

Viet Nam Living Standards Survey (VNLSS), 1992-93

Basic Information

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Basic Information

1. Overview

This document provides background information on the Viet Nam Living Standards Survey, and the datasets resulting from this nation-wide household survey conducted between September 1992 and October 1993. Information is provided on the survey design, and implementation, the content of the different questionnaires, data processing activities, and the different datasets available for those have obtain permission to use the data.

2. Survey Questionnaires

2.1 Household Questionnaire

The household questionnaire contains modules (sections) to collect data on household demographic structure, education, health, employment, migration, housing conditions, fertility, agricultural activities, household non-agricultural businesses, food expenditures, non-food expenditures, remittances and other income sources, savings and loans, and anthropometric (height and weight) measures.

For some sections (survey information, housing, and respondents for second round) the individual designated by the household members as the household head provided responses. For some others (agro-pastoral activities, non-farm self employment, food expenditures, non-food expenditures) a member identified as most knowledgeable provided responses. Identification codes for respondents of different sections indicate who provided the information. In sections where the information collected pertains to individuals (education, health, employment, migration, and fertility) each member of the household was asked to respond for himself or herself, except that parents were allowed to respond for younger children. In the case of the employment and fertility sections it is possible that the information was not provided by the relevant person; variables in these sections indicate when this is the case.

The household questionnaire was completed in two interviews two weeks apart: Sections 0-8, were conducted in the first interview, sections 9-14 were conducted in the second interview, and section 15 was administered in both interviews. The survey was designed so that more sensitive issues such as credit and savings were discussed near the end. The content of each module is briefly described below.

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, ethnic group of the household head, the language used by the respondent and other technical information related to the interview are noted. Section 0B summarizes the results of the survey visits, i.e. whether a section was completed on the first visit or the second visit. Section 0C, not entered into the computer, contains remarks of the interviewer and the supervisor. Since the data in Section 0C are retained only on the questionnaires, researchers cannot gain access to them without checking the original questionnaires at the General Statistical Office in Hanoi.

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 household members who are temporarily away from home. The household head is listed first and receives the personal id code 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. A lunar calendar is provided in the questionnaire to help respondents recall the year and month they were born. For individuals who are married and whose spouse resides in the household, the personal id number of the spouse is noted. This way information on the spouse can be collected by appropriately merging information from the roster and other parts of the survey.

Section 1B collects information on the parents of all household members. For individuals whose parents reside in the household, parents' personal id numbers are noted, and information can be obtained by appropriately merging information from other parts of the survey. For individuals whose parents do not reside in the household, information is recorded on whether each parent is alive, as well as their schooling and occupation.

In section 1C information is collected for children of household members living elsewhere. This information is only collected for children below 30 years of age. Children who have died are not included. All living children are listed along with the personal id number of their father and mother (if parents reside in the household). Then information on the age, schooling, and current place of residence of each such child is recorded.

Section 2 SCHOOLING

In Section 2, data were collected on self-reported literacy and numeracy, school attendance, completion, and current enrollment for all household members of creche or pre-school age and older. The interpretation of creche or pre-school age appears to have varied, with the result that while education information is available for some children of pre-school age, not all pre-school children were included in this section. But for ages 6 and above information is available for nearly all individuals, so in essence the data on schooling can be said to apply to all persons 6 age and above. For those who were enrolled in school at the time of the survey, information was also collected on school attendance, distance, travel time, expenses, and scholarships.

Section 3 HEALTH

In this section, data on any illness or injury experienced in the 4 weeks preceding the date of interview were obtained for all household members. For those who reported being ill in the past 4 weeks, information was obtained on the duration and type of illness, type of care sought, distance to health provider, travel time, and cost of medication and consultation. All individuals, whether ill or not in the past 4 weeks, were asked if they had been ill in the year before the survey, and if so the total amount they had spent on health care in the previous year. At the request of the World Health Organization, several questions on smoking were asked of all individuals 6 years of age and older.

Section 4 EMPLOYMENT

- 4A TYPE OF WORK AND JOB SEARCH
- 4B MAIN JOB DURING THE PAST SEVEN DAYS
- 4C SECONDARY JOB DURING THE PAST SEVEN DAYS
- 4D SEARCH FOR ADDITIONAL EMPLOYMENT
- 4E MAIN JOB DURING THE PAST TWELVE MONTHS
- 4F EMPLOYMENT HISTORY
- 4G SECONDARY JOB DURING THE PAST TWELVE MONTHS
- 4H OTHER ACTIVITIES

All individuals age six and older were asked to respond to the economic activity questions in Section 4, beginning with questions on the nature of their work in the last seven days. For persons who did not work in last seven days, data were collected on job search, 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 place of 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.

Occupation and sector of employment codes are not available in the household questionnaire. These appear in the supervisor's manual and have been reproduced in Appendix F. There are some differences in the codes listed in Appendix F and those that appear in the data. Some codes were used by the survey team that do not appear in Appendix F (and the supervisor's manual). It is not possible to determine the specific occupation these stand for, but based on the ordering of the codes it is possible to determine the broad classification they fall under (for example, construction, transport, storage, communication, etc.). These can, therefore, be treated as "other occupations" within the broad classification. Finally, the last 4 codes in Appendix F, namely, X, X-1, X-2, and X-3, appear as 0, -1, -2, and -3 in the data. The Xs were dropped from these codes so that the variable could be stored as a numeric variable.

Section 5 MIGRATION

All household members age 15 or older responded to the questions on migration in Section 5. If not born at current place of residence, respondents were asked whether the place of birth was a village, town, city, or other. The age at which such individuals left their place of birth was recorded, as well as the main reason for leaving. In addition, individuals were asked the main reason for coming to the current place of residence, from what region they had come to the current place, and whether the previous place was a village, town or city. Finally, respondents were asked how many places they had lived for periods of more than three months in their life?

Section 6 HOUSING

6A TYPE OF DWELLING

6B HOUSING EXPENSES

6C HOUSING CHARACTERISTICS

Section 6 contains information on the type of dwelling, housing expenses, and housing characteristics for all households interviewed. Information was collected on the number of rooms in the dwelling, ownership status, wall material, roof material, water source, toilet type, utilities expenses, and square meters of living area. Respondents for all 4800 households, regardless of whether the dwelling was owned or rented, were asked for the resale value of the dwelling. This section also contains information on type of cooking fuel used, the time and distance involved in collecting wood, and whether it is the primary cooking fuel used by the household.

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

In Section 7, the principal respondent for Round One 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, and the household members who know most about them. Finally, a woman was selected at random from among the women in the household between the ages of 15 and 49 to respond to the fertility module.

In principle, those identified in this section for interviewing in later sections should be the ones who are actually interviewed in those sections. While this is true for many households there are some cases where the respondents for the agriculture, food expense, and non-food expense sections are different from those identified in this section. This is possible if the person identified was not present at the time the section was completed (e.g. the second visit to the household).

Section 8 FERTILITY

8A FERTILITY HISTORY

8B FAMILY PLANNING

In each household one woman 15-49 years old, randomly selected in Section 7, responded to the questions in Section 8. If a household contained no woman in this age range, Section 8 was not completed. The woman was asked if she had ever been pregnant and, if so, whether she had ever given birth. Women who respond that they have are asked the birth date and sex of all children they have given birth to, including children 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 was married, and the number of miscarriages she has had. Section 8B gathers information on knowledge, use, source and cost of six modern and six traditional methods of family planning. In using data from this section it should be kept in mind that unlike the Demographic and Health Surveys and the World Fertility Surveys, interviewers were not necessarily women.

II. SECOND INTERVIEW

Section 9 AGRO-PASTORAL ACTIVITIES

- 9A1 AGRICULTURAL LAND
- 9A2 FOREST LAND
- 9A3 SELLING OR BUYING LAND
- 9A4 VACANT LOT, BALD HILL, LAND CLEARING RECLAMATION
- 9A5 AGRICULTURAL TAXES
- 9B1 PADDY
- 9B2 OTHER FOOD CROPS
- 9B3 ANNUAL INDUSTRIAL CROPS
- 9B4 PERENNIAL INDUSTRIAL CROPS
- 9B5 FRUIT CROPS
- 9B6 FOREST TREES
- 9C CROP BYPRODUCTS
- 9D FARM INPUTS
- 9E TRANSFORMATION OF HOMEGROWN CROPS
- 9F LIVESTOCK
- 9G OTHER ANIMAL PRODUCTS
- 9H RAISING/PLANTING WATER PRODUCTS
- 9I EXTENSION CONTACTS FOR LIVESTOCK
- 9J LIVESTOCK EXPENDITURES
- 9K HAND TOOLS
- 9L 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. This section is by far the largest section of the household questionnaire, with many subsections that contain information on different aspects of agricultural production and related livestock activities C collectively referred to as agro-pastoral activities.

Sections 9A1 to 9A5 collect information on household's control over land of different tenures. These include land allocated by the commune, auctioned land, privately held land, rented/sharecropped land, and swidden land. In each case data are obtained on total land size, size of irrigated land, and payments for use of land. For annual crop land information is also obtained on quality of land. Similar information is obtained on water surface cultivated, forest land controlled, land reclaimed from a bald hill, newly ploughed land, and roadside/riverside land. In these sections data are also obtained on purchases and sales of land, and land taxes paid by the household.

Section 9B1 to 9B6 contain detailed output information for all crops grown by the household. This information is obtained separately for each crop and includes (in most cases) information on quantity produced, value of output, quantity sold in the market and given to the cooperative, quantity kept for seeds, quantity fed to livestock, and quantity given as gifts. In the case of paddy information is obtained, separately, for the summer crop, winter crop, and the autumn crop. It should be remembered that while data is obtained for each crop cultivated by a household, it is not possible to link the information on land tenure (and size) with output information to determine the tenure structure of land on which a certain crop is cultivated C

unless a household cultivates only one crop on the land it cultivates. Section 9C contains information on crop byproducts.

Section 9D obtains detailed information on seeds, manure, fertilizer, insecticides, and transportation for all crops cultivated by a household. This information is also crop-specific and can, theoretically, be linked with the output information in the earlier sections by matching the datasets by household codes and crop codes. Information on other inputs such as hired labor, packing and storage costs, etc., are obtained at an aggregated level for each household. Other crop-specific information obtained in this section consists of data on home consumption and on the use of agricultural extension services.

Section 9E contains information on transformation of home grown crops that were subsequently sold. This includes data on output for sale, codes of household members who participated in the production process, number of sales, revenues from these sales, and costs of production. Section 9F collects information on livestock, poultry, and other animals that are either consumed by a household or generate income. These data include an inventory of current numbers possessed, the numbers born, sold, consumed, given away or lost, and the numbers bought by a household. Also included is information on the value of current stocks, revenue from sales, and purchase costs. Section 9G then collects information on animal products such as milk, eggs, silk, manure, etc. Here information is restricted to revenue from sales. In section 9H similar information is collected for water animals (fish, shrimp, etc.).

Section 9I collects information on extension services for livestock, and section 9J contains information on livestock expenditures. Finally, section 9L and 9K collect data on implements and farm machinery owned by the household.

Section 10 NON-FARM SELF-EMPLOYMENT

10A WORKING CONDITIONS

10B EXPENDITURES

10C REVENUES

10D BUSINESS ASSETS

Section 10 gathers data on household businesses 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 is 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 C buildings, land, vehicles, tools and other durable goods C in the last twelve months is also collected.

Section 11 FOOD EXPENSES AND HOME PRODUCTION

11A HOLIDAY EXPENSES

11B NORMAL EXPENSES

In Section 11A the amounts spent on holidays, primarily Tet (New Year), 15th January, 15th July, Moon festival, and Independence day. The range of food items for which such expense information is obtained is smaller than that for which information is obtained in the Section 11B. The main reason for separating holiday expenses from normal expenses, a departure from the standard LSMS survey format, is to take into account the fact that the Tet holiday in Viet Nam often represents significant departures from normal spending patterns C particularly unusually high expenditures.

Section 11B collects detailed information on market purchases and consumption from home production for forty-five food items. Information is obtained for expenses since the interviewer's first visit. For a longer recall period (12 months) data are obtained on the number of months (in the preceding 12 months) each food item was purchased, the number of times purchases were made during those months, the quantity purchased each time, and the value per purchase. These four pieces of information can be combined to obtain the total expenditure on food in the 12 months before the date of the interview. Note that this, in effect, is a variable-recall procedure because the time frame for which purchase information is provided by a respondent can differ for two food items, as well as across respondents. Besides market purchases (including barter), information is also collected on consumption from home production. Again data are obtained on the number of months each item was consumed but, unlike market purchases, the information of the quantity and value of consumption is obtained by asking a single question on the total amount for the past 12 months (as opposed to asking how often purchased each month, quantity purchased each time, etc.).

Section 12 NON-FOOD EXPENDITURES & INVENTORY OF DURABLE GOODS

12A DAILY EXPENSES

12B ANNUAL EXPENSES

12C INVENTORY OF DURABLE GOODS

12D EXPENSES FOR REMITTANCES

Section 12 collects information on non-food household expenditures from the household member identified in Section 7 as the one most able to answer non-food expenditure questions. In section 12A 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. In section 12B expenditure data, both in the last two weeks and the last twelve months, were collected for shoes, cloth, clothing, home repairs, public transport, paper supplies, kitchen equipment, medical services, domestic servants, jewelry, entertainment and other goods (see household questionnaire). Purchase price, year of purchase, and resale value of durable goods owned were collected in Section 12C.¹

¹ Earlier versions of the data contained two variables instead of a single one for question number 3. This was the form in which data were received from Hanoi. The reason purchase price information was coded in two variables was because there was a devaluation in 1986, and so purchase price information from years before 1986, if coded in thousands of dong, would appear very small. Data were therefore presented in two variables with the first one

Relation and location of the recipients of remittances sent out from the household are noted in Section 12D (remittances received by the household are recorded in Section 13A).

Section 13 OTHER INCOME

13A INCOME FROM REMITTANCES

13B MISCELLANEOUS INCOME

Section 13 collects data on money and goods that come into the household as remittances or from other sources unrelated to employment, such as employee welfare funds, dowries, sale of consumer durables, rental of buildings, etc.

Section 14 CREDIT AND SAVING

14A MONEY AND GOODS LENT AND BORROWED

14B LOANS CONTRACTED

14C SAVINGS

Section 14 collects information on the amount of indebtedness of household members to people or institutions outside the household. If money or goods have been borrowed, or borrowed and repaid by any household member in the last twelve months, information is collected on those loans, including the source and amount of the loan, interest, side payments, collateral, repayment schedule, reason for borrowing, and number of loans from the same source. The household is asked to list different types of savings, if any, including bank deposits, bonds, cash (dong), US dollars, gold and value of paddy. The respondent is also asked the total value of all savings accounts.

Section 15 ANTHROPOMETRICS

Anthropometric measurements are completed for each household member. Data were collected on the household member's age, gender, date of measurement, weight, height, and arm circumference. It was also noted if female respondents were pregnant or breastfeeding. If a person was not measured the reason why is noted.

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. The questionnaire was administered only in rural areas, i.e. commune numbers 1 to 120.

representing thousands of dongs, and the second one representing amounts less than a thousand dongs. These variables have now been combined so that the most recent version of the data contain a single variable for purchase price in thousands of dongs.

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. Data are also gathered on the local land market and agricultural and non-agricultural wages in the community.

2.3 Price Questionnaire

In rural areas (commune numbers 1 to 120), price data were collected by the team supervisor for 36 food items, 31 nonfood items, 9 medicines, 7 insecticides/fertilizers, and 5 types of services from local markets. Three separate observations were made and these did not necessarily involve actual purchases. In some communes fewer than 3 observations were made, either because of a lack of three distinct markets, or for some other reason. A separate set of prices are available for urban areas (commune numbers 121 to 150). These were collected by the General Statistical Office as part of a separate effort to construct price indices in Viet Nam (see Appendix D), and their values appear to be comparable to those of the rural prices.

3. Sample

3.1 Sample Design

The sample covers 4800 households from all areas of Viet Nam. The sample design was self-weighted, which means that each household in Viet Nam had the same probability of being

selected. The overall sampling frame was stratified into two groups urban and rural, with sampling was carried out separately in each group (strata). About 20% of Vietnamese households live in urban areas, so the sample stratification ensures that 20% of selected households also come from urban areas. Within urban and rural areas, two lists of all communes was drawn up (one of urban communes and another of rural ones), province by province, in "serpentine" order.² The selection of communes within each list was done to ensure that they were spread out evenly among all provinces in Viet Nam.

The VNLSS sample design is the following. Within each province in Viet Nam, rural areas can be broken down into districts, and districts in turn are divided into communes (Xa). Urban areas in all provinces consist of centers/towns, which are divided into quarters (Quan), and then divided further into communes (Phuong). The number of communes in all of Viet Nam, both urban and rural, is about 10,000, and the average population in each is about 6,500. As explained in Section 4, each survey team covers 32 households in 4 weeks, 16 households in one area, and 16 in another area. For convenience all 32 households (i.e. both sets of 16 household) were selected from the same commune. This implied that 150 communes needed to be randomly selected ($32 \times 150 = 4800$), 30 in urban areas and 120 in urban areas. Within urban areas communes can be further divided into clusters (Cum), two of which were selected from which to draw two "workloads" of 16 households (16 from each of the two clusters). The same was done in rural areas, where each commune is divided into several villages (Thon). The average size of urban clusters and rural villages is somewhat less than 1000 households.

The VNLSS sample was drawn in three stages. Because the General Statistical Office in Hanoi knows the current population of each commune in Viet Nam (but not of each cluster or village within each commune), 150 communes were selected out of the 10,000 in all of Viet Nam with the probability of selection proportional to their population size. At the second stage, information was gathered from the 150 selected communes on the population of each cluster (in urban areas) or villages (in rural areas), and two clusters or villages were randomly drawn with probability proportional to their population size. Finally, the third stage involved random selection of 20 households (16 for the sample plus four "extras" to serve as replacements if some of the 16 "originals" could not be interviewed) within each cluster or village from a list of all households within each cluster or village. Note that the first stage of the sample is based on information from the 1989 Census, but the second and third stages use updated information available from the communes. The first and second stage samples were drawn in Hanoi, while the third stage was drawn in the field (see Section 4.3 below for more details).

For a more detailed description of the sample design see the paper on recommended sample design written by consultant Christopher Scott listed in Appendix C.

² Serpentine ordering ensures that provinces that are adjacent to each other are also adjacent in terms of their location on the list.

3.2 Implementation

The attached map shows the commune number and approximate location of the 150 communes selected in Viet Nam. Of the 150 communes chosen, one was in a very remote and inaccessible area near the Chinese border and was replaced by another not quite as inaccessible.

The actual interview schedule went smoothly. In one instance (commune 68) one of the selected villages was replaced because when the survey team arrived in the village it discovered that most of the adults were away from the village and thus could not be interviewed. In each cluster or village interviews were completed for 16 households, thus the 4800 household target sample was fully achieved. About 3% of the households (155) were replaced; the main reason for replacement was that their occupants were not at home. Only four households refused to participate. Community questionnaires were completed for all 120 rural communes. Price questionnaires were completed for 118 of 120 communes (the exceptions were communes 62 and 63), and comparable price data were collected from existing sources for all 30 urban areas.

4. Organization of the Survey

4.1 Survey Management

The VNLSS was jointly managed by the State Planning Committee (SPC) and the General Statistical Office (GSO) of Viet Nam. At the highest level of management was a steering committee consisting of 4 persons, one director and 3 vice directors. Immediately below this committee is a standing committee (also known as the "working group") of 6 persons, 3 from the SPC and 3 from the GSO. The standing committee did much of the detailed work, such as preparing questionnaires and manuals, organizing training courses and managing the day to day survey activities. Both the steering committee and the standing committee were based in Hanoi.

The survey itself was carried out by 15 teams, each composed of 6 members: one supervisor, two interviewers, one anthropometrist (anthropometrician), one data entry operator and one driver. Eight teams were located in northern Viet Nam (either based in Hanoi or in some other major city) and seven teams were based in the midlands or the south (2 based in Da Nang, 3 in Ho Chi Minh City and 2 in the Mekong Delta). As in other LSMS (World Bank) surveys, the data entry was done in a decentralized manner (described below), which allowed for interviewers to return to households to check errors detected by the data entry program.

4.2 Training and Field Test

The draft questionnaire was field tested in April, 1992. The field test was fairly extensive, covering different areas in both the north and south of Viet Nam. A six-week training course for interviewers, supervisors and data entry operators was held in Hanoi from July 30 to September 5, 1992. These and other local activities were done with the help of a long-term consultant in Hanoi (Adam McCarty), with guidance and short-term visits from Paul Glewwe (World Bank).

4.3 Organization of the Field Work

When a team arrived in a village (rural areas) or cluster (urban areas), the supervisor met with local authorities to explain the purpose of the survey and distribute materials for publicity and letters to the households selected to be surveyed. The 20 households selected (16 "original" and 4 replacement) in each village or cluster were selected by the supervisor immediately after arriving in the village/cluster, following detailed instruction given in the interviewer manual.³ The supervisor also fills out the community and price questionnaire in collaboration with the anthropometrist.

The household questionnaire was completed by the interviewers in two separate interviews. The first visit (Round 1) covered Sections 0-8, while the second visit covered Section 9-14. Section 15 (anthropometric measurements) was completed by the anthropometrist during both visits. The typical interview time for completing half of the questionnaire (one round) was intended to be 2-3 hours, thus 4-6 hours would be required during two separate visits for one completed household questionnaire. Each team completed 32 household interviews during each four week period, 16 each per team interviewer. Round 1 (Sections 0-8) was conducted in one cluster/village in the first week. The next week consisted of completing Round 1 in the other cluster/village in the same commune. In the third week the team returned to the first cluster/village and completed the remainder of the questionnaire (Sections 9-14) for each household, and the same was done in the second cluster/village in the fourth week.

The decentralized data entry was done as follows. After completing the first half of the household questionnaire (Sections 0-8) in the first cluster/village during the first week, all 16 half completed questionnaires were given to the data entry operator located at the team's "base", who then entered the data on a personal computer using the customized data entry program. The data entry program performed range and consistency checks on all data in the questionnaire and produced reports (lists) of all data for which problems arose. Upon returning to the same village

³ There were also one or two communes in which the villages or clusters themselves needed to be chosen (because the necessary information had not been received by Hanoi in time). In these cases the supervisor also made the selection, again following detailed instruction in the supervisor manual.

in the third week to complete the questionnaire (and similarly upon returning to the second village in the fourth week) discrepancies detected by the data entry program could be corrected. After four weeks of work are completed in a given cluster/village, the teams either move to the next commune or take a one-week break.

Duties of the supervisor also included observing some interviews and randomly revisiting some of the interviewed households to check the quality of the work done by the interviewer. A complete description of these and other supervisory tasks are found in the Supervisor's Instruction Manual (see Appendix C).

The field work for the VNLSS began on October 19, 1992 and ended in October, 1993. Although the first week or two was difficult, given the complexity of the survey, things proceeded smoothly thereafter. In addition to supervisory visits by members of the steering and standing committees, two consultants (Adam McCarty and Lisa Drummond) made supervisory visits to all teams in the early months of the survey.

5. Using the Data

It is strongly recommended that the data be used with the questionnaires. The questionnaires contain the exact wording of the questions and interviewer instructions. Since the questionnaires used to collect the data were in Vietnamese, it is also advisable to check the Vietnamese version of the questionnaire in case of doubt or confusion regarding a question. 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 04, 07 and 10, are contained in the questionnaire itself. The industry and occupation codes are listed in Appendix F. For more details, see the 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 below the whole list of responses 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 (English and Vietnamese), and the manuals (interviewer, supervisor, data entry operator, anthropometrist) are available from the

World Bank (see Appendix C).

The household, community, and price 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 3.1), and ASCII files. 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.

5.1 Data Processing

This section describes the different data processing stages between the actual interviewing and the final datasets that are ready for use by researchers. The main reason for being aware of these data processing steps is that in case of questions about data quality, the first place to look for answers should be the process through which data passed from the questionnaire to the final dataset stage.

The Viet Nam Living Standards Survey format calls for two rounds of interviews and data entry in the field itself. The purpose of this format is to minimize response and data entry errors, and offer the possibility of rechecking information with households. Achieving these objectives requires continuous monitoring on the part of the supervisors of each survey team. The quality of interviewing and supervision varied from one survey team to another, but on the whole the survey effort was very good.

The procedure that the supervisors are supposed to follow is the following. Data collected in the first round is checked by the supervisor prior to the second round and necessary clarifications sought from the concerned household during the second round. Since the bulk of expenditure data are collected in the second round this particular checking is not possible for expenditure information. But since data are entered in the field office itself, the supervisor can check data from the second round, after the interview, and, in theory, check with households for which there are questionable data.

All responses obtained from individual, household, and community interviews were recorded in questionnaires. These were then entered into the computer, in the field, using data entry programs written in BASIC. The data produced by the data entry program are in the form of household files, i.e. one data file for all of the data in one household/community questionnaire. In the case of the household survey, this means 4800 data files, and in the case of community and price surveys this means 120 files each. These are the files that were produced in the field and then sent to the State Planning Committee in Hanoi.

At the State Planning Committee offices in Hanoi, these data files were processed to produce Stata datasets, each of which contained information for all households for a subset of variables. The subset of variables chosen corresponded to data entry screens, so these files are hereafter referred to as "screen files".⁴ For the household survey component 116 data files were created, for the community survey component 23 data files were created, and for the price survey 6 data files were created. Members of the survey team were trained by World Bank staff in the use of database management software (Paradox) and statistical software (Stata) to check, correct, and analyze survey data. The survey team then spent approximately 3 months checking and correcting data by checking the questionnaires for original recorded information.

We would like to emphasize that correction here refers to checking questionnaires, in case of errors in skip patterns, incorrect values, or outlying values, and changing values if and only if data in the computer were different from those in the questionnaires. The personnel in charge of data preparation were given specific instructions not to change data even if values in the questionnaires were clearly incorrect. We have no reason to believe that these instructions were not followed, and every reason to believe that the data resulting from these checks and corrections are accurate and of the highest quality possible.

The screen files were then brought to World Bank headquarters in Washington, D.C. and uploaded to a mainframe computer, where they were converted to "standard" LSMS format by merging datasets to produce separate datasets for each section with variable names (and labels) used in past LSMS datasets. In some cases this has meant a single dataset for a section, while in others it has meant retaining "screen" datasets with just the variable names changed. For example, there were 3 "screen files" corresponding to section 2 (education) but the final LSMS dataset, SECT02, is a single dataset which was created by merging the 3 screen files by household and individual identification codes. On the other hand, SECT09B1, the dataset that contains output information on paddy is simply the screen file for data entry screen 56, but with variable names and labels different from the original screen file.

One specific issue that arose during the process of data collection was that in the early stages of the survey, it was observed that expenditures on some items were larger than what could be accommodated with the data entry program in use at that point. This was particularly the case in the southern part of the country. To accommodate these larger expenditures, the data entry program was modified to increase the number of digits available for recording values. Initially, this created some problems with the data entry program, and data that had been entered

⁴ The data entry program had the capacity to produce these "screen-level" files but due to some miscommunication the staff at the State Planning Committee were unaware of this. For this reason, a separate "data conversion" program was written in QBASIC, by the State Planning Committee staff under World Bank staff supervision. The essential elements of this program involve reading household data files one by one, and writing out the data from these files to 116 files (one for each data entry screen) based on the data entry code. This way data for each data entry screen for all households is stacked (concatenated), and a "screen file" is created.

using earlier versions of the program. But these were resolved by the survey team and have had no effect on the quality of expenditure data.

Other than this particular issue there does not appear to be any widespread problems with the data. The data have been used by the State Planning Committee and the General Statistical Office to produce a statistical abstract and a set of papers on health, education, employment, and agriculture, and no serious concerns about data quality have been expressed. Work done at the World Bank has not uncovered serious problems with the data. Some issues related to expenditure data, the only part of the dataset that has been worked with in detail at the time this document was written, are discussed in Appendix E.

5.2 Linking Parts of the Household Survey

Each household has a unique identification number which is contained in the variable HID. Values for this variable range from 101 to 30119. The last two digits of HID contain the household number within the cluster (primary sampling unit). For most clusters these range from 01 to 19, but for some clusters these extend to 23. In clusters where household numbers (within cluster) have values beyond 16, some of the selected households were either not found or refused to be interviewed, so that replacement households had to be used. The first 1, 2 or 3 digits (depending on the cluster number) identify the cluster the household belongs to. In particular, if HID has 3 digits the 1st digit denotes cluster number. If HID has 4 digits, the first 2 digits represent cluster number, and if HID has 5 digits the first 3 digits denote cluster number. Cluster numbers range from 01 to 301, with cluster numbers 1 and 2 part of commune number 1, cluster numbers 3 and 4 belonging to commune 2, and so on. The one discrepancy in this pattern arises due to no data for cluster number 136. One of the clusters in commune 68 had to be replaced with another cluster because when the interviewers went to interview households in this cluster, almost all adults were away from the village. Instead of coding the replacement cluster as cluster 136, the new cluster was given a code of 301. Therefore, when deriving commune numbers from cluster numbers, one should remember to recode the commune number for these 16 households to 68.

Data for households from different parts of the survey can be merged by using the HID variable which appears in each dataset of the household survey. To link information for an individual use should be made of both the household identification number, HID, and the person identification number, PID.

A child in the household can be linked to the parents, if the parents are household members, through the parents' 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. Household members can be linked with their non-resident children

through the parents' id codes in Section 01C. The woman chosen for the fertility section can also be linked to the children living with her in the household through the id codes in Section 8A. 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 almost all can be linked by comparing age, sex and mother's id. In the same way spouses can be linked to each other through the spouse's id codes available in the household roster.

5.3 Linking the Household to the Price & Community Data

The dataset with the expenditure variable has a variable for commune, CUM. Both the price and community datasets have a commune variable which can be used to match these datasets. The commune variable is derived from the household identification number HID as follows. Since the first 1, 2 or 3 digits, depending on the household number, represent cluster numbers, and since cluster numbers 1 and 2 correspond to commune number 1, 3 and 4 to commune 2, and so on, the easiest way to generate a commune variable is to drop the last 2 digits from HID, divide the remainder by 2 and round up the resulting number. For example, for HID equal to 12916, the commune number would be 65.

6. **Constructed Data Sets**

Researchers at the World Bank have created a data set with information on annual household expenditures, region codes, etc. This constructed data set is 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, as much as possible, those assumptions are explained below. Except where noted, the data sets have been created using only the original (raw) data sets. A researcher could construct similar data sets incorporating different assumptions.

6.1 Aggregate Expenditure, HHEXPEND

The dataset HHEXPEND contains variables for household annual nominal expenditures, household annual real expenditures, per-capita nominal and real expenditures, and variables for the different components of total household expenditures C food expenditures, non-food expenditures, use value of consumer durables, etc. These, along with the algorithm used to calculate household expenditures are detailed in Appendix E. The dataset also contains variables for a household's commune number which can be used to match household datasets with community and price datasets. And in addition to this commune number the dataset also contains a variable for region, and for rural/urban sectors.

Appendix A

How to Obtain the VNLSS Data

The VNLSS data are the property of the government of Viet Nam. Beginning in February 2000, the General Statistical Office of Viet Nam decided to distribute their data through their own offices. Distribution outside of the World Bank will no longer be done by the World Bank. Interested users should contact:

Mr. Nguyen Phong
Department of Social and Environment Statistics
General Statistical Office
2, Hoang Van Thu Street
Hanoi, VIET NAM
fax: 84-4-846-3511 or 84-4-846-4345
e:mail: vie95043@undp.org.vn

The request should include a brief letter explaining the proposed research.

There is a processing fee associated with the distribution of the data, which are on CD-ROM in STATA format, and the documentation, which is supplied in Microsoft Word format. The tentative fees are:

For one year of data only

A. For Vietnamese individuals and Vietnamese organizations

- Vietnamese organizations with domestic budget: US\$200 *
- Vietnamese organizations with financial support from foreign and international budget: US\$400 *
- Vietnamese individuals using their own funds: US\$100

B. For foreign individuals and foreign or international organizations

- Foreign or international organizations: US\$2000 *
- Individual foreigners using the data for their own research/study/lectures preparation:
 - Citizens of a developing country: US\$200
 - Citizens of a developed country: US\$500

An additional US\$20 fee is required for shipping the CD-ROM by airmail.

*In the case of institutions, the payment of the processing fee gives an institutional license for the use of the data.

Payment

The processing fee for the VNLSS data sets should be sent to the following account through a bank transfer. DO NOT SEND PERSONAL CHECKS.

Account name: TONG CUC THONG KE

Account number: 001 1 37 008159 0
Bank name: BANK FOR FOREIGN TRADE OF VIET NAM
Bank address: 23 Phan Chu Trinh Street, Hanoi, Viet Nam

Once the bank confirms that the payment for the fee is available in the account, a CD-ROM with the data set(s) and related materials will be sent.

The researcher should further note that once received, the data cannot be passed on to a third party for any reason. Researchers are requested to provide copies of their results to the General Statistical Office.

Information about the survey can also be obtained from:

Living Standards Measurement Study
Development Research Group
Poverty and Human Resources
The World Bank
1818 H Street, N.W.
Washington, DC 20433
USA
e-mail: lsms@worldbank.org
<http://www.worldbank.org/lsms/lsmshome.html>

Appendix B

List of VNLSS 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.

| | VNLSS DATA SETS |
|---|--|
| HOUSEHOLD (numbers correspond to sections of the household survey) | SECT00A, SECT00B |
| | SECT01A, SECT01B, SECT01C |
| | SECT02 |
| | SECT03 |
| | SECT04A, SECT04B, SECT04C, SECT04D, SECT04E, SECT04F, SECT04G, SECT04H |
| | SECT05 |
| | SECT06 |
| | SECT07 |
| | SECT08, SECT08A, SECT08B |
| | SECT09, SECT09A0, SECT09A1, SECT09A2, SECT09A3, SECT09A4, SECT09A5, SECT09A6, SECT09B1, SECT09B2, SECT09B3, SECT09B4, SECT09B5, SECT09B6, SECT09C, SECT09D1, SECT09D2, SECT09D3, SECT09D4, SECT09D5, SECT09D6, SECT09D7, SECT09D8, SECT09D9, SECT09E, SECT09F, SECT09G, SECT09H, SECT09J, SECT09L |
| | SECT10, SECT10B, SECT10D |
| | SECT11A, SECT11B |
| | SECT12A, SECT12B, SECT12C, SECT12D |
| | SECT13A, SECT13B |
| | SECT14B, SECT14C |
| | SECT15 |
| | SECTSKIP (variables that contain skip pattern information) |
| COMMUNITY | COMCROP, COMCULT, COMGENL, COMGOV, COMHLTH, COMINTV, COMLAND, COMLNDQ, COMSCH |
| PRICE | PRICE0, PRICE1 |
| Constructed | HHEXPEND |

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 (English & Vietnamese versions), 99 pages
2. Community Questionnaire (English & Vietnamese versions), 25 pages
3. Price Questionnaire (English & Vietnamese versions), 4 pages

B. Training Manuals

1. Supervisor's Instruction Manual, 50 pages
2. Interviewer's Instruction Manual, 67 pages
3. Anthropometrist's Instruction Manual
4. Data Entry Operator's Instruction Manual, 7 pages

C. Other

1. Viet Nam Living Standards Survey: Recommended Sample Design, by Chris Scott. November 1991. 17 pages.
2. Listing of Variable Means and Standard Deviations. 87 pages.

Appendix D

Spatial Price Indices

A spatial price index was calculated for rural and urban areas within each of the 7 regions which comprise the northern uplands, the Red river delta, the north central region, the central coastal region, the central highlands, the southeast (which includes Ho Chi Minh city), and the Mekong river delta. Since no urban communes were selected in the central highlands no price index was calculated for this sub-group.^{D1} This appendix provides details of the procedure used to obtain the price index and also provide values of the price index. Note that these values can be derived from the dataset HHEXPEND by dividing nominal expenditure variables by their real expenditure counterparts.

During the course of the household survey, price data were collected from each of the 120 rural communes. Prices were collected for a set of food, non-food, medicines, fertilizers, insecticides, and services. For urban communes price data were taken from official published sources of the General Statistical Office. An effort was made to match, as closely as possible, the survey months (for each urban commune) with months for which urban prices could be obtained. On the whole the effort appears to have yielded fairly comparable prices for the urban areas, in terms of months and values.

For rural communes, three separate observations were made for each commodity, and so the first step in the calculation process involves taking a simple average of these three observations. In cases where less than 3 observations are available, either the average of two observations is taken, or the single price observation is taken to be the average price for the commune. In the case of urban communes a single observation is used.

The VNLSS data were collected over 13 months. It is possible that variation in prices over these months, along with the timing of commune interviews over these 13 months, introduced a systematic bias in the price data. To remove this bias, a monthly deflator was constructed on the basis of a monthly consumer price index (provided by the General Statistical Office), with January 1993 as the base month. This deflator was then used to remove temporal variation in the commune prices. Values of the deflator are provided in Table D1.

Spatial price indices provide information on variation in prices across spatial units, and require selecting one unit as the base group. Instead of selecting a particular region as the base group, the national average is used as the base group. Therefore, the regional price indices measure differences in price levels in the 13 locations relative to the average for all of Vietnam.

The price indices calculated are Laspeyre's price indices with quantity weights from the average Vietnamese household. Formally, if p_{ij} is the price of good j in region i , p_{oj} is the price of good j in Vietnam (as a whole), q_{ij} is the quantity of good j in region i , q_{oj} is the quantity of

^{D1} We chose to construct these indices at the region-sector level, instead of the commune level because, because it was felt that normal season variation in prices would lead to spurious variation in prices across communes.

good j in Vietnam (as a whole), then the Laspeyre's price index can be written as:

$$P_i = \frac{\sum (p_{ij} q_{oj})}{\sum (p_{oj} q_{oj})} = \sum \frac{p_{ij}}{p_{oj}} \times \frac{(p_{oj} q_{oj})}{\sum (p_{oj} q_{oj})}$$

The last part of this expression shows that the Laspeyre's price index is a weighted average of relative prices where each commodity's relative price (price in region i relative to the overall average) is weighted by the budget share of the average Vietnamese household on that commodity.

The procedure outlined above requires matching prices in the price questionnaire with the consumption bundle in the household questionnaire. Not all commodities covered in the price survey were included as separate commodities in the expenditure section of the household survey. Thus the regional price index is limited to using only those commodities for which budget shares could be obtained from the household survey. The "no price" commodities take up 35 percent of the average Vietnamese household's annual expenditures, so mean shares on commodities-with-prices were scaled up by dividing these shares by 0.6525). The implicit assumption in this type of adjustment is that spatial variation in the prices of commodities with no data from the price survey is no different from that observed in the prices in the price questionnaire.

The final step consists of multiplying the price ratios C the region-sector prices relative to the national average C by the budget shares and summing the products. These yield the price index shown in Table D2.

| Table D1: Monthly price deflator | | |
|----------------------------------|-----------|----------|
| Year | Month | Deflator |
| 1992 | September | 95.24 |
| | October | 95.07 |
| | November | 96.99 |
| | December | 98.33 |
| 1993 | January | 100.00 |
| | February | 101.90 |
| | March | 101.39 |
| | April | 101.19 |
| | May | 102.71 |
| | June | 102.40 |
| | July | 102.40 |
| | August | 102.19 |
| | September | 102.70 |
| | October | 102.60 |

| Table D2: A spatial price index for Viet Nam (1992-93) | | |
|--|--------|--------|
| Region | Sector | |
| | Rural | Urban |
| Northern Uplands | 96.92 | 108.15 |
| Red River Delta | 89.54 | 106.58 |
| North Central | 98.13 | 101.12 |
| Central Coast | 97.64 | 105.54 |
| Central Highlands | 106.38 | .. |
| Southeast | 111.53 | 123.15 |
| Mekong River Delta | 101.96 | 109.29 |

Appendix E

Household Expenditure Calculations

In arriving at a measure of household consumption expenditures the driving motivation is to include, as accurately as possible, all expenditures that can be said to have contributed to the enhancement of household welfare in the year preceding the interview. The VNLSS contains expenditure information on various food and non-food items. The way in which this information is used to arrive at a measure of household expenditures in the 12 months preceding the interview is described in this appendix.

1. Food expenditures

Household expenditures on food items is available in sections 11A and 11B; in-kind wages received as lunches are detailed in section 4B and 4E but their calculation is described later. In Viet Nam, the lunar new year (Tet) represents a considerable departure from normal spending patterns. Food expenditure information during Tet and other holidays (hereafter referred to as just Tet) is, therefore, collected separately in section 11A. Non-holiday expenditure information is available in section 11B.

We assume that Tet expenditures cover a two-week period.^{E1} For 18 food items/categories information is available on the quantity and value of market purchases. For these same foods, information is also obtained on the quantity consumed out of home production, and the value of this quantity if it had been purchased in the market. The data on value of market purchases and value of home production consumed by the household is to be included in household expenditures; the procedure is described later.

1.1 Value of annual market purchases

Section 11B contains non-holiday food expenditure information on 45 food items. Data is obtained on value of purchases made since the 1st interview, quantity and value of market purchases in the preceding 12 months, and quantity and value of foods consumed out of home production in 12 months. For obtaining annual food expenditures, the information on value of purchases made in the 2 weeks (since the 1st interview) is ignored.

Market purchase information is obtained as follows. The respondents are asked for the number of months during which market purchases were made. They are then asked for the number of purchases made during these months. To allow for differences in purchase frequency, both across food items and across respondents, respondents can provide purchase frequency information for one of 6 different recall periods separately for each item. Number of purchases can, therefore, be reported as number of purchases per day, per week, per month, per quarter, per

^{E1} Consultations during the questionnaire design stage indicated that this was a reasonable assumption to make.

half-year, or per year. For example, a respondent could report that during 6 months of the year bananas were purchased twice a week and that during the whole year duck was purchased once per month. Respondents then provide the information on the average quantity and value of a typical purchase. It is this information C months of purchase, number of purchases, recall period, and value of each purchase C that is used to obtain the value of non-holiday market food expenditures in the 12 months preceding the interview.

The procedure used to obtain annual non-holiday market expenditures consists of the following steps.

! **Step 1** converts purchase frequency information C number of purchases and recall periods C to a single "purchases per month" variable for all foods and all households.

! **Step 2**, the variable for months of purchase is scaled down if a household has Tet expenditures for that food item. Assuming that the Tet and holiday period covers two weeks or half a month, months of purchase are multiplied by $11.5/12$ if there are Tet expenditures for a food item. No adjustments are made if the recall time period exceeds a month, i.e. if purchase frequency is reported as number of times per quarter, per half-year, or per year.

! In **Step 3**, the "purchases per month" variable is multiplied by variables for number of months of purchase and the value of each purchase to obtain the value of annual non-holiday market purchases.

1.2 Value of home produce consumed during the year

Information on home produce consumed by the household is obtained as follows. Respondents are asked for the number of months during which home produce is consumed, the total quantity consumed (during these months) and the value of such consumption if it was to be purchased in the market. Calculating annual expenditures on home production is relatively simple.

If a household does not consume anything from home production for a particular food item during Tet, the value of annual expenditures on home production is simply equal to the value provided by the respondent. On the other hand, if a household reports Tet home production expenditures for a food item, one needs to scale down the values reported in section 11B. The rule used to scale down section 11B expenditures is as follows:

(i) If months of consumption, from home production, are greater than 6, expenditures are scaled down so that they cover 11 and a half months C value is multiplied by $11.5/12$.

(ii) If months of consumption are 6 or less, then no adjustment is made to expenditures.

2. Nonfood expenditures

Nonfood expenditures include expenditures on clothing, footwear, personal care, entertainment and recreation, transportation, housing supplies, housing, furniture, household appliances, other consumer durables, education, and health. These are discussed in the order in which they are added to food expenditures, to obtain total household expenditures.

2.1 Daily expenses

Section 12A contains information on 14 frequently purchased nonfood items. These include expenditures on cigarettes, tobacco, areca nut, cooking fuel, soap and detergents, parking fees, etc. in the 4 weeks preceding the interview. Annual expenditure on these items is obtained by multiplying four-week expenditure by 13. The one item excluded from household expenditure is **lottery tickets**. These expenses are excluded because they enhance well-being only when a household wins the lottery, and in that case the amount won is likely to be reflected in increased expenditures on other goods.

2.2 Annual expenses

Less frequent nonfood expenditure information is obtained in section 12B. Information is obtained on expenditure in the two-weeks since the first interview, as well as in the last 12 months. This section includes expenditure on cloth, readymade clothing, blankets, footwear, tailoring services, pots and pans, household supplies, housing materials, motorcycle and bicycle tires, tubes and spare parts, public transportation fees, books and stationery, recreation, taxes, etc. Since annual expenditure is available for each item no calculation is needed for items in this section.

The following items (item codes in parentheses) in this section are not included because they do not increase economic well-being: **income taxes** (152), **security fund** (153), **social funds (aging, charity, etc.)** (154), **insurance** (155), and **gift, transfer** (158).

The following items (item codes in parentheses) are not included because expenditure on them is likely to be reflected in the current value of the relevant consumer durable, expenditures on which are treated separately: **purchase materials to build new house** (133), **expenses for building new house other than purchase of materials to build a house** (134), **home repairs, painting, etc.** (135), **bike tire, tube** (136), **bike spare parts** (137), **motor bike tire, tube** (138), **motor bike spare parts** (139), **repair and other expenses for vehicles other than gasoline and oil** (140),

2.3 Consumer durables

Consumer durables provide a flow of services over a period of time, and therefore it is misleading to include annual expenditures on them in a measure of household expenditure that is

to serve as a measure of a household's standard of living. Excluding these expenditures is also inappropriate since they do contribute to an improvement in a household's economic well-being. The objective, therefore, is to obtain a measure of the value of services provided by consumer durables C their "use value" in the 12 months preceding the interview.

To obtain a measure of "use value" what is needed is the price at which the durable was purchased, the duration for which the household has been in possession of the item, and the durable's current value. Based on these three variables, along with a price index for deriving real values for purchase price and current value, one can construct a measure of the monetary value of services derived from consumer durables. These data are available from the household survey and are utilized in the following manner to obtain use values.

The first step consists of deriving depreciation rates for each type of consumer durable. These are derived as follows. The relationship between the real value of a good at the time it was bought (VB) and its value at the time of the interview (VT) is:

$$VB = VT (1 - d)^t,$$

where t is the number of years since purchase, and d is the depreciation rate. Since the survey collects information on purchase price, resale value at the time of the interview, and year of purchase, it is possible to derive the implicit depreciation rate for each type of consumer durable for each household. Specifically, the depreciation rate can be derived from the formula above as equal to:

$$d = 1 - \left(\frac{VB}{VT} \right)^{1/t}$$

To minimize the influence of errors and biases in self-reported resale values and purchase prices, the median depreciation rate for each type of consumer durable is used.

These depreciation rates were calculated using only consumer durables acquired after 1986. This was done because reasonable price indices for earlier years, which are necessary for converting nominal purchase prices to real values, do not exist.

The second step consists of using the depreciation rate along with the real interest rate to obtain the annual use value of a durable good, in order to measure the opportunity cost to the owner of using the good for one year, instead of selling it at the beginning of the year and investing the money at the real interest rate. Therefore, use value is obtained as,

$$\text{Use value} = VI (1 + d) \times (d + 0.05),$$

where 0.05 is an estimate of the real interest rate and VI (1 + d) is the value of the consumer durable 12 months before the interview.

2.4 Utilities

Section 6 contains information on housing characteristics and housing expenses. Expenditure data on electricity, drinking water, laundry and bathing water are obtained with the possibility of variable reporting periods (similar to those food expenditures). Similar information is also obtained for household payments for garbage disposal services. For all these expenditures, the reported expenditure information is scaled up (if reporting period is less than a year) to obtain annual expenditure for electricity, drinking water, laundry and bathing water, and garbage disposal.

2.5 Rent

For households who rent their dwelling, rental expenditures for the year are clearly their housing expenses. For households who live in dwellings they own, the true cost of living in the owned dwelling is not zero, but the opportunity cost of living in that dwelling. If there is a competitive rental market for dwellings, then the rental amount paid by households who rent their dwelling is likely to be an accurate measure of the opportunity cost of living in similar dwellings, and this information can be utilized to impute a rent for those who live in dwellings they own. The usual procedure, in such cases, is to run a regression of rental values on housing characteristics and then use the coefficients from such a regression to impute rental values for those who do not rent their dwellings.

Unfortunately, in the Vietnamese case it is not possible to use this procedure because only 309 households live in dwellings they do not own. But more importantly only 17 of these households rent from private persons, i.e. parties other than the government and relatives. And almost all of these households are concentrated in the Ho Chi Minh City area. What this implies is that, for all practical purposes, there is no competitive rental market for housing in the country.

However, a similar approach uses information in Section 6 on the value of the dwelling for all households C owners as well as renters. On average, those who rent their dwelling from private persons pay an annual rent which is approximately 3 percent of the current value of the dwelling. This ratio is used as a guide to obtain the "use value" of dwellings. This ratio is also reasonable with respect to the real interest rate prevailing in the economy. Instead of applying this ratio to the reported value of a dwelling, a predicted housing value is derived from a regression of housing value on various housing characteristics, and the ratio is applied to the predicted value, since reported values are likely to have substantial random variation related to respondent knowledge, etc.

2.7 Education

Household expenditures on tuition, registration, uniforms, books, etc. for each household member are obtained in Section 2 of the survey. The questionnaire also provides the totals for all such expenditures for each member. In addition to this, expenditures on foreign language courses are also obtained for each household member.

2.8 Health

Section 3 contains information on health expenses during the 12 months preceding the interview, for each member of the household. Household expenditures on health are obtained by simply summing health expenditures of all members in the household.

2.9 In-kind wages

Wages received in-kind are a form of household consumption not measured elsewhere, and therefore should be included in household expenditures. In section 4B and 4E detailed information is available on wages, and different types of compensations received for primary employment in the 7 days preceding the interview, and the 12 months preceding the interview. The latter information is available only when primary employment in the 12 months preceding the interview is different from employment in the 7 days preceding the interview. Only the in-kind compensation data from these sections is included, because for secondary employment only total earnings are recorded (i.e. inkind wages from secondary jobs are ignored).

Data on in-kind compensation can be reported for different time periods *C* day, week, month, quarter, half-year, and year. This wage data (in-kind) is annualized on the basis of labor supply information, i.e. by multiplying it by the number of hours, days, or weeks (as the case may be) worked in the previous year. This annual in-kind wage information is then summed over all wage earners in a household to arrive at total household in-kind wages.

3. Data Problems and Corrections

In theory, a variable-recall procedure, such as the one used in the VNLSS, should provide more accurate expenditure information than a constant-recall procedure such as asking for expenditure information for the month preceding the date of the interview. But a variable-recall procedure is also more demanding on the part of the interviewer and the respondent. And from an analytical perspective too, it requires checking the data to see if the various parts are consistent with each other. In constructing the expenditure variable the following checks were performed:

(1) Shares of different food items in total food expenditures, and shares of all food and nonfood items in total annual expenditures were checked to identify outliers. Expenditure shares were also examined in relation to per-capita expenditures to determine within-household inconsistencies. For example, a household with per-capita expenditures such that it would fall in the poorest decile in the per-capita expenditure distribution, is unlikely to have high budget shares for meat and fish. Note that these patterns were examined only to identify extremely inconsistent observations and then check the component parts of the expenditure variable for potential data entry errors. Types of errors and the way these are dealt with are discussed later.

(2) The distributions of all component variables for food expenditure data *C* months of

purchase, number of purchases, recall period time units, quantity of each purchase, quantity units, and value of each purchase C were examined to identify incorrect values and outlying cases.

(3) Unit prices were calculated by dividing expenditure values (for food items) by quantities, and their distributions checked for outlying values. The advantage of checking distributions of unit prices is that both tails of the distribution can be checked for outlying values; in the case of quantity and value distributions one can only check the upper tail of the distribution because any small value is reasonable. In checking these distributions, comparisons were made with data from the price questionnaire.

(4) Calorie shares were also checked to determine the contribution of different food items to the total calories consumed by a household.

(5) A final check, which is not so much a separate check, but a complementary activity to all of the above checks, involves browsing through the data to explore distributions and patterns beyond the information provided by descriptive statistics such as means, and order statistics.

The corrections made to data on nonfood expenditures are primarily based on distributions for expenditure values and budget shares. These are few, fairly obvious, and noted in a Stata program available on diskette from the World Bank. Two specific ones are noted here. In two cases expenditures on "other household goods" were found to be extremely high. On checking data on consumer durable purchase years it was found that these expenditures represented purchases of video machines and TV sets in the past year. Since these would be represented in the use-value of consumer durables, they were not included as "other non-food expenditures." In another three cases use-values for consumer durables were extremely high for boats. On checking data on self-employed non-agricultural enterprises it was determined that these particular households used boats mainly for income earning activities. These boat values were, therefore, excluded from expenditure calculations.

The main problem with the food data, noted by the checks, concerns confusion with the variable-recall procedure. In some cases responses on quantity purchased and the value of these purchases appears to have been provided for the entire time unit for which purchase frequency information was given, and not for each purchase. For example, if a household reported purchasing oil 12 months of the year, making 20 oil purchases, and gave the recall period as a month, then this means that it made 20 purchases every month of the year. The quantity and value information, in this case, should be for one purchase. But in some cases this quantity and value information appears to have been provided for a month, i.e. for all 20 purchases, instead of one purchase. The result is a twenty-fold increase in actual expenditures.

What is the extent of this problem? For the most part, this type of miscoding, probably on the part of the interviewer, is likely to cause budget shares, total quantities, total expenditures, and calorie shares to be extremely high, and therefore be detected by one of the checks. In cases where the miscoding was very obvious, corrections were made to either the variable for number

of purchases or recall time unit; these are noted in the Stata program available from the World Bank. Note that no corrections have been made to the original data.

The other problem with the food expenditure data is the apparent inconsistency between data on months of purchase, frequency of purchase, and recall time units. This is best illustrated with an example. If a household reports two purchases per quarter of a food item, strictly speaking, the number of months of purchase cannot be greater than 8 for that food item (they can be less than 8 if more than 1 purchase is made in a month), because for each 3 months of the year (a quarter of a year), purchases are made in only 2 months. About 1400 such inconsistencies were found in the data; these represent 34 percent of all food items with quarter, half-year, or year as the recall period, but note as well that these three recall units account for less than 5 percent of all market food purchases.

When these 1400 observations are examined closely two patterns are clear. Firstly, 86 percent (1200) of these inconsistent observations have months of purchase equal to 12. It is possible that months of purchase were in fact interpreted as months of consumption. What lends some support to this conjecture is the second pattern. Almost 67 percent of the inconsistent observations are for salt or monosodium glutamate, which are consumed all through the year.

No corrections or changes were done for these observations. Some of these observations did have high quantity and expenditure values and were detected in the checks outlined earlier, and corrections have been made for some. But otherwise the problem is ignored in the calculation of expenditure variables. Since most of the corrections involve salt or monosodium glutamate, the impact of corrections and changes on total expenditure values is likely to be minimal; the combined budget share of these two items is no more than 1.7 percent (on average).

Appendix F

Occupation and Employment Sector Codes

1. Occupation: International Standard Classification of Occupations

| | | | |
|-----|---|-----|---|
| 0-1 | Physical Scientists and Related Technicians | 6-0 | Farm Managers and Supervisors |
| 0-2 | Architects, Engineers and Related Technicians | 6-1 | Farmers (farming, livestock and aquatic product raising) |
| 0-4 | Aircraft and Ship's Officers | 6-2 | General Farm Workers (farming and livestock raising) in agricultural |
| 0-5 | Life Scientists and Related Technicians | 6-3 | Forestry Workers |
| 0-6 | Doctors, Dentists, Veterinary and Related Workers | 6-4 | Fishermen, Hunters and Related Workers |
| 0-7 | Physicians | | |
| 0-8 | Statisticians, Mathematicians, Systems Analysts and 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 | 7-4 | Chemical Processors and Related Workers |
| 1-3 | Teachers, Trainers | 7-5 | Spinners, Weavers, Knitters Dyers and Related Workers |
| 1-4 | Religion Servicemen | 7-6 | Tanners, Fellmongers and Pelt Dressers |
| 1-5 | Authors, Journalists and Related Writers | 7-7 | Food, Food stuff and Beverage Processors |
| 1-6 | Painters, Sculptors, Photographers and Related Creative Artists | 7-8 | Tobacco Preparers and Cigarettes 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 and Technical 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 (directors, vice directors of State, cooperative, private enterprises and join ventures) | 8-3 | Blacksmith, Toolmakers and Machine Tool Operators |
| 3-0 | Clerical Supervisors | 8-4 | Machine Assemblers, Machinery Fitters and Precision-Instrument Makers (except Electrical) |
| 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 | Welders, Plumbers, Sheet-Metal and Structural Metal Preparers |
| 3-6 | Transport Conductors | 8-8 | Jewelry and Precious Metal Workers |
| 3-7 | Mail Distribution Clerks | 8-9 | Ceramic, Glass, Porcelain Maker |
| 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 |
| 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 and Business Services, Salesmen and | 9-6 | Stationary Engine and Related Equipment Operators |
| 4-5 | Shop Assistants, Salesmen, 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 | Laborers Not Elsewhere Classified |
| 5-1 | Working Proprietors (Catering and Lodging Services) | | |
| 5-2 | Housekeeping and Related Service Supervisors | X | For the Person, whose Work can not be classified in any kind of job |
| 5-3 | Cooks, Waiters, Bartenders and Related workers | X-1 | For the Person looking for a Job |
| 5-4 | Maid and Related Housekeeping Service Workers Not Elsewhere Classified | X-2 | For the Person who do not have permanent job and he/she runs such job |
| | | X-3 | For the Person, who has no job |
| 5-5 | Cleaners, Building Caretakers, Charworkers, and Related Workers | | |
| 5-6 | Launderers, Dry-Cleaners and Pressers | | |
| 5-7 | Barbers, Hairdressers, Beauticians and Related Workers | | |
| 5-8 | Protective Service Workers | | |
| 5-9 | Service Workers Not Elsewhere Classified | | |

2. Sector of Employment: International Standard Industrial Classification of All Economic Activities

Agriculture, Hunting, Forestry and Fishing

- 1.1.1 Agriculture (farming, husbandry, and raising of aquatic products)
- 1.1.2 Agricultural services
- 1.1.3 Hunting
- 1.2.1 Forestry
- 1.2.2 Logging, and exploitation of other forestry products
- 1.3.0 Fishing

Mining and Quarrying

- 2.1.0 Mining of Coal
- 2.2.0 Exploitation of Crude Oil and Gas
- 2.3.0 Metal Ore Mining
- 2.9.0 Other Mining

Manufacturing

- 3.1.1 Manufacture of Food and Food Stuff
- 3.1.3 Beverage industries
- 3.1.4 Tobacco, Cigarettes
- 3.2.1 Manuf. of Textiles
- 3.2.2 Manuf. of garment (except of Footwear)
- 3.2.3 Leather Industry and Manufacture of other Leather products (except Garment and Footwear)
- 3.2.4 Manuf. of footwear (except Footwear made of Plastic, and Latex)
- 3.3.1 Manuf. of wood products (except furniture)
- 3.3.2 Manuf. of furniture (except furniture made of metal)
- 3.4.1 Cellulose, paper and paper products
- 3.4.2 Press and Publicity
- 3.5.1 Industry of Basic Chemicals, including Fertilizer
- 3.5.2 Other chemical Industry
- 3.5.3 Oil Finery
- 3.5.4 Manuf. of other oil and coal products
- 3.5.5 Manuf. of rubber products
- 3.5.6 Manuf. of other plastic products which are not mention above classified
- 3.6.1 Ceramic, Porcelain products
- 3.6.2 Production of glass and other glass products
- 3.6.9 Ore Processing except Metal Ore
- 3.7.1 Steel Industry
- 3.7.2 Manuf. of basic metal (except Iron)
- 3.8.1 Manuf. of equipment made of metal
- 3.8.2 Machinery except electric and electronic machinery
- 3.8.4 Manuf. of electric and electronic machinery
- 3.8.5 Manuf. of science, technique equipment, measuring instruments and optical facilities
- 3.9.0 Other machinery

Electricity, Gas and Water

- 4.1.0 Electricity, gas and steam
- 4.2.0 Water works and supply

Construction

- 5.0 Construction
- 5.1 Construction of industrial Projects
- 5.2 Construction of Agricultural, Forestry and Irrigation Projects
- 5.3 Construction of Transportation Projects
- 5.4 Construction of Stores Departments, Storage
- 5.5 Construction of Public Projects
- 5.6 Building
- 5.7 Construction of Other Projects

Wholesale and Retail Trade, and Restaurants and Hotels

- 6.1.0 Wholesale Trade
- 6.2.0 Retail Trade
- 6.3.1 Restaurants, cafes, other public alimentation
- 6.3.2 Hotels, guest houses

Transport, Storage and Communication

- 7.1.1 Road Transportation
- 7.1.2 Inland Water Transportation
- 7.1.3 Air line
- 7.1.9 Services involved in Transportation
- 7.2.0 Communication

Financing, Insurance, Real Estate and Business Services

- 8.1.0 Financial Institutions
- 8.2.0 Insurance
- 8.3.1 Real Estate and business
- 8.3.2 Service and other business (except lending of equipment)
- 8.3.3 Lending of equipment

Community, Social and Personal Services

- 9.1.0 Public administration and Defence
- 9.2.0 Sanitary and similar services
- 9.3.1 Education
- 9.3.2 Science, Research institute
- 9.3.3 Health care
- 9.3.4 Welfare institutions
- 9.3.5 Business, job and association
- 9.3.9 Other organizations belonging to above group, which are not mentioned
- 9.4.1 Service involved in entertainment, photography
- 9.4.2 Libraries, museums, park, zoos and other kind of services classified
- 9.4.9 Other Services regarding the entertainment, which are not mentioned above
- 9.5.1 Repair services
- 9.5.2 Washing, dying, bleaching services
- 9.5.3 Services of housework
- 9.5.9 Other individual services
- 9.6.0 International and other Extra-territorial Bodies

Appendix G

List of Communes, Districts, Provinces Sampled

| <u>Commune No.</u> | <u>Commune Name</u> | <u>District</u> | <u>Province</u> | <u>Region</u> |
|--------------------|---------------------|-----------------|-----------------|---------------|
| 1 | Cao Son | Muong Khuong | Lao Cai | 1 |
| 2 | Bach Ha | Yen Binh | Yen Bai | 1 |
| 3 | Quan Ba | Quan Ba | Ha Giang | 1 |
| 4 | Tan Tien | Yen Son | Tuyen Quang | 1 |
| 5 | Dan Chu | Hoa An | Cao Bang | 1 |
| 6 | Trang Phai | Van Quan | Lang Son | 1 |
| 7 | Tan Long | Dong Hy | Bac Thai | 1 |
| 8 | Tien Luong | Song Thao | Vinh Phu | 1 |
| 9 | Ba Hien | Tam Dao | Vinh Phu | 1 |
| 10 | Thuong Nong | Tam Thanh | Vinh Phu | 1 |
| 11 | Cu Dong | Thanh Son | Vinh Phu | 1 |
| 12 | Chieng Mung | Mai Son | Son La | 1 |
| 13 | Hao Ly | Da Bac | Hoa Binh | 2 |
| 14 | Van Vo | Chuong My | Ha Tay | 2 |
| 15 | Hop Thanh | Kim Boi | Hoa Binh | 2 |
| 16 | Phuong Duc | Phu Xuyen | Ha Tay | 2 |
| 17 | Sondong | Tx Son Tay | Ha Tay | 2 |
| 18 | Minh Quang | Ba Vi | Ha Tay | 2 |
| 19 | Tan Hoi | Dan Phuong | Ha Tay | 2 |
| 20 | Nam Hong | Dong Anh | Ha Noi | 2 |
| 21 | Dich Vong | Tir Liem | Ha Noi | 2 |
| 22 | Kinh Bac | Tx Bac Ninh | Ha Bac | 1 |
| 23 | Kien Thanh | Luc Ngan | Ha Bac | 1 |
| 24 | Lien Trung | Tan Yen | Ha Bac | 1 |
| 25 | Tam Di | Luc Nam | Ha Bac | 1 |
| 26 | Huong Mac | Tien Son | Ha Bac | 1 |
| 27 | Dinh To | Thuan Thanh | Ha Bac | 1 |
| 28 | Hai Lang | Tien Yen | Quang Ninh | 1 |
| 29 | My Duc | An Lao | Hai Phong | 2 |
| 30 | Lien Khe | Thuy Nguyen | Hai Phong | 2 |
| 31 | Vinh An | Vinh Bao | Hai Phong | 2 |
| 32 | Ai Quoc | Nam Thanh | Hai Hung | 2 |
| 33 | Hiep Hoa | Kim Mon | Hai Hung | 2 |
| 34 | Tan Truong | Cam Binh | Hai Hung | 2 |
| 35 | Doan Kei | Ninh Thanh | Hai Hung | 2 |
| 36 | Nghia Tru | My Van | Hai Hung | 2 |
| 37 | Van Phuc | Chau Giang | Hai Hung | 2 |
| 38 | Ngo Quyen | Phu Tien | Hai Hung | 2 |
| 39 | An Le | Quynh Phu | Thai Binh | 2 |

| | | | | |
|----|-------------|---------------|------------|---|
| 40 | Dong Vinh | Dong Hung | Thai Binh | 2 |
| 41 | Vu Doai | Vu Thu | Thai Binh | 2 |
| 42 | Dong Quy | Tien Hai | Thai Binh | 2 |
| 43 | Ninh Thanh | Tx Ninh Binh | Ninh Binh | 2 |
| 44 | Xuan Thuong | Xuan Thuy | Nam Ha | 2 |
| 45 | Nghia Chau | Nghia Hung | Nam Ha | 2 |
| 46 | Hai Ninh | Hai Hau | Nam Ha | 2 |
| 47 | Tien Hiep | Duy Tien | Nam Ha | 2 |
| 48 | An Lao | Binh Luc | Nam Ha | 2 |
| 49 | Yen Phuc | Y Yen | Nam Ha | 2 |
| 50 | Thanh Hai | Thanh Liem | Nam Ha | 2 |
| 51 | Ninh Son | Hoa Lu | Ninh Binh | 2 |
| 52 | Tho Phu | Trieu Son | Thanh Hoa | 3 |
| 53 | Dong Van | Dong Son | Thanh Hoa | 3 |
| 54 | Ha Giang | Ha Trung | Thanh Hoa | 3 |
| 55 | Hoang Son | Hoang Hoa | Thanh Hoa | 3 |
| 56 | Quang Giao | Quang Xuong | Thanh Hoa | 3 |
| 57 | Dong Vinh | Tp Vinh | Nghe An | 3 |
| 58 | Quynh Yen | Quynh Luu | Nghe An | 3 |
| 59 | Nghi Dien | Nghi Loc | Nghe An | 3 |
| 60 | Nam Son | Do Luong | Nghe An | 3 |
| 61 | Xuan Hoi | Nghi Xuan | Ha Tinh | 3 |
| 62 | Thach Ban | Thach Ha | Ha Tinh | 3 |
| 63 | Lang Son | Anh Son | Nghe An | 3 |
| 64 | Nt An Ngai | Tan Ky | Nghe An | 3 |
| 65 | Bong Khe | Con Cuong | Nghe An | 3 |
| 66 | Hung Trach | Bo Trach | Quang Binh | 3 |
| 67 | Gio Thanh | Gio Linh | Quang Tri | 3 |
| 68 | Huong Toan | Huong Tra | Thua Thien | 3 |
| 69 | Loc Binh | Phu Loc | Thua Thien | 3 |
| 70 | Hoa Quy | Hoa Vang | Quang Nam | 4 |
| 71 | Duy An | Duy Xuyen | Quang Nam | 4 |
| 72 | Tra Dong | Tra My | Quang Nam | 4 |
| 73 | K Dang | Mang Giang | Gia Lai | 5 |
| 74 | Nghia Lo | TX Quang Ngai | Quang Ngai | 4 |
| 75 | Son Thuong | Son Ha | Quang Ngai | 4 |
| 76 | Pho Van | Duc Pho | Quang Ngai | 4 |
| 77 | Hoai Xuan | Hoai Nhon | Binh Dinh | 4 |
| 78 | Binh Nghi | Tay Son | Binh Dinh | 4 |
| 79 | Hoa Tri | TX Tuy Hoa | Phu Yen | 4 |
| 80 | Hoa Phu | Buon Me Thoui | Dac Lac | 5 |
| 81 | Quang Phu | Cu Mgar | Dac Lac | 5 |
| 82 | Dien Phu | Dien Khanh | Khanh Hoa | 4 |
| 83 | Lam Son | Ninh Son | Ninh Thuan | 4 |
| 84 | Ham Cuong | Ham Thuan Nam | Binh Thuan | 4 |

| | | | | |
|-----|--------------|----------------|------------------|---|
| 85 | Tan Chau | Di Linh | Lam Dong | 5 |
| 86 | Loc Thang | Loc Ninh | Song Be | 6 |
| 87 | An Tay | Ben Cai | Song Be | 6 |
| 88 | Truong Mit | Duong Minh | Tay Ninh | 6 |
| 89 | An Hoa | Trang Bang | Tay Ninh | 6 |
| 90 | Binh Hoa Nam | Duc Hue | Long An | 7 |
| 91 | Binh Tinh | Tan Tru | Long An | 7 |
| 92 | Binh Khanh | Can Gio | Ho Chi Minh City | 6 |
| 93 | Tan Hiep | Hoc Mon | Ho Chi Minh City | 6 |
| 94 | Tan An | TX Vinh An | Dong Nai | 6 |
| 95 | Quang Trung | Thong Nhat | Dong Nai | 6 |
| 96 | Vinh Thanh | Long Thanh | Dong Nai | 6 |
| 97 | Binh Chau | Xuyen Loc | Ba Ria | 6 |
| 98 | Thanh Loc | Cai Lay | Tien Giang | 7 |
| 99 | Phu My | Chau Thanh | Tien Giang | 7 |
| 100 | Tan Tay | Go Cong Dong | Tien Giang | 7 |
| 101 | Huong My | Mo Cay | Ben Tre | 7 |
| 102 | Tam Hiep | Binh Dai | Ben Tre | 7 |
| 103 | Tan Ngai | TX Vinh Long | Vinh Long | 7 |
| 104 | Binh Ninh | Tam Binh | Vinh Long | 7 |
| 105 | Nhi Long | Cang Long | Tra Vinh | 7 |
| 106 | Ham Giang | Tra Cu | Tra Vinh | 7 |
| 107 | My Xuong | Cao Lanh | Dong Thap | 7 |
| 108 | Phu Hru | Chau Thanh | Dong Thap | 7 |
| 109 | Phu Hiep | Phu Tan | An Giang | 7 |
| 110 | Thanh My Tay | Chau Phu | An Giang | 7 |
| 111 | Vong The | Thoai Son | An Giang | 7 |
| 112 | Thanh Hoa | Giong Rieng | Kien Giang | 7 |
| 113 | Vinh Thuan | Vinh Thuan | Kien Giang | 7 |
| 114 | Truong Lac | O Mon | Can Tho | 7 |
| 115 | Hiep Hung | Phung Hiep | Can Tho | 7 |
| 116 | Thoi An Hoi | Ke Sach | Soc Trang | 7 |
| 117 | Lam Kiet | Thanh Tri | Soc Trang | 7 |
| 118 | Hoa Thanh | TX Ca Mau | Minh Hai | 7 |
| 119 | Dinh Thanh | Gia Rai | Minh Hai | 7 |
| 120 | Ta An Khuong | Dam Doi | Minh Hai | 7 |
| 121 | Pom Han | TX Lao Cai | Lao Cai | 1 |
| 122 | Tan Long | TP Thai Nguyen | Bac Thai | 1 |
| 123 | NT To Hieu | Mai Son | Son La | 1 |
| 124 | Thuy Khue | Ba Dinh | Ha Noi | 2 |
| 125 | Bach Mai | Hai Ba Trung | Ha Noi | 2 |
| 126 | Thinh Quang | Dong Da | Ha Noi | 2 |
| 127 | Ve An | TX Bac Ninh | Ha Bac | 1 |
| 128 | Thuong Ly | Hong Bang | Hai Phong | 2 |
| 129 | Phuong Ngoc | Do Son | Hai Phong | 2 |

| | | | | |
|-----|-----------------|---------------|------------------|---|
| 130 | Phuong Nang | TP Nam Dinh | Nam Ha | 2 |
| 131 | Dong Tho | TX Thanh Hoa | Thanh Hoa | 3 |
| 132 | Thi Tran Nt Tay | Nghia Dan | Nghe An | 3 |
| 133 | Hai Chau 2 | TP Da Nang | Quang Nam | 4 |
| 134 | Vinh Dien | Dien Ban | Quang Nam | 4 |
| 135 | Phuong Le Hong | TP Qui Nhon | Binh Dinh | 4 |
| 136 | Phuong Sai | TP Nha Trang | Khanh Hoa | 4 |
| 137 | La Gi | Ham Tan | Binh Thuan | 4 |
| 138 | TT Hiep Hoa | Duc Hoa | Long An | 7 |
| 139 | Da Cao | Quan 1 | Ho Chi Minh City | 6 |
| 140 | Phuong 13 | Quan 5 | Ho Chi Minh City | 6 |
| 141 | Phuong 1 | Quan 6 | Ho Chi Minh City | 6 |
| 142 | Phuong 5 | Quan 10 | Ho Chi Minh City | 6 |
| 143 | Phuong 18 | Quan Tan Binh | Ho Chi Minh City | 6 |
| 144 | Phuong 5 | Quan Binh | Ho Chi Minh City | 6 |
| 145 | Phuong Tan Hoa | TP Bien Hoa | Dong Nai | 6 |
| 146 | Phuong 5 | My Tho | Tien Giang | 7 |
| 147 | Phuong 3 | Sa Dec | Dong Thap | 7 |
| 148 | Vinh Lac | Rach Gia | Kien Giang | 7 |
| 149 | Phuong 4 | TX Soc Trang | Soc Trang | 7 |
| 150 | Thoi Binh | Thoi Binh | Minh Hai | 7 |

Note: Region codes refer to the following regions: 1=Northern Uplands, 2=Red River Delta, 3=North Central, 4=Central Coast, 5=Central Highlands, 6=Southeast, 7=Mekong River Delta