the household member's sex, date of measurement, weight and height. It was also noted if female respondents were pregnant or breastfeeding. The survey was designed so that 20% of the respondents, including those whose measurements deviated substantially from the norm, would be re-measured and re-weighed in Round Two. Due to a data-entry program error not connected with the accuracy of the data, the majority of respondents were re-weighed and re-measured in the first three months of the first year. The error was subsequently corrected.

Section 17 COGNITIVE SKILLS TESTS (1988-89 ONLY)
      17A ROUND ONE: EASY READING, EASY MATH AND RAVEN TEST SCORES
      17B ROUND TWO: ADVANCED READING AND ADVANCED MATH TEST SCORES
      17C HOUSEHOLD INFORMATION

In the second year (1988-89) approximately one half of the households participated in the Cognitive Skills Tests component of the Household questionnaire. Sections 17A, 17B and 17C were included in the household survey in 85 sampling clusters randomly selected from the entire second year sample of 170 clusters. The clusters included are noted in Appendix I. These

modules contain cognitive skills test score data for household members between the ages of 9 and 55. Section 17A contains scores for the Raven Progressive Matrices test, an easy reading test and an easy math test. All household members age 9 to 55 were given the Raven's test. The easy math and easy reading tests were given to all household members who had at least three years of schooling and were present on the day of the survey. Respondents who scored more than 4 out of 8 on the easy test were given the advanced test during the second round. Section 17B contains those scores. Section 17C contains data on distance, travel time, and transport cost both to the three nearest primary schools and the three nearest middle schools. An explanation of the tests is provided in Glewwe (1991) and Glewwe and Jacoby (1992), listed in Appendix C. The actual reading and math tests are available in the Education Module Questionnaire, also listed in Appendix C.

2.2 Community Questionnaire

A Community questionnaire was administered by the team supervisor and completed with the help of village chiefs, teachers, government officials and health care workers. Supervisors were instructed to conduct interviews for all rural areas and in other areas where agricultural pursuits were followed. The questionnaires were completed for almost all rural, most semi-urban clusters and one urban cluster. (Cluster refers to a group of 16, 32 or 48 households within one geographic area that were surveyed, as explained in Section 3 of this document.) Where the households in one cluster were located in more than one distinct community, questionnaires were completed for each community. In those cases, each community questionnaire contains a list indicating which of the households in that cluster belong to that community. Data were collected on a variety of topics as discussed below.

Section 1 (DEMOGRAPHIC INFORMATION) includes the population of the community, a list of principal ethnic groups and religions, the length of time the community has existed and whether or not it has grown. Section 2 (ECONOMY AND INFRASTRUCTURE) questions include a list of principal economic activities, access to a motorable road, electricity, pipe-borne water, restaurant or food stall, post office, bank, daily market and public transport. There are also questions on employment, migration for jobs, and the existence of community development projects. Section 3 (EDUCATION) asks distance to primary and middle schools. For up to three primary schools, the nearest middle school and the nearest secondary school, information is obtained on whether it is public or private, whether it is for boys or girls, or both, how many classes there are, and when it was built. Enrollment rates and reasons why children do not attend school are also collected. Section 4 (HEALTH) collects data on distance and travel time to the nearest of each of several types of health workers (doctor, nurse, pharmacist, midwife, family planning worker, community health worker, traditional birth attendant and traditional healer) and each type of several types of health facilities (hospital, dispensary, pharmacy, maternity home, health post and family planning clinic). The questions in Section 5 (AGRICULTURE) include the type of crops grown in the community, how often and when they are planted and harvested, and how the harvest is generally sold. This section also includes questions on the availability of an extension center, agricultural cooperatives, and machinery, and

questions on the use of pesticides and irrigation. Qualitative data on the last year's rainfall, the local land market, the prevalence of sharecropping, and agricultural wages in the community are also gathered.

In several sections respondents were asked to list the problems experienced by the community. The responses were noted and codes were assigned after all the questionnaires had been entered. These codes are provided in Section 3 of Appendix G.

In clusters that were surveyed in both years of the GLSS (1987-88 and 1988-89), the community questionnaire was not administered in the second year.

2.3 Price Questionnaire

In principle, a price questionnaire was to be completed for each cluster. Prices from up to three vendors are collected for 28 food, 6 pharmaceutical and 13 other non-food items. The items were selected because they are important in most household budgets and because they are usually available in most areas of the country. Weighing scales were used to determine the exact weight of food items.

In clusters that contained more than one locality, a questionnaire was completed for the market closest to each locality. The price questionnaire was administered in both years to half of the clusters that were surveyed in both 1987-88 and 1988-89.

2.4 Health and Family Planning Facilities Questionnaire

In order to examine the effect of the quality and availability of health and family planning services near the household, health facility and pharmacy surveys were conducted by the Africa Technical Department with funds from the Netherlands Trust Fund. In December, 1989, shortly after completion of the household survey, health facilities and pharmacies were surveyed for all clusters in the 1988-89 sample. Interview teams were instructed to survey the nearest health facility to each cluster, the nearest public health facility (if the nearest is private), and the nearest source of family planning (if not available at the nearest health facility or the nearest public health facility). In the event that a public and a private facility are equal distance from the community, then the private facility should be interviewed as the nearest health facility and the public facility would be interviewed as the nearest public facility. In rural areas, the community questionnaires were consulted to determine the nearest facility. In urban areas the facilities nearest to the central point of the cluster were surveyed. All health facilities and family planning clinics were surveyed with the same questionnaire. The health facility survey covered 231 health facilities.

The Health and Family Planning Services Questionnaire begins by asking whether the facility is a clinic, a health post, a maternity home or a hospital. Section I (CHARACTERISTICS OF THE FACILITY) includes the age of the oldest building, availability of electricity, water, and a refrigerator, an operating room and a laboratory. Data on the amount charged for lab tests were

collected. Section II (SERVICES) collects information on the services that are offered at that facility. Days and hours of availability and the amount charged for service were collected for out-patient consultations, deliveries, prenatal consultations, postnatal consultations, well-baby clinics, and programs for malnourished children. In Section III (IMMUNIZATIONS), availability and cost data were collected for BCG, DPT, Tetanus, Measles, Yellow fever, Meningitis, and Polio. Section IV (PERSONNEL) collects information on the number of people currently employed, at work at the time of the survey, and at work in the last 24 hours for twelve job categories from medical doctor to laborers. Section V (BEDS) notes availability, occupancy and charge for beds, private rooms and food.[2] Section VI (EQUIPMENT) asks about the number and type of vehicles owned (and the number in working condition), and the presence of air conditioners and fans. Section VII (DRUG SUPPLY) asks, for 17 drugs, if the drug is now in stock, how is it dispensed, the price to patients and how long the most recent stock lasted before it was depleted. Anti-malarials, aspirin, vitamins, ampicillin and valium are included. This section also includes questions on drug restocking, when the busy times of the day, week and year are and whether credit or exemptions are extended to patients who can not pay. Section VIII (FAMILY PLANNING) is completed for facilities where methods or consultations are available. Questions are asked about hours of operation and the cost of a family planning consultation. For each of six methods (condoms, spermicide, pills, IUD, diaphragm and injection), facilities were asked: 1) if the method is offered; 2) if it is available the day of the interview; and 3) the amount that clients are charged. Information was gathered on the age, sex, number of children and training of up to five family planning workers.

The purpose of collecting the facility data was to measure household and individual access to health services. Because of this, the facilities surveyed are not a random sample of the health facilities in Ghana. The survey is also not a blanket survey of the facilities in the clusters. The data are designed to measure price, availability and quality of the nearest services available to households, but not to generate national or regional statistics on health services. Facilities in rural and less-populated areas are over-represented in this sample of 237 facilities. If the nearest facility was public and offered family planning then only one facility was surveyed for that cluster. If, on the other hand, the nearest facility was private and neither the nearest private nor the nearest public facility offered family planning, then three facilities were to have been surveyed for that cluster. In no case were more than three facilities surveyed regardless of the number of facilities in the cluster.

2.5 Drugstores, Pharmacies and Drug Vendors Questionnaire

The pharmacy questionnaire is very similar to the health facility questionnaire. The nearest source of drugs other than health facilities (drugstore, pharmacy, chemical seller, or market vendor of drugs) to each cluster was surveyed. Data were collected on type of facility,

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[2]The survey supervisor suggests that number of beds may be a more useful indicator of category of facility than the clinic/health post distinction mentioned above. (See notes distributed with the health services questionnaire.)

year it opened, availability of electricity and refrigeration, hours of operation, and presence of a qualified pharmacist. Respondents were asked if they usually offer, have in stock, and charge for eight immunizations, six methods of contraception, and the same 17 drugs as the health facilities. As with the health facility survey, this is not a random sample of pharmacies in the country nor is it a blanket survey of all pharmacies in selected areas. The survey covered 169 drugstores, pharmacies and drug vendors.

2.6 School Questionnaire

The 1988-89 GLSS included a survey of schools. For each of the randomly-selected clusters in which cognitive skills tests were administered (see the description of module 17A in Section 2.1 above), each primary and middle school in the cluster was surveyed. For clusters without a primary or middle school, the nearest school of each type outside the cluster was surveyed. In urban areas, where the number of schools is often rather large, schools that were neither the closest school to any surveyed household nor attended by any individual in any surveyed household may have been missed.

Section I (SCHOOL CHARACTERISTICS) asks whether the school is public, private secular or private religious. Data are gathered on the physical size and overall condition of the school, quality of blackboards, availability of chalk, textbooks, desks, teacher accommodations and visits from school inspectors. Section II (ENROLLMENT) notes the number of classes, number of students, number of girls, and number of repeaters for each grade. There are also questions on enrollment criteria and number of students who have completed and continued. Section III (SCHOOL STAFF) gathers information on occupation, schooling and training, and outside jobs for all school employees. Section IV (EXPENDITURES ON SCHOOLING) collects information on fees and school-related expenses for students at that school. Section V (OBSERVATIONS) asks the respondent to comment on important problems with education and staff at that school and provides room for the interviewer to note observations. The Middle/Junior Secondary School questionnaire is very similar except that the grades and the completion questions have been adjusted appropriately.

Like the health facility survey, this is not a national survey of schools. It is a blanket survey of all schools in the randomly-selected clusters (with the exception in urban areas noted above). However, clusters were selected to accurately reflect population distribution, not school distribution. (Cluster selection is described in Section 3.1 below.) Schools in areas with lower school/population ratios are expected to be over-sampled. Again, the data provide measurements of the quality of schooling facilities available to the sample of the population and they will not necessarily provide accurate measures of average school quality.

3. Sample

3.1 Sample Design

The methodology that was chosen reflects the purpose of the survey. To balance the desire for a large, representative sample with the expense of a long, detailed survey instrument, a sample size of 3,200 households was selected. The households were to be chosen in such a manner that each household had an equal probability of being selected. At the same time, the logistics of locating the households and conducting all interviews within a specific time frame required that the households be grouped into "workloads" of 16 households each. A final concern was that all three of the country's ecological zones (coastal, forest and savannah), and each of urban, semi-urban and rural areas (population greater than 5000, 1500 to 5000, and less than 1500, respectively) form the same proportion in the sample as they do in the national population.

To achieve the three objectives simultaneously, a stratified selection process was used. For the 1984 Census, all of Ghana was divided into approximately 13,000 enumeration areas (EAs). From this list it was determined what proportion of the 200 GLSS workloads should be selected from each of the nine zone/urban categories. Two hundred sampling areas were then selected from the enumeration areas in the sub-divided list. For each enumeration area, the probability of being selected was proportional to the number of households contained in that area.

After the 200 sampling areas were selected, households in those areas were enumerated in 1987. Therefore it was possible to take into account changes in the number of households and preserve the self-weighting nature of the sample. The 200 workloads were assigned among the 200 sampling areas with probability equal to the number of households in that area in 1987 divided by the number of households in that area in 1984 and multiplied by the total number of households in 1984 divided by the total number of households in 1987. That is, sampling areas that had greater than average increases in size had a greater than one chance of being selected. Thus, each sampling area was assigned zero, one, two, or even three workloads of sixteen households. The households (sixteen selected and four replacement for each workload) were then chosen randomly from the household list for each sampling area. The resulting list is 3200 households and 800 replacement households in something less than 200 sampling areas (specifically 178 in 1987-88 and 170 in 1988-89). Each group of 16, 32 or 48 households within a sampling area is referred to as a cluster in the GLSS data sets and in this document.

Following the same households over time is important for evaluating changes in living standards, even though each interview is time-consuming and repeated visits to the same household begin to represent a substantial burden. On the other hand, replacing households increases the representative nature of the data. To balance these competing concerns, the survey was designed to be a rotating panel. Each year, half of the sampling areas would be retained and half replaced. Within the retained sampling areas, the same households would be interviewed

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for the two years. Scott and Amenuvegbe, (1989), listed in Appendix C, provide a detailed description of the sample design.

3.2 Implementation

The attached maps show the location and cluster number of all first and second year clusters. Where community, health facility and education data were collected, is noted as well.

Table 1 shows the sample size of the resulting data sets. The 1987-88 survey contained 176 clusters, 3,136 households and 15,492 individuals. Two of the planned clusters of 16 households each, 1020 and 1167, were not surveyed due to an automobile accident involving the team that was to undertake the work. Questionnaires were incomplete for 32 households that have been excluded. In the 1987-88 survey, only one household refused to participate. Approximately 4%, 123, could not be located and had to be replaced. The 1988-89 data contain 170 clusters, 3,192 households and 14,924 individuals. All intended clusters were surveyed, and only eight households were missed.

Table 1. Sample Size, Ghana Living Standards Survey

Household Survey	1987-88		1988-89	
	Planned	Actual	Planned	Actual
Clusters	178	176	170	170
Households	3,200	3,136	3,200	3,192
Individuals	NA	15,492	NA	14,924
Household Members	NA	15,071	NA	14,435
Other Surveys				
Communities		137 (102)		86 (71)
Health Facilities		0		231
Pharmacies		0		169
Primary Schools		0		286
Middle Schools		0		233
Test Scores, Ind.		0		3,174

Table 1a. Survey Coverage
Number of Clusters in Household, Community, and Price Surveys by Region

	Year1			Year2			Year1 clusters which can be used to augment Year2 data	
	Number of Clusters			Number of Clusters			Number of Clusters	
	Household	Comm	Price	Household	Comm	Price	Comm	Price
Urban	65	3	62	56	0	38	25	12
Semi-Urban	35	26	33	31	16	23	11	7
Rural	76	73	70	83	55	47	26	27
Total	176	102	165	170	71	108	62	46

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Community questionnaires were administered in 102 of the 176 1987-88 clusters. Because some clusters contained more than one distinct community, a total of 137 communities were surveyed in the first year. Six clusters designated as rural do not have community questionnaires: 2038, 1012, 2310, 1085=2337, 1099=2393, 1179. The 1988-89 data contain 86 community questionnaires that cover 71 of the clusters but all of these were simply copies of the 1987-88 questionnaire. Price questionnaires were completed in 165 clusters the first year and 108 clusters the second year. Health facility surveys were completed for all but two second year clusters. A total of 237 health and family planning facilities were surveyed. Questionnaires were completed for 169 pharmacies, drug stores and drug vendors. No pharmacy was surveyed in two of the second year clusters. The school questionnaire was administered to 286 primary schools and 233 middle schools located in 85 clusters.

NOTE: In the second year, interview teams conducted "practice" interviews in ten clusters that were not part of the original sample. Many of these interviews are incomplete and no health facility surveys were conducted in the clusters. They have been excluded from the data sets that are currently available. They may have been included in data sets previously released. All data from second year clusters 174, 177, 190, 209, 233, 238, 246, 685, 789, and 790 should be excluded from any research done with the data. Their inclusion would compromise the randomly-selected nature of the sample.

4. Organization of the Survey

4.1 Survey Management

The GLSS was managed by a seven member Project Directorate headquartered in Accra. The directorate consisted of a Project Director, an Assistant Project Director, three Project Managers (for field work, anthropometrics, and data entry and processing) and two Project Assistants (for administration and data preparation). The directorate was responsible for ensuring the smooth implementation of the survey, including purchases and making of all necessary contacts.

In each year, the survey was conducted by 10 six member teams. Each team included 2 household interviewers, one anthropometrist, one data-entry operator (with a personal computer), one driver (with a Land Rover) and one supervisor. In 1988-89 five test administrators were added, one each to five teams, as explained below. The teams were based in the eight regional offices of the Ghana Statistical Service; two teams each were based in Accra and Kumasi, with others at Cape Coast, Ho, Koforidua, Sekondi, Sunyani and Tamale. The field work was decentralized with guidance from the central office. Data entry was decentralized for the first time in Ghana's survey history. This made an important contribution to the accuracy and efficiency of the data collection and processing. To minimize the disadvantages of the decentralized system, all ten teams were brought together for refresher training sessions, during which experiences were shared to ensure that the teams worked as efficiently as possible towards

the same objective.

4.2 Training and Field Test

The questionnaire was field-tested in March, 1987. The test was not extensive because a very similar questionnaire had been used in neighboring Côte d'Ivoire in 1986-87 and most of the bugs had been worked out. A five-week training for interview teams was conducted between late July and early September in 1987. Paul Glewwe (World Bank) assisted both the field test and the training.

4.3 Organization of Fieldwork

One to two weeks before the team arrived in an urban "workload" for interviewing, the supervisor sent out letters to inform the heads of households of the team's date of arrival in the community and possible date of visit to the household. The supervisor then visited each household. In rural areas the letter was sent to the local chief or regent. The weekend before the survey the team paid a courtesy call to the chief/regent and other prominent members of the community to explain the objectives of the survey, introduce the team members and discuss the survey schedule for the week. The supervisor could use the occasion to administer the community questionnaire. After this meeting the interviewers contacted the households to introduce themselves, explain the purposes of the survey and to make appointments for interviews.

These visits were not necessary in urban areas because household heads would have received the letters and visits from the supervisors. In rural areas these pre-survey field preparations were necessary to ensure that all the selected households could be easily located, and to establish the necessary rapport. The supervisor enlisted the help of the community leaders in locating households and in persuading reluctant households to participate.

The household survey was conducted in two interviews. Round 1 covered Sections 0 through 8 and Round 2 covered Sections 9-17. The interview for each of the two rounds of the household questionnaire were expected to take 2-3 hours. Each team conducted 32 complete interviews in each four week period, 16 for each of the two interviewers. Round one was conducted in one cluster the first week. Then the team moved to a second cluster for the second week. The third week, the team returned to conduct Round Two of the household interviews in the first cluster. The second round was completed in the second cluster in week four.

The data entry was decentralized. Responses from all household questionnaires were entered in regional offices in the week between the two rounds of interviews. The data entry program performed range and consistency checks on all responses and produced lists of questions that needed to be readministered for each household in the cluster. This allowed for correction of first interview discrepancies during the second round. Each team conducted both rounds of interviews, entered the responses for 32 households, and had one week off in each five week

period.

The supervisor was responsible for administering the community questionnaire. The supervisor also sat in on some interviews and randomly revisited 25 percent of the households to verify the answers to some key questions to provide quality control. A complete list of reinterview questions can be found in the Supervisor's Instruction Manual (Appendix C). The Anthropometrist performed the anthropometry (Section 16 of the household questionnaire) and conducted the price survey. In the second year, a test administrator was added to the team to conduct the cognitive skills tests (Section 17 of the household questionnaire) and to administer the school surveys.

Table 2 presents the language of the interview. If no one in the household spoke English and if no member of the team spoke the language of the household, then the household was asked to choose someone known to them who spoke and understood English to translate. If the household could not name anyone, then the chief was asked to designate someone.

Table 2. Language of Interview

	Year 1	Year 2
English	495	391
Akan	1794	1955
Ewe	273	367
Ga	210	182
Dagbani	97	44
Hausa	31	9
Nzema	1	-
Other	234	242
Total	3135	3190
Interpreter Required	424	292

Year one household, community and price questionnaires were administered from September 20, 1987 to August 27, 1988. In the second year, the household, community, price and schooling questionnaires were administered from October 2, 1988 to August 29, 1989.

School facility and tests were administered at the same time as the household survey in half of the 1988-89 clusters. Five test administrators and five alternates were trained. The five administrators were distributed among the ten interview teams so that all regions of the country were included. School facility and test score surveys were directed by Paul Glewwe (World Bank) and Wendy Addae (consultant).

In late 1989, health facilities and pharmacies were surveyed by ten teams of two interviewers each. Training, questionnaire testing, and surveying were conducted in November and December, 1989. Martha Ainsworth (World Bank) and Wendy Addae (consultant) were responsible for the direction and supervision of the Health Facility and Pharmacy Surveys.

5. Using the Data

It is strongly recommended that the data be used <u>with</u> the questionnaires. The questionnaires contain the exact wording of the questions and interviewer instructions. The interviewer was to read out only the things written in lower case. Upper case print was for instructions. Sometimes the list of responses was to be read to the respondent but more often the interviewer was simply to code the response given. The questionnaire is also useful in interpreting the codes. All codes, except the industry and occupation codes used in Sections 05 and 07, are contained in the questionnaire itself. The industry and occupation codes are listed in Appendix G. For more details, see interviewer and supervisor manuals.

The most important reason to consult the questionnaire is that extensive use is made of skip patterns. This was desirable to maximize the ease with which the interview could be conducted and to include all questions that applied to a particular household or individual but exclude those that were not relevant to a particular respondent or household. The researcher must be aware of these skip patterns so that the data are properly interpreted. The skip patterns are in most cases clear. If there is no instruction the next question should be asked regardless of the response. An arrow followed by a number in parentheses (e.g. (▸4)) after a particular response indicates which question should be asked if that reply is given. This implies skipping over other questions. An arrow with a number in a rectangle indicates which question to ask next regardless of the response. The skip codes are explained in detail in the Interviewer Manual. Copies of all questionnaires and the Interviewer Manual are available from the World Bank, see Appendix C.

The 1987-88 and 1988-89 household data are available, to those who have received permission for use, in data sets that correspond to sections of the questionnaire. A complete list of data sets is provided in Appendix B. The data sets are available in SAS portable (version 5), STATA (version 2.1), and ASCII files. They are distributed in compressed form and each diskette contains the pkunzip program necessary to uncompress them. The SAS and STATA files contain variable labels for most variables. Each ASCII file contains a dictionary file that explains the contents and format of the variables in that data set. FORMAT.ZIP is a complete listing of the SAS format statements. The questionnaire is especially useful for interpreting the health facility, pharmacy, and school data because all variables are named only by section and question number in the case of health facilities and pharmacies, and only by box number in the case of the school questionnaires.

The next section describes problems with the data and the expected impact of those problems on use of the data. Sections 5.2 through 5.7 describe procedures for linking the various data sets, including the creation of panel data.

5.1 Data Problems

In general, the data are of good quality. The questionnaires are almost entirely pre-coded to eliminate the coding process, which is often a source of various types of error. Also the decentralized data entry allowed for immediate follow-up on inconsistencies that were detected by the data entry program when data were entered from the first round of the household survey. There are, however, some weaknesses in the data. These are listed here and discussed in more detail below. Basically, the impact of each problem is to reduce the sample size and possibly to distort the randomly-selected nature of the sample.

1. Community questionnaires not completed. Community questionnaires are not available for the following clusters that are identified as being rural: 1012, 2038, 2310, 1085=2337, 1099=2393, 1179.

2. Price questionnaires not completed. Price questionnaires were administered and are coded for 164 of 176 first year clusters. Price data are available in the second year for three first year clusters: 1049, 1093, and 1099. There are no price data available for nine first year clusters: 1012, 1096, 1118=2469, 1147, 1159, 1175, 1181, 1183, 1191.

Price questionnaires were administered and are coded for 107 of the 170 second year clusters and price data are available from the first year for 43 additional clusters. There are no price data for 20 of the second year clusters: 2014, 2078, 2094, 2134, 2169, 2217, 2262, 2294, 2302, 2326, 2366, 2374, 2382, 2469, 2582, 2622, 2646, 2678, 2742, 2774.

2. Community and Price questionnaires not completed for both years. The community questionnaire was administered in none of the 86 resurveyed clusters. The second year data set contains community data for some of these clusters but it was simply copied from the first year questionnaires.

For clusters included in both years, price questionnaires were only administered in the second year for three of the first year clusters and only in the first year for 43 clusters. Use of the community and price variables collected in the first year requires the assumption that prices and community characteristics did not change substantially between the two surveys.

3. The procedure for matching households to community questionnaires in clusters with more than one community is slightly complicated. In sampling clusters that contained more than one community, multiple community and price questionnaires exist and the community questionnaires are often lacking the list of households necessary to make an easy link. This problem is not expected to have an important impact on the quality of the data. It means that linking households to the communities requires some thought. The linking procedure is described in Section 5.4 and linking files constructed by World Bank

researchers are available.

4. The procedure for matching individuals and households in the panel data did not work well. This issue is discussed in greater detail in Section 5.3 below. Because of difficulty in matching households and because of the high degree of change within households, the number of individuals that can be linked in both years is about half of what was intended.

5. In the special Education module implemented in half of the 1988-89 clusters, some students in the households could not be matched to the schools they attended and so only characteristics of nearest schools (not necessarily the school attended) are available. Raven, reading and math test scores are only available for 50%, 22% and 32% of the individuals in the households, respectively. The cognitive skills tests were only administered to individuals between the ages of 9 and 55 and, of them, 81% took the Raven test. The reading and math tests were further restricted to individuals with at least three years of schooling.

Some specific corrections that have been identified are listed in Appendix H. Most concern the Section 13 (Fertility) and the health facility data.

5.2 Linking Parts of the Household Survey

As presented in Section 2 and Appendix B, the household survey data is in 77 separate data sets. Each cluster has a four digit id number: CLUST = Year*1000 + cluster number where Year =1 for 1987-88 and Year=2 for 1988-89. Each household has a two digit number for identification within the cluster and a unique six digit id number constructed: HID = CLUST*100 + Household ID. Each individual has a two digit id code within the household and a unique eight digit person id can be constructed: PID = HID*100 + personal id.

A child in the household can be linked to the parents, if the parents are part of the household through the id codes in Section 01B. For parents who are not in the household, information is collected on the parent's schooling, main occupation and whether he/she is currently alive are known. Household members can be linked with their non-resident children through the id codes in Section 01C. The woman chosen for the fertility section can be linked to the children living with her in the household through the id codes in Section 13A1B. There is no code to link the children in her fertility roster who are not living in the household with the non-resident children in Section 01C, though most can be linked by comparing age, sex and mother's id.

5.3 Linking 1987-88 and 1988-89 Data sets

Cluster numbers in the 1987-88 range from 1 to 200. In the second year almost all resurveyed clusters were renumbered with cluster numbers ranging from 1 to 798. To insure that the cluster number is unique, the four digit code with the year as the first digit should be used.

The complete list of cluster names with the year 1 and year 2 cluster numbers is listed in Appendix I and is available on diskette in CLYR1YR2 as listed in Appendix B. It is very important to use this list for linking purposes. For example, cluster 1 in the first year does correspond to cluster 1 in the second year but cluster 25 in year one corresponds to cluster 97 (not 25) in year two even though there is a cluster 25 in the second year. The renumbering appears to have been done for purposes of more internal consistency with a broader sampling frame within the Ghana Statistical Service. The confusion caused should be minimal if the researcher makes use of the list in Appendix I.

The ability to use the GLSS data as a panel data set is severely limited. In principle, data should be available to construct a panel data set of roughly half of the clusters /households/individuals because the same household should have been interviewed in each year. However, three factors make this extremely difficult. The first is that though households should retain the same number in both years this often was not the case. For the clusters resurveyed in 1988-89, there is no indication on the 1988-89 questionnaire of whether or not the household participated in the 1987-88 round. Several household numbers used in the first year were not used in the second year. It is not clear if the households were not found, not interviewed, or re-interviewed with different numbers.

The second difficulty is that within households, personal id codes were not maintained. The household head should be listed first in each case but even this does not guarantee that the two individuals are the same person. The severity of the second difficulty is confounded by the third factor, intra-household mobility. Ghanaian households, the people that eat meals regularly together, are very fluid entities. Nieces and nephews often travel to attend school and for other reasons.[3] Even a dwelling that contained the same household may not contain the same members.

In spite of these difficulties, a surprisingly large number of individuals have been linked for use as a panel data set. Individuals and households must be matched almost manually by age and sex. A researcher at the World Bank compared respondent names (no longer available in the data sets) within clusters to link households and then linked individuals by comparing age and sex. PANELC contains first and second year household and personal id codes of 3,370 individuals in 741 households that were surveyed in both years. The entire list of individual names were not available for this exercise. It is possible that household by household comparison would yield more matches.

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[3]The survey itself provides evidence of this. Of the individuals under 20, 58% have fathers living elsewhere and 43% have mothers living elsewhere and the non-resident children roster contains 3504 children of household members who are living elsewhere and who are less than 21 years of age.

Table 3. Frequency of Time Lapsed Between First Year and Second Year Interviews

Months	Number of Clusters		Months	Number of Clusters
2	1		13	9
3	2		14	3
4	1		15	8
5	4		16	4
6	4		17	7
7	0		18	7
8	6		19	0
9	5		20	3
10	9		21	0
11	5		22	0
12	4		23	1

There is an additional problem, however. Because of a lapse of supervision of the survey, the timing of the first year interviews was not carried forward into the second year and the panel nature of the data is thus compromised further. The panel observations actually measure anywhere from two months to twenty-three months of change. Table 3 presents the frequency of the interval between interviews for resurveyed clusters. Half of the clusters were resurveyed within 9-15 months of the first survey, and 80% within 8-18 months.

5.4 Linking the Household to the Community Data

Linking the household to the community data can be done, but it is not straightforward. Community questionnaires were not completed for urban areas, so some clusters will have no community questionnaire. Of the 57 non-urban resurveyed (panel) clusters, data from first year community questionnaire for 21 clusters were copied into the second year data set. For the rest of the resurveyed clusters, in order to link a second year household with the community data, first the second year cluster number must be linked to the first year cluster number and then to the appropriate community data. Finally, many sampling clusters contain more than one distinct community. For these clusters a community questionnaire was completed for each community. Each community questionnaire contains a list of ids of the households in that cluster that correspond to that community. So that other researchers need not duplicate the tedious linking process, the World Bank provides the results of its linking file, HHCOMM that contains a list of household id, the cluster number, the community number (see Section 6.6 below).

5.5 Linking to the Price Data

Each record in the price data set contains the price and quantity of one item purchased from up to three vendors in the cluster. Price data were to be collected at markets in each locality in each cluster. However, it was found to be the case that even where there was more than one locality, all households did most of their marketing in one market. In fact, in several cases, one market served more than one cluster. And regional variation in prices was found to be

insignificant so it is possible that the inability to completely account for the very local variation does not represent an important weakness. (Glewwe and Twum-Baah, 1991.)

For the clusters included in both years, data for three first year clusters must be retrieved from the second year data set and data for 43 second year clusters are only available in the first year data set. Appendix E indicates the assumption of price stability over time is not justified. If relative prices between regions remain constant then first year prices can be adjusted. No price data are available for 28 of the total 266 clusters.

5.6 Linking the Household to the Health Facility and Pharmacy Data

Each facility in the health facility survey has a unique four digit id that is built in the following fashion: ID = REGION*1000 + TEAM*100 + FACILITY. Appendix I provides a complete list of clusters with the facility id for the nearest public health facility, the nearest health facility and the nearest health facility offering family planning and the distance to each facility. The corresponding data set, CLHLTH, can be used to link the individual or household data to the facilities. **Cluster 17 in the health facility data corresponds to cluster 5 in the household data and cluster 434 in the health data corresponds to cluster 454 in the household survey.** These corrections have been taken into account in this list. All other cluster numbers in the health facilities data set correspond to the second year cluster numbers. All surveyed health facilities are listed in Appendix J.

For pharmacies, this link is very straightforward. For every regular cluster in the second year survey there is one pharmacy in the pharmacy data set. Using the data set DRUG, create a facility id code: DRUG_ID = REGION * 1000 + TEAM * 100 + FACILITY.

5.7 Linking the Households to the School Data

As described in Section 2, the local primary or middle school attended by each child, (currently or in the last five years) is noted in Section 17A of the household questionnaire. In Section 17C, each household was asked to identify the nearest primary and middle schools (up to three each). A master list of schools was kept for each cluster and each school that was mentioned in either Section 17A or 17C was given a school code and then an attempt was made to administer the school questionnaire at each of those schools. The cluster number together with the code in Section 17C or 17A will uniquely identify the school in the data set PSCHOOL or MSCHOOL.

6. Constructed Data Sets

Researchers at the World Bank have created several data sets that combine various sections of the questionnaires in ways they have found to be especially useful. To increase the facility with which the data can be used by other researchers, these data sets are being made

available with the raw data sets. These constructed data sets are made available for general use with the understanding that the description below is the only documentation that will be provided. Any manipulation of the data requires assumptions to be made and, to the extent possible, those assumptions are explained below. Except where noted, the data sets have been created using only the raw data sets. A researcher could construct similar data sets incorporating different assumptions.

6.1 Aggregate Expenditure, EXPEND

The data sets EXPEND, one for each year, contain variables for all household expenditure items in the household questionnaire. All expenditures are in cedis, the Ghanaian currency. The 1988 cedi exchange rate was 188 cedis = 1USD. All expenditure has been calculated on an annual basis. No price inflation adjustment has been made to any of the variables. Annual price inflation was 31% during the period of the 1987-88 survey and 24% during the 1988-89 survey. The national Ghanaian price index provided by the Ghana Statistical Service is in Appendix E. The variables in the EXPEND data set are:

SIZE is the number of household members (non-member individuals are not counted) listed in Section 01A for calculating per capita values.

PFOOD is the total amount spent on all food items in the last year calculated from the answers to questions 4-6 in Section 12A (not from the two week estimate).

HPFOOD is the value of home produced food consumed in the last year calculated from Section 12B.

FOODEXP is the sum of PFOOD and HPFOOD.

RENTYR is the value in cash and kind of annual rent paid for the household calculated from Section 02B. It is only available for renters.

MORTYR is the annual value of the mortgage payment for all owner-occupied housing.

RENTVYR is the owner's estimate of the annual rental value of the dwelling.

IMPRENT is calculated for all households based on physical characteristics and location of the dwelling (type of wall, floor, roof, window, number of rooms, type of residence, type of latrine, rural, semi-urban, coastal, savannah and per capita expenditure from Sections 02A, 02B and 08) using coefficients from a regression of the log of RENTVYR of owner-occupied dwellings on those same characteristics.

WATERYR is the annual payments for water adjusted down for the fraction of water sold.

GARBYR is the annual payment for garbage disposal.

ELECYR is the annual payment for electricity.

EXPSCHL sums the annual school-related expenses (A,C,E,F and G in Section 03II) for all household members.

EXP101-EXP109 are calculated by multiplying the two week amounts in Section 11A by 26. (Not available for GLSS2.)

NFOODA is the sum of items 102 to 109 (lottery tickets are excluded).

EXP115-EXP145 are the annual expenditure estimates provided in Section 11B. (Not available for GLSS2.)

NFOODB is the sum of EXP115 to EXP144. Losses, EXP145, are not included.

EXPEMPL is the value of employee benefits from Section 05B for all household members.

DURSERV is an estimate of the annual service value of the durable goods owned by the household reported in Section 11C. It is calculated from the current value of each durable good using depreciation rates that are calculated from the entire sample. The values of all goods owned are then summed for each household.

TOTALEXP is PFOOD + HPFOOD + NFOODA + NFOODB + WATERYR + GARBYR
    + ELECYR + EXPSCHL + EXPEMPL + IMPRENT + DURSERV.

MO2 and YR2 are the month and year of the second interview.

Consumption and expenditure aggregates were also created by Jeffrey Round and Andrew McKay at University of Warwick in England. These variables are not currently available from the World Bank.

6.2 Price Data, PRICE

Each record in PRICE corresponds to one item in one cluster. The prices, quantities, and date of interview are recorded from the questionnaire. Unit prices and an average real price have been calculated. The appropriate national monthly price index and the location of the cluster have been included.

CLUST is the three digit cluster number.

ITEMNO is the item number as listed on the questionnaire.

MOINT, YRINT are the month and year of the price interview, they may not correspond to the date of the household interview.

PRICE1, PRICE2, PRICE3 are the prices charged for the item.

QUAN1, QUAN2, QUAN3 are the quantities that correspond to the three prices.

PRICE1U, PRICE2U, PRICE3U is the unit price= PRICE1/QUAN1, PRICE2/QUAN2,...

DEFL is the price index (Appendix E) that corresponds to the month and year of interview.

PRICE is the real price, the straight average of PRICE1U, PRICE2U, and PRICE3U divided by DEFL.

TYPRES is the location of the cluster (1=Accra/Tema 2=Other Urban Coast 3=Rural Coast 4=Urban Forest 5=Rural Forest 6=Urban Savannah 7=Rural Savannah).

6.3 Household and Household Head Characteristics, HEAD

LANGHD is the primary language of the household head from Section 00A.

RELIGION of the household head from Section 00A

AGEHD, SEXHD, NATHD and GRADEHD are from sections 01A and 03I.

EMPLOYER (1=government 2=state owned 3=private 4=self employed 5=unemployed) is the type of employment in the last year derived from all parts of Section 05.

EMPST (1=too old/retired 2=unemployed 3=other reasons for not working 4=cocoa farmer 5=other farmer 6=sales/service 7=white collar 8=ind/prod/craft) is derived from Sections 05 and 09B.

DWATER, LIGHT and TOILET report the source of drinking water and light, and type of toilet from Section 02B.

6.4 Panel Data Set, PANELC

PANELC contains the id codes for the individuals linked by researchers at the World Bank as described in Section 5.3 above. It contains 3,370 individuals.

HID1 is the six digit household id code from 1987-88.

PID1 is the two digit personal id code from 1987-88.

HID2 is the six digit household id code from 1988-89.

PID2 is the two digit personal id code from 1988-89.

6.5 Height for Age, Weight for Age and Height for Weight, ZSCORE

ZSCORE contains Z-scores derived from the anthropometric measures from sections 16A and 16B. When measurements were made in both rounds and did not match and when age or sex in round one and round two did not match, a judgement was made as to which to use. A Z-score was then calculated by comparing the height and weight of the individual to averages for US children using the CASP software. All children under 10 years are included in the ZSCORE data set for 1987-88. The data set has only been constructed for the children under age 10 in the half of the 1988-89 sample that participated in the school and cognitive skill test components, ZSCOREH. Anthropometric measurements for all household members are available in Sections 16A and 16B.

6.6 Household to Community Link, HHCOMM

HHCOMM contains the six digit household id, HID, the corresponding first or second year four digit cluster number, CLUST, and the number of the community within the cluster, NO_CLST. Household data can be linked to the community data through HID in the household data sets and CLUST and NO_CLST in the COMM data sets. The cluster number in the COMM data sets is only the three digit cluster number. In order to perform the merge, the four digit cluster number has to be created (using year 1 or 2 as the first digit).

As with the other constructed data sets, this is provided only for the researcher's convenience, it is possible to do the linking without it. Also, as with other constructed data sets, this one contains certain assumptions that the researcher may wish to resolve differently. In this case, where there was more than one community questionnaire but the list of household ids was missing, all households in the cluster were assigned to the first community. The same decision was made where households in the second year were not contained in the list of the first year households, all were assigned to the first community.

6.7 1987-88 to 1988-89 Cluster Link, CLYR1YR2

CLYR1YR2 contains CLYR1 and CLYR2, two four digit cluster numbers. When the cluster was resurveyed, the two numbers are contained in the same record.

6.8 Cluster to Health Facility Link, CLHLTH

A unique id code for each facility can be created in the health data set: ID=REGION*1000+ TEAM*100 + FACILITY. The data set CLHLTH contains, for each cluster the ID of the nearest health facility, the nearest health facility offering family planning and the nearest public health facility. Some facilities are the nearest facility for more than one cluster. CLHLTH also contains the distance to each facility. The DRUG id and distance correspond to the pharmacies and drug stores in the DRUG data set.

CLUST is the four digit second year cluster number.

FACID is the four digit id of the nearest health facility.

FACMI is the distance in miles to the nearest health facility.

FPID is the four digit id of the nearest health facility offering family planning.

FPMI is the distance in miles to the nearest health facility offering family planning services.

IDPUB is the four digit id of the nearest public health facility.

PUBMI is the distance in miles to the nearest public health facility offering family planning services.

DRUG is the four digit id of the nearest drug store or pharmacy.

DRMI is the distance in miles to the nearest drug store or pharmacy.

7. Summary

This document is designed to provide an overview of the data available from the Ghana Living Standards Survey and to set out the procedures for obtaining the data. All the basic knowledge required to use the data is contained in this document and the questionnaires. The training manuals and additional papers are also available. Inquiries may be directed to the World Bank at the address listed in Appendix A.

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Appendix A

How to Obtain the GLSS data

The GLSS data are the property of the Ghanaian government. Permission to use the GLSS data must first be obtained from the Ghanaian Statistical Service. The request should be submitted to:

Dr. Kwaku A. Twum-Baah
Ghana Statistical Service
Ministry of Finance
P.O. Box 1098
Accra
GHANA

The request should include a two page letter explaining the proposed research, the specific sections of the data requested, the reason for using the GLSS, and the value of the research to the government and people of Ghana.

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

Living Standards Measurement Study
Poverty and Human Resources Division
Policy Research Department
Attn: Paul Glewwe
The World Bank
1818 H Street, N.W.
Washington, DC 20433
USA

The letter should include a photocopy of the letter of permission from the Ghana Statistical Service and a copy of the research proposal.

There is a nominal fee associated with the data, which are on 3 1/2" diskette, in SAS (version 5.0) portable, STATA (version 2.1), or ASCII files.

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 or used for other research. Other researchers must contact the Ghana Statistical Service and the World Bank directly for access to these data. Any violation of this policy will result in the denial of future access to World Bank LSMS data.

List of GLSS Data Sets Available

The following data sets are available on 3 1/2" diskette. All are available in SAS portable (version 5), STATA (version 2.1) and ASCII files.

	GLSS DATA SETS	
	1987-88 and 1988-89	88-89 ONLY
HOUSEHOLD (numbers correspond to sections of the household survey)	Y00A	Y00B, Y00C
	Y01A, Y01B, Y01C	
	Y02A, Y02B	
	Y03I, Y03II	
	Y04	
	Y05A, Y05B1, Y05B2, Y05B3, Y05B4, Y05C1, Y05C2, Y05D	
	Y05E1, Y05E2, Y05E3, Y05E4, Y05F, Y05G1, Y05G2, Y05H	
	Y06	
	Y07	
	Y08	
	Y09A, Y09B, Y09C, Y09D1A, Y09D1B, Y09D1C	
	Y09D2A, Y09D2B, Y09D2C, Y09D3A, Y09D3B	
	Y09D4A, Y09D4B, Y09D4C, Y09D5, Y09E, Y09F	
	Y09G, Y09H, Y09I, Y09J, Y09K	
	Y10A, Y10B, Y10C, Y10D	
	Y11A, Y11B, Y11C, Y11D	
	Y12A, Y12B	
	Y13A1A, Y13A1B, Y13A2, Y13B	
	Y14A, Y14B	
	Y15A, Y15B, Y15C	
	Y16A, Y16B	
		Y17A, Y17B, Y17C
COMMUNITY	COMM	
PRICE	PRICE	PRICE
HEALTH		HEALTH
PHARMACY		DRUG
PRIMARY SCH		PSCHOOL ****
MIDDLE SCH		MSCHOOL***
LINKING	PANELC, CLYR1YR2, HHCOMM, CLHLTH	
Constructed	EXPEND, HEAD, ZSCORE (ZSCOREH for 1988-89)	

****Each of the school STATA and ASCII data sets is available in three parts: PSCHOOLA (SID AVGRAV-X350), PSCHOOLB (SID X351-X700) and PSCHOOLC (SID X701-P_TOTG2), and MSCHOOLA (SID AVGRAV-X380), MSCHOOLB (SID X381-X774), and MSCHOOLC (SID X775-P_TOTG2).

Appendix C

List of Related Documents

The following documents can be obtained from the World Bank, Poverty and Human Resources Division, Policy Research Department (PRD/PH), at a cost of five cents per page for photocopying.

A. Questionnaires (free of charge)

1. Household Questionnaire 77 pages
2. Community Questionnaire 21 pages
3. Price Questionnaire 4 pages
3. Questionnaire for Health and Family Planning Services 19 pages
4. Questionnaire for Drugstores, Pharmacies & Drug Vendors 10 pages
5. Primary School Questionnaire 11 pages
6. Middle/Junior Secondary School Questionnaire 11 pages
7. Household Education Module 26 pages

B. Training Manuals

1. Supervisor's Instruction Manual 55 pages
2. Interviewer's Instruction Manual 79 pages
3. Anthropometrist's Instruction Manual 39 pages
4. Data Entry Operator's Instruction Manual 40 pages
5. Availability, Price and Quality of Health Care Survey: Protocol for Questionnaire Administrators 6 pages
6. Education Module Supervisor's Instructions 5 pages

C. Other

1. Scott, Chris and Ben Amenuvegbe. October, 1986. "Ghana Living Standards Survey: Recommended Sample Design." 31 pages. Also available as LSMS Working Paper No. 49.
2. Glewwe, Paul. "Schooling, Skills and the Returns to Government Investments in Education: An Exploration Using Data from Ghana." LSMS Working Paper No. 76, March 1991. 56 pages
3. Glewwe, Paul and Hanan Jacoby, 1992. "Estimating the Determinants of Cognitive Achievement in Low Income Countries: The Case of Ghana." LSMS Working Paper No. 91. 74 pages
4. Glewwe, Paul and Kwaku A. Twum-Baah. 1991. "The Distribution of Welfare in Ghana, 1987-88." LSMS Working Paper No. 75, March, 1991. 94 pages
5. Listing of variable means and standard deviations 137 pages

Appendix D

Introduction: List of reports/papers using the GLSS 1987-88 and 1988-89 Data

The following is a list of papers, published and unpublished, and research in progress that make use of the GLSS data. It is provided to guide researchers who are seeking to build on, but not reproduce work that has already been done.

Copies of all papers and publications resulting from the analysis of LSMS data sets should be sent to the LSMS at the address listed in Appendix A.

Addae-Mensah, Joseph. "The Economic Re covery of Ghana and the Urban Housing Market: The Supply of Rental Housing," Ph.D. Dissertation.

Alberts, Wim, Paul Glewwe and Elizabeth King. 1992. "Human Resource Development and Economic Growth: Ghana in the Next Two Decades." Background Paper for the Accelerated Growth Study o f Ghana, June, 1992.

Alberts, Wim. Poverty Assessment for Ghana

Alderman, Harold. "Nutritional Status in Ghana and its Determinants." SDA Working Paper #3.

Alderman, Harold and Paul Higgins. "Food and Nutritional Adequacy in Ghana." Cornell Food an d Nutrition Policy Program Working Paper #27.

Alderman, Harold. "Incomes and Food Security in Ghana." CFNPP #28.

Alderman, Harold and Paul Higgins. "Labor and Women's Nutrition: A Study of Energy Expenditures, Fertility and Nutrition Status in Ghana."

Benefo, Kofi D. and T. Paul Schultz. "Child Mortality and Fertility in the Côte d'Ivoire and Ghana."

Commander, Simon and Cecilia Ugaz. "What Seems Right and What Seems Wrong with Ghana's Labor Market?" (draft)

Cox, Donald and Emmanuel Jimenez. "The Relationsh ip Between Community Characteristics and Private Transfers: Evidence from Ghana."

Deaton, Angus. 1992. "Household saving in LDC's: credit mark ets, insurance, and welfare," Scandinavian Journal of Economics, 94(2):253-73.

Glewwe, Paul and Kwaku A. Twum-Baah. 1991. "The Distribution of Welfare in Ghana, 1987-88. " LSMS Working Paper No. 75, March, 1991.

Glewwe, Paul. "Schooling, Skills and the Returns to Government Investments in Education: A n Exploration Using Data from Ghana." LSMS Working Paper No. 76, March 1991.

Glewwe, Paul and Hanan Jacoby. 1992. "Es timating the Determinants of Cognitive Achievement in Low Income Countries: The Case of Ghana." LSMS Working Paper No. 91.

Glewwe, Paul and Hanan Jacoby. 1993. "An Economic Analysis of Delayed Primary School Enrollment and Childhood Malnutrition in a Low Income Country." LSMS Working Paper No. 98.

Haddad, Lawrence. "Gender and poverty in Ghana: A descriptive analysis of selected outcomes an d processes." IDS Bulletin, vol. 22(1).

Haddad, Lawrence. "The Impact of Women's Employment Status on Househo ld Food Security at Different Income Levels in Ghana." Forthcoming in Food and Nutrition Bulletin.

Haddad, Lawrence. "Gender and Economic Adjustment in Ghana and the Côte d'Ivoire." in Gender and Adjustment. The Mayatech Corporation, MD, 1991.

Kennedy, E. and L. Haddad. "Are Preschoolers from Female-Headed Households Less Malnourished ? A Comparative Analysis of Results from Ghana and Kenya." IFPRI Mimeo, 1991.

Haddad, L. "Gender and Poverty in Ghana: A Descriptive Analysis." SDA Working Paper, Afric a Region, The World Bank, 1991.

Kennedy, E., P. Peters and L. Haddad. "The Nutritional Status of Preschoolers and women   in different Female-Headed Households: A Comparative Analysis of Resu lts from Kenya, Malawi and Ghana." IFPRI Mimeo, 1992.

Jolliffe, Dean. "The I mpact of Education in Rural Ghana: Examining Productivity and Labor Allocation Effects." 1993. Mimeo.

Jolliffe, Dean. "The Impact of Cognitive Skills on Income from Farming." 1993. Mimeo.

Jones, Theresa P. Ghana CEM Assessment. World Bank.

Lavy, Victor. 1992. "Investment in Human Capital: Schooling Supply Constraints in Rural Ghana. " LSMS Working Paper No. 93.

Lloyd, Cynthia. "Women's Role in Maintaining Households: Family Welfare and Sexual Inequality i n Ghana." Population Studies, 47(1), 1993.

Lloyd, Cynthia and Anastasia Brandon. "Women's Role in the Maintenance of Households; Poverty and Gender Inequality in Ghana," In Women, Family and Popu lation, Vol.I, Conference Proceedings of Union for African Population Studies, Ouagadougou, Burkina Faso, April, 1991.

Lloyd, Cynthia and Anastasia Brandon. "Does Sibs ize Matter? Implications of Family Size for Children's Educational Opportunities and Wor k Responsibilities in Ghana," Paper presented to PAA, Denver, April, 1992.

Oliver, Raylynn. "Schooling and Fertility: An Analysis of Age-Specific Fertility Levels in Ghana." 1992. Mimeo.

Oliver, Raylynn. "The Impact of Schooling on Fertility in Ghana." 1993. Mimeo.

Oliver, Raylynn. "The Effect of Qu ality, Price and Availability of Family Planning on Contraceptive Use in Ghana." 1993. Mimeo.

Oliver, Raylynn. "The 'Quality-Quantity' Trade-off: Evidence from Ghana."

Pitt, Mark and Victor Lavy. "Intrahousehold Allocation of Medical Care in Ghana." Mimeo, not dated.

Quigley, John, and Victor Lavy. "Willingness to Pay for the Quality and Intensity of Medical Care : Evidence from Low-Income households in Ghana." Forthcoming LSMS Working Paper, 1992.

Schultz, T. Paul and Aysit Tansel. "Study of Adult Disabilities and Productivity for LSMS."

Schultz, T. Paul and Aysit Tansel. 1993. "Measurement of Returns to Adult Health: Morbidity Effects on Wage Rates in Côte d'Ivoire and Ghana." LSMS Working Paper No. 95

Schultz, T. Paul and Kofi Benefo. "Impact of child mortality on fertility in Côte d'Ivoire and Ghana." Thomas, Duncan. "Gender Differences in Household Resource Allocations." LSMS Working Paper No. 79, June, 1991.

Vijverberg, Wim P.M. "Returns to Schooling in Non-Farm Self-Employment: An Econometric Cas e Study of Ghana." 1991.

Vijverberg, Wim P.M. "Schooling, Skills and Inc ome from Non-Farm Self-Employment in Ghana." June 1991.

Vijverberg, Wim P.M. "Measuring Income from Family Enterprises with Household Surveys." LSMS Working Paper No. 84, October, 1991 (also published in Small Business Economics, 1992, pp. 287-305).

Monthly, Regional and Annual Price Indices

Relative price stability makes daily and weekly price adjustments unnecessary. However, overall annual consumer price inflation was 31% over the year first year of the survey and 24% over the second year. Consumer monthly price index numbers are prepared by the Ghana Statistical Service. The overall and food price indices for October, 1986 to September, 1989 are presented below.

National Consumer Price Index, Ghana: October, 1986 - September, 1989

		Combined Index			Food Index		
1986	October	4734.9	1.000		3287.4	1.000	
	November	4959.8	1.047		3468.3	1.055	
	December	5175.0	1.093		3647.2	1.109	
1987	January	5400.4	1.141		3841.2	1.168	
	February	5616.3	1.186		3983.2	1.212	
	March	5914.2	1.249		4167.7	1.268	
	April	6195.6	1.308		4399.6	1.338	
	May	6404.3	1.353		4617.8	1.405	
	June	6605.0	1.395		4838.2	1.472	
	July	6635.4	1.401		4800.2	1.460	
	August	6610.9	1.396		4720.9	1.436	
1987	September	6591.8	1.392	1.000	4649.5	1.414	1.000
	October	6596.0	1.393	1.001	4626.8	1.407	0.999
	November	6710.5	1.417	1.018	4729.9	1.439	1.019
	December	6943.8	1.467	1.053	4950.4	1.506	1.073
1988	January	7232.0	1.527	1.097	5196.2	1.581	1.125
	February	7533.6	1.591	1.143	5444.8	1.656	1.184
	March	7875.3	1.663	1.195	5762.2	1.753	1.250
	April	8208.3	1.734	1.245	6087.5	1.852	1.321
	May	8553.5	1.806	1.298	6424.9	1.954	1.388
	June	8808.0	1.860	1.336	6692.3	2.036	1.446
	July	8722.2	1.842	1.323	6453.0	1.963	1.394
	August	8625.6	1.822	<u>1.309</u>	6233.5	1.896	<u>1.335</u>
1988	September	8571.5	1.810	1.000	6105.0	1.857	1.000
	October	8569.8	1.810	0.999	6060.2	1.843	0.993
	November	8639.3	1.825	1.008	6128.7	1.864	1.004
	December	8787.8	1.856	1.025	6263.9	1.905	1.026
1989	January	9132.7	1.929	1.065	6526.9	1.985	1.069
	February	9456.9	1.997	1.103	6818.1	2.074	1.117
	March	9829.0	2.076	1.147	7183.1	2.185	1.177
	April	10209.4	2.156	1.191	7533.7	2.292	1.234
	May	10554.2	2.229	1.230	7872.6	2.395	1.290
	June	10813.1	2.284	1.262	8130.3	2.473	1.332
	July	10775.0	2.276	1.257	7976.9	2.427	1.307
	August	10667.4	2.255	1.246	7697.9	2.342	1.261
	September	10663.2	2.252	1.244	7597.5	2.311	1.244

Source: Ghana Statistical Service, Statistical Newsletter, Nos. A5/88, A8/89 and A2/90.

Regional price indices were calculated for seven sub-regions in Ghana (Accra City, Urban Coast, Rural Coast, Urban Forest, Rural Forest , Urban Savannah and Rural Savannah), and for Ghana as a whole using the data from the 1987-88 price questionnaires. The region codes can be found in the fil e 'FORMCON.SAS'. Again, the overall and food indices are presented below.   Details on the calculation is provided in Glewwe and Twum-Baah, 1991.

Area Price Indices for Ghana: 1987 - 1988

	Overall Price Index	Food Price Index
Accra	0.952	1.012
Other Urban Coast	0.971	0.961
Rural Coast	1.000	0.996
Urban Forest	0.999	0.993
Rural Forest	0.997	0.972
Urban Savannah	1.009	1.002
Rural Savannah	1.023	1.017
All Ghana	1.000	1.000

Source: Glewwe and Twum-Baah, 1991. Derived from GLSS price data.

The calculation of the service value of durable goods in the EXPEND data set makes use of the annual price index presented below.

Annual Price Indices for Adjusting Durable Goods

	Price Index
1967	0.028
1968	0.031
1969	0.033
1970	0.034
1971	0.037
1972	0.041
1973	0.048
1974	0.057
1975	0.074
1976	0.115
1977	0.249
1978	0.432
1979	0.666
1980	1.000
1981	2.165
1982	2.648
1983	5.901
1984	8.236
1985	9.091
1986	11.324
1987	15.833
1988	20.797
1989	26.045

Source: Derived from Ghana Statistical Service, Statistical Newsletter.

Appendix F

Translating Highest Grade Completed to Years of Schooling

Highest Grade Completed	Years of Schooling	Highest Grade Completed	Years of Schooling
None, K, "", B	0	A1	16
P1	1	A2	17
P2	2	PS1, U1, T3	18
P3	3	PS2, U2	19
P4	4	PS3, U3	20
P5	5	U4	21
P6	6	U5	22
M1	7	U6	23
M2	8	U7	24
M3	9	U8	25
M4	10		
S1, T1	11		
S2, T2	12		
S3	13		
S4, T4	14		
S5	15		

There is some ambiguity in this translation. Students who attend good primary schools may proceed directly from P6 to S1 by passing the Common Entrance Exam (CEE). Yet most students attend M1 through M4 until they are able to attain their Middle-School Leaving Certificate or pass the CEE. For students that continue, it is probably not a distortion to give them credit for the years of middle school even if they went directly into secondary school. The distortion affects the students who attend good private schools but have only achieved grade 5 or 6 because their education level is likely to be equal to that of a student in M3 or M4. It is not clear how to avoid this. There is a question providing information on whether the last school attended is public, private secular or private religious, that will allow the researcher to make an adjustment if they wish. A further ambiguity exists in teacher training. A middle school completer can follow a four year course to become a teacher and T4 represents 14 years of schooling. A secondary school completer can follow a three year course to become a teacher so T3 may represent 18 years of schooling.

Years of completed schooling can also be broken into categories:

NONE, K, B, ""	None
P1, P2, P3, P4, P5, P6	Primary
M1, M2, M3, M4	Middle
S1, S2, S3, S4, S5	Secondary
PS1, PS2, PS3	Post-Secondary
A1, A2	Advanced
T1, T2, T4	Teacher Training
T3, U1, U2, U3, U4, U5, U6, U7, U8	University

Appendix G

Codes Not in Questionnaire

1. Occupation: International Standard Classification of Occupations

0-1	Physical Scientists and Related Technicians	6-0	Farm Managers and Supervisors
0-2/0-3	Architects, Engineers and Related Technicians	6-1	Farmers
0-4	Aircraft and Ship's Officers	6-2	Agricultural and Animal Husbandry Workers
0-5	Life Scientists and Related Technicians	6-3	Forestry Workers
0-6	Medical, Dental, Veterinary and Related Workers	6-4	Fishermen, Hunters and Related Workers
0-7	Professional Nurses		
0-8	Statisticians, Mathematicians, Systems Analysts, Related Technicians	7-0	Production Supervisors and General Foremen
0-9	Economists	7-1	Miners, Quarrymen, Well Drillers and Related Workers
		7-2	Metal Processors
1-1	Accountants	7-3	Wood Preparation Workers and Paper Makers
1-2	Jurists (e.g. Lawyers, Judges)	7-4	Chemical Processors and Related Workers
1-3	Teachers	7-5	Spinners, Weavers, Knitters Dyers and Related Workers
1-4	Workers in Religion	7-6	Tanners, Fellmongers and Pelt Dressers
1-5	Authors, Journalists and Related Writers	7-7	Food and Beverage Processors
1-6	Sculptors, Painters, Photographers and Related Creative Artists	7-8	Tobacco Preparers and Tobacco Products Makers
1-7	Composers and Performing Artists	7-9	Tailors, Dressmakers, Sewers, Upholsterers and Related Workers
1-8	Athletes, Sportsmen and Related Workers		
1-9	Professional, Technical and Related Workers not elsewhere classified	8-0	Shoemakers and Leather Goods Makers
		8-1	Cabinetmakers and Related Wood Workers
2-0	Legislative Officials and Government Administrators	8-2	Stone Carvers and Stone Cutters
2-1	Managers	8-3	Blacksmith, Toolmakers and Machine Tool Operators
3-0	Clerical and Related Workers	8-4	Machinery Fitters, Machine Assemblers and Precision-Instrument Makers (except Electrical)
3-1	Government Executive Officials		
3-2	Stenographers, Typists, and Card and Tape-Punch Machine Operators	8-5	Electrical Fitters and Related Electrical and Electronics Workers
3-3	Book-keepers, Cashiers and Related Workers	8-6	Broadcasting Station and Sound-Equipment Operators and Cinema Projectionists
3-4	Computing Machine Operators		
3-5	Transport and Communications Supervisors	8-7	Plumbers, Welders, Sheet-Metal and Structural Metal Preparers and Erectors
3-6	Transport Conductors	8-8	Jewelry and Precious Metal Workers
3-7	Mail Distribution Clerks	8-9	Glass Formers, Potters and Related Workers
3-8	Telephone and Telegraph Operators		
3-9	Clerical and Related Workers Not Elsewhere Classified	9-0	Rubber and Plastics Products Makers
		9-1	Paper and Paperboard Products Makers
4-0	Managers (wholesale and Retail Trade)	9-2	Printers and Related Workers
4-1	Working Proprietors (Wholesale and Retail Trade)	9-3	Painters
4-2	Sales Supervisors and Buyers	9-4	Production and Related Workers Not Elsewhere Classified
4-3	Technical Salesmen, Commercial Travellers and Manufactures' Agents	9-5	Bricklayers, Carpenters and Other Construction Workers
4-4	Insurance, Real Estate Securities, Business Services, Salesmen, Auctioneers	9-6	Stationary Engine and Related Equipment Operators
4-5	Salesmen, Shop Assistants and Related Workers	9-7	Material Handling and Related Equipment Operators, Dockers and Freight Handlers
4-9	Sales Workers Not Elsewhere Classified		
		9-8	Transport Equipment Operators
5-0	Managers (Catering, Lodging Services)	9-9	Labourers Not Elsewhere Classified
5-1	Working Proprietors (Catering and Lodging Services)		
5-2	Housekeeping and Related Service Supervisors	X	Workers Not Classifiable by Occupation
5-3	Cooks, Waiters, Bartenders and Related workers	X-1	New Workers Seeking Employment
5-4	Maids and Related Housekeeping Service Workers Not Elsewhere Classified	X-2	Workers Reporting Occupation Unidentifiable or Inadequately Described
5-5	Building Caretakers, Charworkers, Cleaners and Related Workers	X-3	Workers Not Reporting any Occupation
5-6	Launderers, Dry-Cleaners and Pressers		
5-7	Hairdressers, Barbers, Beauticians and Related Workers		
5-8	Protective Service Workers		
5-9	Service Workers Not Elsewhere Classified		

2. Type of Industry: International Standard Industrial Classification of All Economic Activities

Agriculture, Hunting, Forestry and Fishing
111   Agriculture and livestock production
112   Agricultural services
113   Hunting, trapping and game
121   Forestry
122   Logging
130   Fishing

Mining and Quarrying
210   Coal Mining
220   Crude Petroleum and Natural Gas Production
230   Metal Ore Mining
290   Other Mining

Manufacturing
311   Food Manufacturers
313   Beverage industries
314   Tobacco Manufacturers
321   Manuf. of Textiles
322   Manuf. of wearing apparel, except footwear
323   Manuf. of leather and products of leather, except footwear and wearing apparel
324   Manuf. of footwear, except vulcanized or mould rubber or plastic footwear
331   Manuf. of wood and cork products, except furniture
332   Manuf. of furniture and fixtures except primarily of metal
341   Manuf. of paper and paper products
342   Printing, publishing and allied industries
351   Manuf. of basic industrial chemicals, including fertilizers
352   Manuf. of other chemical products
353   Petroleum refineries
354   Manuf. of miscellaneous products of petroleum and coal
355   Manuf. of rubber products
356   Manuf. of plastic products not elsewhere classified
361   Manuf. of pottery, china and earthenware
362   Manuf. of glass and glass products
369   Manuf. of other non-metallic mineral products
371   Iron and steel basic industries
372   Non-ferrous metal basic industries
381   Manuf. of fabricated metal products, except machinery and equipment
382   Manuf. of machinery except electrical
383   Manuf. of electrical machinery apparatus, appliances and supplies
384   Manuf. of transport equipment
385   Manuf. of professional an scientific equipment, measuring and controlling instruments not elsewhere classified, and of photographic and optical goods
390   Other manufacturing industries

Electricity, Gas and Water
410   Electricity, gas and steam
420   Water works and supply

Construction
500   Construction

Wholesale and Retail Trade, and Restaurants and Hotels
610   Wholesale Trade
620   Retail Trade
631   Restaurants, cafes, other eating and drinking places
632   Hotels, rooming houses, camps and other lodging places

Transport, Storage and Communication
711   Land Transport
712   Water Transport
713   Air Transport
719   Services allied to Transport
720   Communication

Financing, Insurance, Real Estate and Business Services
810   Financial Institutions
820   Insurance
831   Real Estate
832   Business Service except machinery rental and leasing
833   Machinery rental and leasing

Community, Social and Personal Services
910   Public administration and Defence
920   Sanitary and similar services
931   Education services
932   Research and scientific institutes
933   Medical, dental, other health and veterinary services
934   Welfare institutions
935   Business, professional and labour associations
939   Other social and related community services
941   Motion picture and other entertainment services
942   Libraries, museums, botanical and zoological gardens and cultural services not elsewhere classified
949   Amusement and recreational services not elsewhere classified
951   Repair services not elsewhere classified
952   Laundries, laundry services, and cleaning and dyeing plants
953   Domestic Services
959   Miscellaneous personal services
960   International and other Extra-territorial Bodies

3. Community Questionnaire Codes

Section 1. DEMOGRAPHIC INFORMATION

2. Ethnic Groups

- 010 Akan
- 011 Anyi-Bawle
- 012 Nzema
- 013 Twi-Fante (Fante)
- 014 Twi-Fante (Twi)
- 020 Ewe
- 030 Ga-Adangbe
- 031 Adangbe
- 032 Ga
- 040 Guan
- 050 Central Togo
- 060 Gur Mole-Dagbane
- 070 Gurma
- 080 Grusi
- 090 Mande
- 100 Non-Ghanaian Origin
- 101 Mole-Dagbane
- 102 Songhai
- 103 Tem (Kokotil)
- 104 Yoruba
- 110 Northern
- 111 Basari, Battor
- 112 Kotokoli
- 999 Other

3. Religion

- 01 Christian
- 02 Moslem
- 03 Animist/Traditional
- 20 Other

Section 2 ECONOMY & INFRASTRUCTURE

1. Major Economic Activities

- 01 Agriculture
- 02 Blacksmith
- 03 Carpenters
- 04 Government/Clerical Work
- 05 Distilling
- 06 Factory Work
- 07 Animal Husbandry
- 08 Fishermen/Hunters
- 09 Food Processing
- 10 Forestry Workers
- 11 General Formen
- 12 General Labourers
- 13 Miners
- 14 Artisans/Painters
- 15 Shoemakers
- 16 Tailors
- 17 Trading
- 18 Drivers/Transportation
- 19 Teachers
- 20 Poultry Raising
- 21 Masonary
- 22 Weaving
- 23 Copra Work
- 30 Other

3. Reasons for Life Being Better or Worse

- 01 Drop in produce prices
- 02 Increase in production prices
- 03 Inflation
- 04 Weather/No rainfall
- 05 Destruction of Crops
- 06 No farm supplies
- 07 No good drinking water
- 08 No government financial assistance
- 09 Population Increase/Less farm area
- 10 Housing
- 11 Food Shortage/Low Yields
- 12 Non-fertile land
- 13 No health workers
- 17 Better rainfall
- 18 More Jobs
- 19 Better yields
- 20 Transportation/Roads
- 21 Unemployment
- 22 Bank/Market
- 23 More Goods Available
- 24 Clinic/Medical Facility
- 25 Community Center/Church/School
- 30 Other

27. Where do most of them go
      01 Village
      02 Town
      03 City

28. What kind of work searched for
      see list for job codes

32. Where do most of them come from
      excluded

33. What type of work do they do
      see list for job codes

37. Community Development Projects
      00 None
      01 Road construction/lighting
      02 Nursery/Clinic/Hospital
      03 General Service/Market
      04 School Building
      05 Dam/Water Well
      06 Community Center/Church
      07 Cocoa Shed/Farm
      08 Public Toilets
      09 Police Station/Post/Bank
      10 Day Care Center
      20 Other

Section 3. EDUCATION

10. Reasons for not attending school
      00 None
      01 Financial reasons
      02 Distance
      03 Insufficient Materials/Equipment in School
      04 Lack of School Accomodation
      05 No interest in school
      06 Building
      07 Teachers
      08 Need to help in Farm, etc.
      09 Bad drinking water
      10 Lack of school furniture
      20 other

28. Most serious school problems
      see codes above
      99 No school in community

Section 4. HEALTH

3. What is nearest location
      excluded

7. What is nearest location
      excluded

11. Major Health Problems
      00 None
      01 Malaria
      02 Measles
      03 Chicken Pox
      04 Rhuematism
      05 Whooping Cough
      06 Diarrhea
      07 Worms
      08 Malnutrition
      09 Eye Problems/River Blindness
      10 Fever
      11 Tuberculosis
      12 Guinea Worms
      13 Gonorrhea
      14 Bilharzia
      15 Hernia/Waist Pains
      16 Tetanus
      17 Asthma/Cough
      18 Pile
      19 Jaundice
      20 Convulsion
      21 Snake Bite
      22 Leprosy
      23 Epilepsy
      24 Pneumonia
      25 High Blood Pressure
      30 Other

12. Major Problem with Health Services
      00 No Problem
      01 Distance
      02 Health/Drugs Expensive
      03 No Accomodations
      04 No Clinic
      05 No Drugs
      06 No Health Workers
      07 Inadequate Treatment/Services
      08 Lack of Equipment/Transport
      09 Lack of Water
      10 No funds
      20 Other

Section 5. AGRICULTURE

1. Crop codes
       01 Bananas
       02 Beans/Peas
       03 Cocoa
       04 Cocoyam
       05 Coffee
       06 Cassava
       07 Colanut
       08 Cotton
       09 Garden Egg
       10 Keaef
       11 Maize
       12 Oranges
       13 Okro
       14 Other Fruit Tree
       15 Onions
       17 Pineapple
       18 Peanut/Groundnut
       19 Plantains
       20 Millet
       21 Palm Oil
       22 Rubber
       23 Rice
       24 Sweet Potato
       25 Sugar Cane
       26 Sorghum
       27 Tomato
       28 Tobacco
       29 Leafy Vegtables
       30 Other Vegtables
       31 Yam
       32 Coconut
       33 Pepper
       34 Guinea Corn
       50 Other

8. What Agency are they from
       01 Ministry of Agriculture
       02 VORADEP
       20 Other

9. Services They Provide
       01 Advice on Farming Techniques
       02 Provide health services to animals
       03 Provide insecticides/fertilizer
       04 Provide seeds for Planting
       20 Other

11. Name and Services Provided
       01 Advice Fishermen on Fishing
       02 Advice on FIE Control
       03 Advice on Cultivation
       04 Advice on Brewing
       05 Provisions for Farming
       20 Other

Corrections

The following are corrections that researchers should make note of. Items three and four are suggestions from researchers who have used the health facility and fertility sections, respectively.

1. Wrong Cluster Numbers in the Health Facility Survey

Cluster 2017 in health facilities survey corresponds to Cluster 2005 in household survey
Cluster 2434 in health facilities survey corresponds to Cluster 2454 in household survey

2. Clusters that Should Be Excluded from the 1988-89 Data Sets

Ten clusters are non-random extra workloads. They should not be used.
Delete clusters: 2174, 2177, 2190, 2209, 2233, 2238, 2246, 2685, 2789, 2790.

3. Incorrect data in Cluster 1140

In order to get correct data for the 17 households in Cluster 1140, one has to suppress the following records:
- in household number 114003 erase records with PID=2 and PID=3
- in household number 114004 erase records with PID=4
- in household number 114006 erase records with PID=3 through 11
- in household number 114007 erase records with PID=2 through 7
- in household number 114009 erase records with PID=2 through 11
- in household number 114012 erase records with PID=2 through 6
- in household number 114013 erase records with PID=5 through 19

4. Notes on the Fertility sections of the 1987-88 Ghana LSMS data.

There were six households for which two fertility sections had been completed. After consulting the household rosters, it became clear that the interviewer decided to interview a second woman if the one chosen randomly had not had any children. To fix this, the responses for the woman whose personal id was randomly chosen in section 7 were retained and the other woman's responses were deleted. The household ids and women's ids (WID) that were excluded for this reason are: 114002 WID= 1, 114004 WID= 3, 114005 WID= 1, 114006 WID= 7, 114013 WID= 16, 114017 WID= 1.

There were 50 fertility sections in which the personal id corresponded to a man or to a woman outside the eligible age range. Most often, this was the result of assigning the woman a personal id of 1 in the fertility section regardless of her personal id number in the household roster. By checking the household rosters and section 7 and comparing them to the answers given in section 13 the correct personal id of the woman interviewed was determined. The following is a list of the fifty affected households followed by the correct woman's id for the fertility section.

100601 2, 100805 2, 101016 2, 101212 2, 102901 2, 103005 2, 104104 2, 140216 2, 105014 4, 105106 2,
105405 2, 106414 2, 106605 2, 106704 2, 107313 2, 107407 4, 107530 2, 108011 2, 108204 2, 108217 2,
109403 2, 109518 2, 109718 4, 109815 2, 109905 2, 109910 2, 110114 2, 110333 2, 110901 2, 111108 2,
111305 2, 112305 2, 112710 2, 112721 2, 112812 2, 113208 2, 113307 4, 113814 2, 114409 4, 114912 2,
115101 2, 115108 2, 115116 2, 115311 2, 115316 2, 115508 2, 116501 2, 116814 2, 117113 3, 118914 2.

There were seven households for which the questionnaire contained an unreconcilable discrepancy. The excluded households are:

103811 missing section 13a1a, no household roster, not good data
108634 missing section 13a1a, no woman of an age to have kids
114003 there is a fertility section, but not an eligible woman
114006 unable to reconcile EVERBRTH=2 and ORDCHL > 0
114017 unable to reconcile EVERBRTH=2 and ORDCHL > 0
107908 missing section 13a1a, woman is age 52
104215 woman had 2 children living at home, but no section 13a1b

Other miscellaneous errors that were correctable upon inspection of the four household rosters from sections 01a (the household roster), 01c (non-resident children), 13a1a (fertility), and 13a1b (birth history of women interviewed for the fertility section).

HID=119802 PID=1   correct AGEY=50
HID=101305 PID=5   correct MID=6
HID=110101 WID=.   correct WID=1
                                        EVERBRTH=0 correct EVERBRTH=1
                                        EVERPREG=0 correct EVERPREG=1
HID=109912 EVERBRTH=0 correct EVERBRTH=1
            EVERPREG=0 correct EVERPREG=1
HID=100714 WID=3 EVERPREG=1
                            EVERBRTH=. correct EVERBRTH=2
HID=104417 EVERBRTH=2 correct EVERBRTH=1
HID=118706 EVERBRTH=2 correct EVERBRTH=1

Complete List of GLSS Clusters

CLUSTER NAME	Cluster # yr1	yr2	Number of HHs yr1	yr2	Map Axes	Urb SU Rur	Reg.	Eco Zone	Comm. yr1	yr2	School	Price yr1	yr2	Any FACID	Mi	FP FPID	Mi	Public IDPUB	Mi	Pharmacy DRUG	Mi
Jewi Wharf	1	1	16	16	B2	R	West	C	1	.	.	o	.	0011	6	0011	6	0011	6	0009	0
Eikwe	2	.	16	.	C1	R	West	C	1	.	.	x	.	.	.	.	.	.	.	.	.
Nyamebekyere	.	6	.	16	C2	R	West	C	.	1	.	.	x	0008	5	0009	9	.	.	0007	5
Bonzokrom	3	9	16	16	D1	R	West	C	1	1	X	x	x	0007	2	0007	2	0007	2	0006	2
Adiembra	4	.	16	.	D2	R	West	C	3	.	.	x	.	.	.	.	.	.	.	.	.
Mpehin	5	5	16	16	D2	R	Cent	C	1	.	.	o	.	1024	0	1024	0	1024	0	1018	0
New Kedadwin	.	14	.	16	C2	R	West	C	.	2	X	.	.	0012	6	0012	6	0012	6	0010	6
Etwia	.	22	.	16	F2	R	Cent	C	.	1	X	.	x	1124	13	1123	13	1123	13	1114	11
Ndansimon	6	.	16	.	E2	R	Cent	C	2	.	.	o	.	.	.	.	.	.	.	.	.
Oboom	7	25	16	16	E2	R	Cent	C	3	3	X	x	x	1116	7	1116	7	1116	7	1111	7
Nyamedome	8	.	16	.	E2	R	Cent	C	1	.	.	x	.	.	.	.	.	.	.	.	.
Nyakawadzi	9	33	16	16	F2	R	Cent	C	3	3	X	o	.	1120	7	1119	7	1118	7	1112	0
Nantsifa	10	.	16	.	F3	R	Cent	C	3	.	.	x	.	.	.	.	.	.	.	.	.
Kwanyaku/Obusamasi	.	38	.	16	F3	R	Cent	C	.	.	.	.	x	1215	3	1214	7	1214	7	1113	2
Lakpesedom	.	46	.	16	G3	R	Gr.A	C	.	1	X	.	x	2304	0	.	.	2310	2	3303	10
Nkuntunse	12	.	16	.	G3	R	Gr.A	C	.	.	.	.	.	.	.	.	.	.	.	.	.
Bonikope	13	49	32	32	H3	R	Gr.A	C	1	.	.	x	.	2313	3	2313	3	2312	5	2309	8
Kortey/Queitsewe	14	.	16	.	G3	R	East	C	2	.	.	o	.	.	.	.	.	.	.	.	.
Tokpo (Dzokpo)	15	57	16	16	H3	R	Gr.A	C	1	1	X	x	x	4311	6	2312	15	2312	15	4308	6
Verkope	16	.	16	.	I4	R	Volt	C	1	.	.	x	.	.	.	.	.	.	.	.	.
Adusakope	.	62	.	32	I3	R	Volt	C	.	1	X	.	x	4314	3	4314	3	4314	3	4310	3
Sokpekope	17	65	16	16	I4	R	Volt	C	1	.	.	x	.	4802	4	4803	4	4803	4	4802	4
Ohawu	19	73	16	16	I4	R	Volt	C	1	1	X	x	.	4317	6	4317	6	4319	8	4313	6
Live Ga	.	78	.	16	I4	R	Volt	C	.	1	.	.	.	4316	3	4317	3	.	.	4312	3
Tordzinu	20	.	.	.	I4	R	Volt	C	1	.	.	x	.	.	.	.	.	.	.	.	.
Elubo	21	81	16	16	B2	SU	West	C	.	.	X	o	x	0010	0	0010	0	0010	0	0008	0
Agona:BP Filling Station	22	.	16	.	D1	SU	West	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Takoradi:Tanokrom	.	86	.	16	D1	SU	West	C	.	.	X	.	x	0005	1	0004	.	0003	3	0003	0
Inchaban	23	89	16	16	D1	SU	West	C	.	.	X	o	x	0002	0	0001	6	0001	6	0001	0
Cape Coast: Ahm Sch	.	94	.	32	E2	U	Cent	C	.	.	.	.	.	1104	0	1105	2	1105	2	1103	0
Narkwa	25	97	48	47	F2	SU	Cent	C	.	1	X	x	x	1124	13	1123	13	1123	13	1115	13
Sunkwaa	26	.	16	.	E2	SU	Cent	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Owumaso	.	102	.	16	F3	SU	Cent	C	.	1	.	.	x	1114	2	1115	2	1115	2	1110	2
Bontrase	.	110	.	16	F3	SU	Cent	C	.	1	X	.	x	1211	0	1212	7	1212	7	1110	0
Agomeda	28	113	16	16	H3	SU	Gr.A	C	1	1	X	x	.	2304	0	.	.	2310	12	3303	10

Location																					
Mamfe	29	.	16	.	G3	SU	East	C	1	.	.	x	.	.	.	.	.	.	.	.	.
Adukrom	.	118	.	16	G4	U	East	C	.	.	.	.	x	3303	0	3303	0	3303	0	3302	0
Adidome	30	121	16	16	H4	SU	Volt	C	1	.	.	x	.	4808	0	4808	0	4808	0	4809	0
Tadzewu	.	126	.	16	I4	SU	Volt	C	.	1	.	.	x	4319	5	4320	8	4319	5	4314	0
Agbosome/Adina Mornu	31	70	16	16	J4	SU	Volt	C	1	.	.	o	.	4321	3	4321	3	.	.	4315	3
Kwesimintsim	32	129	16	16	D1	U	West	C	.	.	.	o	.	0006	0	0006	0	0006	0	0005	0
Takoradi:Columbia Hot	33	.	16	.	D1	U	West	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Takoradi:Windy Ridge	.	134	.	16	D1	U	West	C	.	.	X	.	.	0005	1	0006	2	0006	2	0004	0
Sekondi:Effiakuma	34	137	16	16	D1	U	West	C	.	.	X	x	x	0005	0	0004	0	0003	2	0002	0
Shama	35	.	16	.	D2	U	West	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Elmina	.	142	.	32	E2	U	Cent	C	.	.	X	.	x	1103	0	1103	0	1103	0	1102	0
Cape Coast:Soc Welfare	36	145	16	16	E2	U	Cent	C	.	.	X	o	x	1101	0	1102	0	1102	0	1101	0
Moree	37	.	15	.	E2	U	Cent	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Odoben	38	.	15	.	F3	U	Cent	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Apam	39	105	15	16	F2	U	Cent	C	.	.	X	x	x	1122	0	1121	0	1121	0	1113	0
Senya Beraku	40	.	16	.	F2	U	Cent	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Anomabo	.	150	.	16	E2	U	Cent	C	.	.	.	.	o	1106	0	1106	0	1106	0	1104	0
Bawjiase	.	158	.	16	F3	U	Cent	C	.	.	X	.	x	1213	0	1212	0	1212	0	1111	0
Agona Swedru	41	161	16	16	F3	U	Cent	C	.	.	.	o	.	1214	0	1214	0	1214	0	1112	0
Medina: Soc Welfare	42	166	16	16	G3	U	Gr.A	C	.	.	.	x	.	2205	0	2205	0	.	.	2206	0
Accra: Chorkor Tea Garden	43	.	16	.	G3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Accra:Mamprobi	44	.	16	.	G3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Accra:Dansoman Est	.	169	.	16	G3	U	Gr.A	C	.	.	.	.	.	.	.	.	.	.	.	.	.
Accra:TownCouncil	45	.	32	.	G3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Accra:Abossey	46	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Accra:Darkuman	48	.	31	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Acc:No Kan Yoga Res	49	193	32	32	G3	U	Gr.A	C	.	.	X	.	x	2210	0	2210	0	2209	3	2209	0
Accra:Nii Boi Town	50	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Accra:Jamestown Police	51	201	16	16	G3	U	Gr.A	C	.	.	.	x	.	2206	0	2206	0	2206	0	2207	0
Acc:MAAB MedCenter	.	206	.	32	G3	U	Gr.A	C	.	.	X	.	x	2204	0	2204	0	2201	2	2204	0
Accra:GoBliss	53	.	32	.	G3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Accra:Osu Busi	54	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Acc:TeshieChrApoChurch	55	.	16	.	G3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Acc:Teshie Continen	56	.	16	.	G3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Labadi:SBC	.	214	.	16	G3	U	Gr.A	C	.	.	X	.	x	2201	0	2201	0	2201	0	2203	0
Accra: Teshie CAC	.	217	.	16	G3	U	Gr.A	C	.	.	X	.	.	2202	0	2201	3	2201	3	2201	0
Acc:Teshie Faith Cl	.	222	.	32	G3	U	Gr.A	C	.	.	.	.	x	2203	0	2203	0	2201	3	2202	0
Labadi: Lakpa House	57	225	16	16	G3	U	Gr.A	C	.	.	X	o	.	2219	0	2219	0	2201	1	2205	0
Acc:East Cantonments	58	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Burma Camp	.	230	.	16	G3	U	Gr.A	C	.	.	X	.	x	.	.	.	.	.	.	2216	0
Accra:Nima market	59	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.

Location					Grid	U/R	Region	C/F													
Accra:Nima Makolanta	60	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Accra:Alajo	62	.	16	.	G3	U	Gr.A	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Tema:Comm2 trotro	63	249	16	16	H3	U	Gr.A	C	.	.	X	x	x	2308	.	.	.	.	.	2304	5
Tema:Comm4 market	64	.	32	.	H3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Tema:Gen Hosp	.	254	.	14	H3	U	Gr.A	C	.	.	.	.	x	2308	0	.	.	.	.	2304	.
Tema:New Town	65	257	16	16	H3	U	Gr.A	C	.	.	X	x	x	2305	0	2306	0	2307	1	2305	0
Tema:Ashiman	66	.	16	.	H3	U	Gr.A	C	.	.	.	o	.	.	.	.	.	.	.	.	.
Ashaiman	.	262	.	32	G3	U	Gr.A	C	.	.	.	.	.	2309		.	.	.	.	2364	0
Aburi	67	265	16	16	G3	U	East	C	.	.	X	o	x	3301	0	3301	0	3301	0	3301	0
Koforidua:Old Cemetery	68	.	16	.	G4	U	East	C	.	.	.	x	.	.	.	.	.	.	.	.	.
Koforidua:Zion	69	273	16	16	G4	U	East	C	.	.	.	x	.	3407	1	3407	1	3407	1	3405	0
Afiadenyigba	70	.	16	.	I4	U	Volt	C	1	.	.	o	.	.	.	.	.	.	.	.	.
Keta	.	278	.	16	J3	U	Volt	C	.	.	X	.	x	4315	2	4315	2	4315	2	4311	2
Dzodze	71	281	16	16	I4	U	Volt	C	.	.	.	x	.	4322	0	4323	3	4322	0	4316	0
Daaman	.	286	.	32	D3	R	West	C	.	1	.	.	x	0016	0	0013	27	0013	27	0013	0
Tarkwa-Aboso:Mantriam	73	289	16	16	C2	R	West	F	2	2	X	x	x	0014	3	0014	3	0013	3	0011	0
Moseaso	74	.	16	.	B3	R	West	F	1	.	.	o	.	.	.	.	.	.	.	.	.
Wassa Dunkwa	.	294	.	16	C3	SU	West	F	.	1	.	.	.	0018	0	0019	8	0019	8	0015	0
Techimantia	75	297	32	32	C3	R	West	F	1	.	.	o	.	0020	22	0021	22	0021	22	0016	6
Ahibenso	76	.	16	.	B4	R	West	F	1	.	.	o	.	.	.	.	.	.	.	.	.
Danielkrom	.	302	.	16	B4	R	West	F	.	1	.	.	.	0629	5	0629	5	0628	5	0615	5
Apronsie	77	305	16	16	A5	R	West	F	2	2	X	o	x	0619	5	6520	13	6520	13	0613	7
Fuakyekron	78	.	16	.	B4	R	West	F	3	.	.	x	.	.	.	.	.	.	.	.	.
Punikrom	.	310	.	16	B4	R	West	F	.	.	.	.	x	0626	0	0627	9	0627	9	0616	0
Dametsikrom	79	313	16	16	E3	R	Cent	F	2	.	.	x	.	1108	5	1108	5	1108	5	1106	5
Adwamasek/Wiwasi	80	406	16	16	D5	R	Asha	F	2	1	.	x	.	5719	3	5701	12	5718	3	5716	.
Odumase	.	318	.	16	E2	R	Cent	C	.	1	X	.	x	1107	0	1107	0	1105	18	1105	0
Agona Jema	81	321	16	16	D3	R	Cent	F	3	.	.	o	.	1022	6	1023	14	1023	14	1017	6
Praho	82	.	16	.	E4	R	East	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Tabita	.	326	.	16	F3	R	East	F	.	1	.	.	.	1218	3	1218	3	1218	3	3315	0
Asuboa	83	329	16	16	F3	R	East	F	1	.	.	x	.	3416	3	3409	9	3412	5	3404	0
Huni Ofori	.	334	.	30	F3	R	Cent	F	.	2	.	.	x	3217	0	3216	2	3216	2	3314	1
Susumawu	85	337	32	32	F3	R	East	F	.	.	X	o	x	3415	3	3415	3	3415	3	3402	3
Shai Mameng	86	.	31	.	G3	R	East	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Aponapon II	.	342	.	32	G4	R	East	F	.	2	X	.	x	3402	3	3408	3	3408	3	3415	3
Sageyimase	87	345	16	16	F4	R	East	F	1	.	.	x	.	3404	2	3404	2	3404	2	3410	0
Abepawtia	.	350	.	16	F5	R	East	F	.	1	X	.	x	3406	3	3420	10	3420	10	3416	0
Oframase	89	353	16	16	F5	R	East	F	1	.	.	x	.	3424	0	3423	15	3424	0	3409	0
Gbledi	90	.	16	.	H5	R	Volt	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Alavanyo Deme	.	358	.	16	H6	R	Volt	F	.	1	X	.	x	4814	3	4814	3	4814	3	4812	3
Dzoko	91	361	16	16	I6	R	Volt	F	1	.	.	x	.	4815	4	4815	4	4816	5	4814	4

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Botirampa	.	366	.	16	C5	R	Asha	F	.	1	.	.	.	5503	12	5503	12	5503	12	5502	0
Sereso	92	.	16	.	C5	SU	Asha	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Konkromase	93	369	16	16	D5	R	Asha	F	2	2	X	.	o	5522	1	5521	1	5521	1	5515	0
Boankra	.	374	.	16	E5	R	Asha	F	.	1	.	.	.	5717	4	5716	4	5716	4	5715	5
Ofuase	94	.	16	.	E4	R	Asha	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Kumasi:Oduom	95	377	16	16	D5	U	Asha	F	.	.	X	o	.	5524	1	5524	1	5524	1	5517	.
Nketia	.	382	.	32	D5	R	Asha	F	.	1	.	.	.	5703	1	5701	8	5703	1	5702	1
Kontomire	96	.	16	.	D5	R	Asha	F	1	.	.	.	.	.	.	.	.	.	.	.	.
Kyenkyenase	97	385	16	16	C4	R	Asha	F	2	.	.	x	.	5515	1	5516	10	5516	10	5510	0
Morontua	.	390	.	16	E4	R	Asha	F	.	2	.	.	o	5509	0	5509	0	5509	0	5506	0
Nsuaem	98	.	16	.	E4	R	Asha	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Sefwi	99	393	16	16	D5	R	Asha	F	.	.	X	.	o	5507	3	5508	8	5507	3	5505	0
Nkoranza	100	.	16	.	D3	R	Asha	F	2	.	.	x	.	.	.	.	.	.	.	.	.
Akrofuom	.	398	.	16	E4	R	Asha	F	.	1	X	.	o	5510	9	5510	9	5510	9	5507	0
Old Ayasi/Omena	101	401	16	16	D4	R	Asha	F	1	.	.	x	.	5513	2	5513	2	5513	2	5509	0
Brahabebome	102	.	16	.	F5	R	Asha	F	2	.	.	x	.	.	.	.	.	.	.	.	.
Wioso	103	409	32	32	E5	R	Asha	F	1	1	X	o	o	5715	7	5715	7	5715	7	5714	1
Agyei Baah	104	.	16	.	D6	R	Asha	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Kwakuben	105	417	16	16	D6	R	Asha	F	2	.	.	x	.	5704	12	5705	12	5705	12	5703	7
Ntabana	.	422	.	32	D5	R	Asha	F	.	1	.	.	o	5501	10	5501	10	5501	10	5501	0
Ahantamwa(Tipokrom)	107	430	16	16	B5	R	Bron	F	2	.	.	x	.	0619	1	6520	13	6520	13	0613	1
Yankye/Kukuom	108	429	16	16	C5	R	Bron	F	1	.	.	x	.	6622	3	6622	3	6622	3	6614	3
Bechem/New Bansakrom	109	.	16	.	C6	R	Bron	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Asunsu No.1	111	.	16	.	B6	R	Bron	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Brofoyedru	.	438	.	16	B6	R	Bron	F	.	1	X	.	o	6618	3	6618	3	6616	9	6612	3
Heman	112	445	16	16	C2	SU	West	F	1	1	X	x	o	0017	0	0017	0	0017	0	0014	0
Abosso	.	446	.	16	D2	U	West	F	.	.	X	.	o	0015	0	0013	6	0013	6	0012	0
Boizan	113	.	16	.	B4	SU	West	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Assin Manso	114	453	16	16	E3	SU	Cent	F	.	1	.	x	.	1110	0	1110	0	1110	0	1107	0
Nkontunse	115	.	16	.	D4	SU	Cent	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Worakeso	.	454	.	16	E3	R	Cent	F	.	1	.	.	o	1113	0	1112	12	1112	12	1109	0
Bawduaa	117	.	16	.	F4	SU	East	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Nkwateng	.	462	.	16	E3	SU	East	F	.	.	.	.	o	3422	7	3418	12	3418	12	3403	0
Anum Apapam	118	469	16	16	F3	SU	East	F	1	.	.	.	.	3403	0	3403	0	3403	0	3401	0
Kukurantumi	.	470	.	32	G4	SU	East	F	.	.	X	.	o	3401	0	3401	0	3401	0	3419	0
Bunso	119	.	16	.	G4	SU	East	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Kwahu Praso	120	477	16	16	F5	SU	East	F	1	.	.	x	.	3414	0	3419	0	3419	0	3411	0
Asakraka	.	478	.	16	F5	SU	East	F	.	1	X	.	o	3423	0	3423	0	3423	0	3407	0
Kpandu Fesi	121	.	16	.	H6	SU	Volt	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Nerebehi	.	486	.	16	D5	SU	Asha	F	.	1	X	.	o	5505	1	5505	1	5504	3	5503	0
Achiasi	123	.	16	.	E5	SU	Asha	F	1	.	.	x	.	.	.	.	.	.	.	.	.

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Manso Abore            124  493  16   16  D4  SU  Asha  F  1  .  .  x  .  5515  0  5516   9  5516   9  5510  0
Fereso                  .   494   .   16  E4  SU  Asha  F  .  1  X  .  o  5512  2  5512   2  5513  15  5508  0
Ampunyasi              125   .   15   .   D4  SU  Asha  F  1  .  .  x  .   .    .   .    .    .    .    .   .
Bompata                126  501  16   16  E5  SU  Asha  F  1  1  X  x  o  5713  0  5713   0  5713   0  5712  0
Nyaboe                  .   502   .   32  E5  SU  Asha  F  .  1  X  .  o  5711  3  5711   3  5711   3  5711  1
Boanim                 127   .   32   .   E6  SU  Asha  F  1  .  .  x  .   .    .   .    .    .    .    .   .
Bodomasi               128  509  10   15  E5  SU  Asha  F  1  .  .  x  .  5714  2  5714   2  5714   2  5713  0
Banko                   .   510   .   16  E5  SU  Asha  F  .  .  .  .  o  5715  6  5715   6  5715   6  5714  .
Ahwiriwma              130  517  16   16  D6  SU  Asha  F  1  1  X  x  o  5706  0  5501  13  5706   0  5704  0
Gaoso(Gambia #2)        .   518   .   16  B6  R   Bron  F  .  1  .  .  o  6623  0  6625  17  6624  12  6617  0
Susuanso               131   .   16   .   C6  SU  Bron  F  1  .  .  x  .   .    .   .    .    .    .    .   .
Tanoso                 132  525  16   16  D6  SU  Bron  F  1  1  X  x  o  6602  0  6602   0  6602   0  6602  0
Aworokowa               .   526   .   16  C7  SU  Bron  F  .  1  X  .  o  6607  0  6603   5  6607   0  6605  0
Tarkwa                 133   .   16   .   D2  U   West  F  .  .  .  o  .   .    .   .    .    .    .    .   .
Bibiani                134  533  16   16  C4  U   West  F  .  .  X  x  o  0506  0  0506   0  0506   0  5504  0
Assin Foso              .   534   .   32  E3  U   Cent  F  .  .  .  .  o  1111  0  1112   0  1112   0  1108  0
Oda                    135   .   16   .   F3  U   East  F  .  .  .  o  .   .    .   .    .    .    .    .   .
Akwatia                136  541  16   16  F4  U   East  F  .  .  X  x  o  3410  1  3411   6  3411   6  3412  0
Kade                    .   542   .   16  F4  U   East  F  .  .  .  .  o  3411  0  3411   0  3411   0  3406  0
Asamankese             137   .   16   .   F3  U   East  F  .  .  .  o  .   .    .   .    .    .    .    .   .
Anyinam                138  549  16   16  F4  U   East  F  .  .  X  x  o  3417  1  3417   1  3417   1  3417  0
Begoro                  .   550   .   16  G4  U   East  F  .  .  .  .  o  3413  1  3413   1  3405  14  3418  0
Mpraeso                139   .   16   .   F5  U   East  F  .  .  .  x  .   .    .   .    .    .    .    .   .
Kpandu: Adombo         140  557  17   32  H5  U   Volt  F  .  .  X  o  o  4810  1  4810   1  4810   1  4811  0
Kwamikrom               .   558   .   32  H6  U   Volt  F  .  .  X  .  o  4811  0  4812   9  4813   9  7813  0
Kumasi:City Hotel      142  565  14   16  D5  U   Asha  F  .  .  X  o  .  5521  1  5521   1  5521   1  5514  0
Kumasi: Bomso           .   566   .   16  D5  U   Asha  F  .  .  .  .  o  5523  1  5524   1  5524   1  5516  0
Kumasi:Military Sta    143   .   16   .   D5  U   Asha  F  .  .  .  o  .   .    .   .    .    .    .    .   .
Kumasi:Aboabo          144  573  16   16  D5  U   Asha  F  .  .  X  o  o  5519  0  5518   2  5518   2  5512  0
Kumasi: New Amakom      .   574   .   16  D5  U   Asha  F  .  .  X  .  o  5520  0  5521   1  5521   1  5513  0
Kumasi:Zongo           145   .   31   .   D5  U   Asha  F  .  .  .  x  .   .    .   .    .    .    .    .   .
Kumasi:Old tafo Moshi  147   .   16   .   D5  U   Asha  F  .  .  .  .  .   .    .   .    .    .    .    .   .
No Kumasi: Manhiya      .   582   .   32  D5  U   Asha  F  .  .  .  .  o  5517  0   .    .    .    .   5511  0
Kumasi:Old Tafo GOIL   148  589  16   16  D5  U   Asha  F  .  .  X  x  o  5701  1  5701   1  5701   1  5701  0
Obuasi                 149   .   32   .   D4  U   Asha  F  .  .  .  o  .   .    .   .    .    .    .    .   .
Odumasi                150  597  16   16  E5  U   Asha  F  .  .  .  x  .  5711  1  5711   1  5711   1  5710  0
Effiduase              151   .   16   .   E5  U   Asha  F  .  .  .  x  .   .    .   .    .    .    .    .   .
Agogo                   .   598   .   16  E5  U   Asha  F  .  .  X  .  o  5710  0  5710   0   .    .   5709  .
Akumadan                .   606   .   16  D6  U   Asha  F  .  .  X  .  o  5601  0  5601   0  5601   0  5601  0
Sunyani:Park            .   614   .   16  C6  U   Bron  F  .  .  X  .  o  6611  0  6611   0  6610   0  6607  0
Kenyase No.2           153   .   32   .   C5  U   Bron  F  1  .  .  o  .   .    .   .    .    .    .    .   .
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Name																					
Nsuare	155	.	16	.	C6	U	Bron	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Dormaa Ahenkro	156	621	16	16	B6	U	Bron	F	.	.	.	o	.	6617	0	6616	0	6616	0	6611	0
Techiman	.	622	.	32	D7	U	Bron	F	.	.	.	.	.	6603	0	6603	0	.	.	6603	0
Warapong	157	.	16	.	G4	R	East	S	4	.	.	x	.	.	.	.	.	.	.	.	.
Senchi	158	629	16	16	H4	R	East	S	2	2	X	x	o	3801	6	3801	6	3801	6	3801	1
Aboma Yaw	.	630	.	16	H4	R	East	F	.	1	.	.	o	4802	7	4803	7	4803	7	3803	3
Catterpillar	159	.	16	.	G5	R	East	S	1	.	.	.	.	.	.	.	.	.	.	.	.
Vudese	160	637	16	16	H4	R	Volt	F	2	.	.	x	.	4806	4	4806	4	4807	4	4808	4
Tokor	161	.	15	.	H5	R	Volt	F	1	.	.	x	.	.	.	.	.	.	.	.	.
Abutia-Agove	.	638	.	16	H5	R	Volt	F	.	1	X	.	o	4805	0	4805	0	4805	0	4805	3
Suhuem	162	645	16	16	H7	R	Volt	S	1	.	.	o	.	4818	9	4817	15	4817	15	4817	9
Amanfrom/Dodofie	.	646	.	16	H7	R	Volt	F	.	1	.	.	.	4819	3	4819	3	4819	3	4818	3
Duflumkpa	163	.	16	.	I8	R	Volt	S	1	.	.	o	.	.	.	.	.	.	.	.	.
Duodoso	164	653	16	16	B7	R	Bron	S	1	1	X	x	o	6612	1	6614	9	6612	1	6608	0
Boase	165	.	16	.	C7	R	Bron	S	2	.	.	o	.	.	.	.	.	.	.	.	.
Yaa Mansa I	.	654	.	16	B7	R	Bron	F	.	1	X	.	o	6613	0	6614	9	6613	0	6609	5
Buaben	.	662	.	16	D7	R	Bron	F	.	1	X	.	o	6608	3	6609	5	6608	3	6606	1
Jato Zongo	167	.	.	.	E7	R	Bron	S	1	.	.	o	.	.	.	.	.	.	.	.	.
Tato Bator	168	669	16	16	G7	R	Bron	S	1	.	.	o	.	7709	28	7709	28	7709	28	6708	.
Bobenyuron	169	.	16	.	C11	R	Nort	S	2	.	.	x	.	.	.	.	.	.	.	.	.
Kwakro Akura	.	670	.	16	F7	R	Bron	S	.	1	.	.	o	7709	12	7709	12	7709	12	6706	7
Kpandai/Kitare	170	677	16	16	H8	R	Nort	S	1	.	.	x	o	7820	24	7820	24	7821	24	7821	24
Dobum No.2	.	678	.	16	H8	R	Nort	S	.	1	.	.	.	7822	1	7821	6	7822	1	7820	6
Tangmaya	171	.	16	.	G10	R	Nort	S	2	.	.	x	.	.	.	.	.	.	.	.	.
Zang	172	.	15	.	H10	R	Nort	S	1	.	.	x	.	.	.	.	.	.	.	.	.
Yeshie	.	686	.	32	G11	R	Nort	S	.	2	.	.	o	7919	8	7919	8	7919	8	7915	0
Zozali	173	.	32	.	F11	R	Nort	S	2	.	.	o	.	.	.	.	.	.	.	.	.
Tuni	174	693	16	16	G12	R	Nort	S	1	1	X	x	o	7920	14	7921	19	7921	19	7916	0
Gbenduri	.	694	.	30	F12	R	Nort	S	.	2	X	.	o	7910	7	7910	7	7910	7	7907	7
Chagu	175	.	32	.	C11	R	UppW	S	1	.	.	.	.	.	.	.	.	.	.	.	.
Jeyin Jamayiri	176	701	32	32	C12	R	UppW	S	1	1	X	o	o	8903	11	8902	17	8902	17	8902	12
Brutu	177	.	16	.	B13	R	UppW	S	1	.	.	o	.	.	.	.	.	.	.	.	.
Navrongo	179	.	16	.	E13	R	UppE	S	.	.	.	x	.	.	.	.	.	.	.	.	.
Anur Yeri	.	710	.	16	E13	R	UppE	S	.	2	.	.	o	9909	6	9909	6	9909	6	9906	6
Channia	180	717	16	16	E14	R	UppE	S	1	1	X	x	o	9908	3	9908	3	9908	3	9905	3
Shiega-Won/Tongo	.	718	.	32	F13	R	UppE	S	.	1	.	.	o	9911	7	9911	7	9911	7	9908	7
Kulbia-Nayire	181	.	16	.	F13	R	UppE	S	1	.	.	.	.	.	.	.	.	.	.	.	.
Dua II	182	725	16	16	F13	R	UppE	S	1	.	.	x	o	9915	3	9915	3	9915	3	9912	3
Zoko Kanga	.	726	.	16	F13	R	UppE	S	.	1	.	.	o	9912	8	9914	8	9914	8	9911	0
Yeliwoko	183	.	16	.	G13	R	UppE	S	3	.	.	.	.	.	.	.	.	.	.	.	.
Nafkoliga	184	733	32	32	G13	R	UppE	S	1	1	X	o	o	9917	7	9914	75	9917	7	9914	6

Name																					
Zorsi-Natingo	.	734	.	16	G14	R	UppE	S	.	1	X	.	o	9918	4	9914	56	9914	56	9913	4
Amankwakrom	186	741	16	16	H6	SU	East	S	1	.	.	o	.	3421	9	3421	9	4810	25	3408	0
Tsito	.	742	.	16	H5	SU	Volt	F	.	.	X	.	.	4804	1	4804	1	4804	1	4804	0
Anfoega	187	.	16	.	H5	SU	Volt	F	.	.	.	x	.	.	.	.	.	.	.	.	.
Damanko	188	749	16	16	H9	SU	Volt	S	.	.	.	x	.	4823	0	7824	19	7824	19	4819	0
Dwenem	.	750	.	16	B7	R	Bron	F	.	1	.	.	o	6615	0	6614	8	6615	0	6610	0
Ewisa	189	.	16	.	C7	SU	Bron	S	1	.	.	o	.	.	.	.	.	.	.	.	.
Gyema	190	757	16	16	D7	SU	Bron	S	1	.	.	o	.	6605	0	6605	0	6606	11	6604	0
Okyeamekrom	.	758	.	16	F7	SU	Bron	S	.	1	X	.	o	7709	14	7709	14	7709	14	6707	.
Adibo	191	.	16	.	H10	SU	Nort	S	1	.	.	.	.	.	.	.	.	.	.	.	.
Charria	192	765	16	16	B12	SU	UppW	S	.	.	X	o	o	8907	0	8906	5	8907	0	8904	5
Tampala	.	766	.	16	B12	SU	UppW	S	.	1	.	.	o	8904	6	8904	6	8905	20	8903	4
Kpong	193	.	16	.	H4	U	East	S	.	.	.	x	.	.	.	.	.	.	.	.	.
Ho: Ahliha	194	773	16	16	H5	U	Volt	F	.	.	X	x	o	4809	0	4809	0	4809	0	4806	0
Ho: Estate House	.	774	.	16	H5	U	Volt	F	.	.	X	.	.	4809	0	4809	0	4809	0	4807	0
Wenchi	195	.	16	.	C7	U	Bron	S	.	.	.	o	.	.	.	.	.	.	.	.	.
Yeji	196	781	16	16	F8	SU	Bron	S	.	.	X	x	o	6708	0	6707	2	6707	2	6705	0
Bole	.	782	.	16	C10	U	Nort	S	.	.	X	.	o	7901	0	7901	0	7901	0	7901	0
Yendi	197	.	32	.	G10	U	Nort	S	.	.	.	x	.	.	.	.	.	.	.	.	.
Tamale: Zogbeli	198	.	16	.	F10	U	Nort	S	.	.	.	x	.	.	.	.	.	.	.	.	.
Kumbumgu	199	.	16	.	F10	U	Nort	S	.	.	.	x	.	.	.	.	.	.	.	.	.
Bolgatonga: Police	200	797	16	16	F13	U	UppE	S	.	.	.	x	.	9913	0	9914	0	9914	0	9910	0
Bolgatonga: Nawongo	.	798	.	16	F13	U	UppE	S	.	.	.	.	o	9912	0	9914	0	9914	0	9909	0

Extra Workloads: (should be excluded)

Name								
Accra:Dansoman	.	174	.	32	G3	U	Gr.A	C
Accra:Town Council	.	177	.	32	G3	U	Gr.A	C
Accra:Bubrashie	.	190	.	16	G3	U	Gr.A	C
Accra	.	209	.	32	G3	U	Gr.A	C
Accra:Nima market	.	233	.	16	G3	U	Gr.A	C
Accra:Nima Pleasant	.	238	.	16	G3	U	Gr.A	C
Accra:W.Af Sec School	.	246	.	32	G3	U	Gr.A	C
Zang	.	685	.	16	H10	R	Nort	S
Tamale: Zogbeli	.	789	.	16	F10	U	Nort	S
Tamale	.	790	.	32	F10	U	Nort	S

Complete List of Health Facilities with IDs

GHANA LIVING STANDARDS SURVEY, HEALTH AND FAMILY PLANNING FACILITIES SURVEY, 1989

INTERVIEW
FACID[5] HEALTH FACILITY NAME   DATE

FACID	HEALTH FACILITY NAME	DATE	FACID	HEALTH FACILITY NAME	DATE
5501	Mankraso Health Post	15/12/89	1116	Nkwantanum Health Post	17/12/89
5503	Nyinahin Health Post	8/12/89	1117	Peace Clinic Mankessim	17/12/89
5504	MCH/PH Clinic Knwie	9/12/89	1118	Winneba Hospital	18/12/89
0506	Bibiani Hospital	8/12/89	1119	Winneba MCH/FP Division	18/12/89
5508	Bekwai Gov't Hospital MCH/FP	11/12/89	1120	Bethel Mat Home Clinic Winneba	18/12/89
5510	New Edubiase Health Post	13/12/89	1121	MCH/FP MOH Apam	19/12/89
5512	Maranatha Maternity & Clinic	12/12/89	1122	Catholic Hospital Apam	19/12/89
5513	Fomena Health Centre	12/12/89	1123	Essuehyia Health Post	20/12/89
5516	Manso Edubia Health Post	13/12/89	1124	St.Lawrence Clinic Mankessim	20/12/89
5518	Manhyia Clinic, near Kumasi	15/12/89	0001	Essikado Health Center	11/12/89
5521	Komfo Anokye Polyclinic, Kumasi	19/12/89	0002	Mamenase Memorial Mat Home	11/12/89
5524	U.S.T. Hospital, Kumasi	14/12/89	0003	Fijai Clinic	12/12/89
5502	Dwen Woho Clinic	.	0004	Mrs. Cudjoe Mat Home	13/12/89
5505	? Clinic	.	0005	George Clinic	13/12/89
5507	Dominase Maternity Home	.	0006	Wesimunisim Polyclinic	13/12/89
5509	Dankura Health Post	.	0007	Agona Junction Health Post	14/12/89
5511	New Edubiase Clinic	.	0008	Primary Health Care	15/12/89
5514	Fomena Clinic	.	0009	Kikam Clinic	16/12/89
5515	Manso Abure Clinic	.	0010	Elubo Health Post	15/12/89
5517	Manhyia Hospital(?) near Kumasi	.	0011	Half Assini Government Hospital	16/12/89
5519	? Clinic	.	0012	Nsulem Health Post	18/12/89
5520	? Clinic	.	0013	Tarkwa General Hospital	18/12/89
5522	Adom Clinic Santasi	.	0014	Bosomtil Mat Home	18/12/89
5523	? Private Hospital (Kumasi?)	.	0015	Yaa Buadiwaah Mem Clinic	18/12/89
1101	Dr. Bentsienchill Mem. Clinic	11/12/89	0016	Adom Clinic	19/12/89
1102	Ewin Polyclinic	11/12/89	0017	Himan Health Post	19/12/89
1103	Elmina Urban Health Center	12/12/89	0019	MCH Outreach Clinic	20/12/89
1104	Adobea Timpong Mem. Clinic	12/12/89	0020	Tarkwa Clinic (Annex)	21/12/89
1105	Adisadel Urban Health Post	13/12/89	0021	Wassa Akropong Health Center	21/12/89
1106	Anomabo Health Post	13/12/89	1022	Homopaetic	21/12/89
1107	Abrafo Adrmase PHC Levy "A"	13/12/89	1023	Twifp Prasp	21/12/89
1108	Jakai Health Post	14/12/89	1024	Kotoka Mem. Clinic	22/12/89
1109	Abakrampa Maternity	14/12/89	0018	Adom Clinic	.
1110	Assin Mansu Health Post	15/12/89	2201	Labadi Polyclinic	6/12/89
1111	St. Franci Xavier Hospital	15/12/89	2202	Unicorn Clinic	6/12/89
1112	MOH Family Clinic	15/12/89	2203	Manna Mission Hospital	7/12/89
1113	Wurakese Primary Health Care	15/12/89	2204	Maab Medical Center	8/12/89
1114	Catholic Hospital Breman/Asikuma	17/12/89	2205	Dela Clinic	11/12/89
1115	Breman Akikuma MCH/FP DIV.	17/12/89	2206	JamesTown Clinic	12/12/89

[5]FACID is a unique identification number for the facility created in the following way:
FACID = REGION * 1000 + TEAM * 100 + FACILITY

2207	Mamprobi Polyclinic	12/12/89	4819	Dodo Amanfrom Health Centre	18/12/89
2208	Star of the Sea Clinic	13/12/89	7820	Kpandai Health Centre	21/12/89
2209	Kameshie Polyclinic	14/12/89	7821	Kpandai Health Post	19/12/89
2210	First Shadraui Clinic	14/12/89	7822	Oti River Leprosarium Kanchina	22/12/89
1211	Alpha Nlb	15/12/89	4823	Revival Clinic Annex Damanko	20/12/89
1212	Sawjiase Health Post	15/12/89	7824	Bimbilla Health Centre	20/12/89
1213	St. Andrews Clinic	17/12/89	3401	Kukurantumi Health Post	8/12/89
1214	Swedru Health Post	18/12/89	3402	Akuafoman Clinic	17/12/89
1215	Anakye Memorial Clinic	19/12/89	3403	MCH/FP PHC Level B Anum Apabam	17/12/89
3216	Mepom Health Post	18/12/89	3403	Akiakwa Health Post	10/12/89
3217	Asikasu Clinic	18/12/89	3405	Bosuso Health Centre	15/12/89
1218	Akroso Health Post	19/12/89	3406	Holy Family Hospital	15/12/89
2219	Okodan Clinic	22/12/89	3407	Korifdua Central Hospital	20/12/89
7901	Bole Health Centre	7/12/89	3408	Suhum Government Hospital	20/12/89
8902	Issa Clinic	8/12/89	4810	Kpando Health Centre	14/12/89
8903	Kojoperi Primary Health Care	9/12/89	3410	OCD Hospital Akinama	13/12/89
8904	Jirapa Hospital	9/12/89	3411	Kade Health Centre	19/12/89
8907	Charria Community Clinic	10/12/89	3409	Ayirebi Health Post	14/12/89
8906	Wa Hospital	15/12/89	3413	Begora Salvation Army Clinic	11/12/89
8905	Nadoli Community Clinic	10/12/89	3414	Kwahu Praso Clinic	11/12/89
9908	Paga Health Posts	11/12/89	3415	MCH/FP PHC Level B Koaltar	17/12/89
9909	Sandema Health Center	11/12/89	3416	St. John Clinic Ofoase	18/12/89
7910	Walewale Health Center	12/12/89	3417	Anyiam Health Centre	18/12/89
9911	Tongo Health Post	13/12/89	3418	Nei Abirem Health Post	21/12/89
9912	Lebe Clinic (Bolgatonga)	13/12/89	3419	NCH/FP Level B, K. Praso	11/12/89
9913	Police Clinic (Bolgatonga)	13/12/89	3420	Atibie Hospital	12/12/89
9914	Bolga Hospital	13/12/89	3421	Donkorkrom Presby Hospital	14/12/89
9915	Bongo Health Centre	14/12/89	3422	St. Micheal's Clinic & Mat.	20/12/89
9916	Bangas Hospital	15/12/89	3423	Asakraka Clinic	12/12/89
9917	Binduri Primary Health Care	15/12/89	3424	Oframase Clinic & Maternity	13/12/89
9918	Bawku Hospital	15/12/89	3412	Bremase Health Center	.
7919	Gushegu Health Post	18/12/89	3301	Aburi Mat. & Child Health Care	10/12/89
7920	Baptist Medical Centre	17/12/89	3302	Teta Quashie Memorial Hospital	11/12/89
7921	Ganbaga Health Post	20/12/89	3303	Adukrom Health Post	11/12/89
3801	U.R.A. Hospital	8/12/89	2304	Agomeda Community Clinic	14/12/89
4802	New Galilee Clinic Juapong	6/12/89	2305	Viva Clinic	12/12/89
4803	Juapong Health Post	11/12/89	2306	Tema Clinic	12/12/89
4804	Tsito Health Post	11/12/89	2307	Manhean Health Post	12/12/89
4805	Abutia Agove Health Post	12/12/89	2308	Pro Vita Specialist Hospital	8/1/90
4806	Christ the Savior Mat Home Ziope	12/12/89	2309	St. Mary's Hospital	20/12/89
4807	Ziope Health Post	9/12/89	2310	Dodowah Health Post	14/12/89
4808	E.P. Church Hospital	7/12/89	4311	Battor Catholic Hospital	14/12/89
4809	Government Hospital Ho	11/12/89	2312	Sege Health Post	14/12/89
4810	Kpando Health Centre	14/12/89	2313	Trinity Health Services	14/12/89
4811	Akabuo Memorial Clinic	15/12/89	4314	Dabala Health Post	15/12/89
4812	Truth Clinic Mat., Pata Abotoase	22/12/89	4315	Government Hospital Keta	15/12/89
4813	Tapa Abotoase Health Post	15/12/89	4316	Hoggar Clinic	16/12/89
4814	Alavanyo Wudidi Health Post	15/12/89	4317	Nancy's Mat. Home, Akatsi	16/12/89
4815	St. Anthony Maternity Home Kute	17/12/89	4318	Weme Roman Cath. Clinic, Abor	18/12/89
4816	New Ayoma Health Post	17/12/89	4319	Government Health Post Gefia	18/12/89
4817	Kadjebi Health Centre	18/12/89	4320	NCH/Family Planning Akatsi	18/12/89
4818	Revival Clinic Poase Cement	18/12/89	4321	Cent. Agbozume Clinic	18/12/89

4322	Mission Hospital Dzodze	.		6613	Yaa Mansah Community Clinic	14/12/89
4323	? Maternity Home	.		6614	St. Mary's Hospital Drobo	14/12/89
5701	Urban Health Centre	11/12/89		6615	Government Rural Clinic	14/12/89
5702	Ranseye Memorial Hospital	9/12/89		6616	Dormaa Presbyterian Hospital	15/12/89
5703	Asuofha Maternity Clinic	9/12/89		6617	Old Town Clinic	15/12/89
5704	St. Patrick Hospital Offinso	11/12/89		6618	Cecis Maternity Home	16/12/89
5705	MCH/Dressing Station Offinso	12/12/89		0619	Dabi Asem Clinic	16/12/89
5706	Community Health Clinic	12/12/89		6520	Cmap 15 Rural Clinic	17/12/89
6707	Health Centre	13/12/89		6621	Assumura Primary Health Care	17/12/89
6708	New Life Clinic	13/12/89		6622	Kukuom Health Post	.
7709	Rural Health Clinic Kwame Danso	14/12/89		6623	Asompa Homeopathic Clinic	.
5710	Agogo Hospital	18/12/89		6624	Nim Timba Company Clinic	.
5711	Health Post Konongo/Odumasi	18/12/89		6625	Goaso Health Centre	.
5712	Sabs Hospital	18/12/89		0626	Bilsan First Aid Centre	.
5713	Bompata Health Post	19/12/89		0627	Sefwi Wiawso Gov't Hospital	.
5714	Kumawi Health Post	20/12/89		0628	Primary Health Care	.
5715	Efiduasi Health Centre	20/12/89		0629	Yeboah Maternity Clinic	.
5716	Ejisu Dressing Station	20/12/89
5717	Sun Sun P.G. Clinic	20/12/89
5718	Abochogya Health Post	21/12/89
5719	Sunkwa Clinic Adwunaksi	20/12/89
5601	Akumadan Health Post	7/12/89
6602	Tanoso Health Post	7/12/89
6603	Adom Maternity Home/Clinic	8/12/89
6604	Holy Family Hospital	8/12/89
6605	Adom Maternity Home	8/12/89
6606	Kintampo Health Center	9/12/89
6607	Aworowa community Clinic	9/12/89
6608	Busunyaa rural Clinic	9/12/89
6609	Yefri Health Post	9/12/89
6610	Sunyani Regional Hospital	11/12/89
6611	Opoku Clinic	12/12/89
6612	Baano No. 1 Rural Clinic	14/12/89

END OF HEALTH FACILITIES LIST