

Procedure for Calculating Nominal and Real Expenditures, and Poverty Indicators, for the 2002 Viet Nam Household Living Standards Survey (VHLSS)

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I. Nominal Expenditures

The overall objective of calculating nominal (and real) expenditures for the 2002 Vietnam Household Living Standards Survey (VHLSS) is to obtain estimates of expenditure and poverty that are comparable to those from the 1997-98 Viet Nam Living Standards Survey (VLSS). In fact, the design of the expenditures sections of the 2002 VHLSS household questionnaire is very similar to (though not exactly the same as) the expenditures sections of the 1997-98 VLSS (this is explained in detail below). Thus the starting point for obtaining comparable expenditure estimates were the Stata programs used to calculate the expenditure numbers for the 1997-98 VLSS. There were 5 Stata programs to calculate expenditures from the 1997-98 VLSS:

1. 11AB98.do (calculates food expenditures, separating into rice and other food)
2. 12ABC98.do (most nonfood expenditures, including “use value” of durable goods)
3. EHU98.do (calculates expenditures on education, health care and utilities)
4. RENTH.do (calculates imputed rental value of housing)
5. HHEXPE.98 (adds all nominal expend., uses deflators to calculate real expend.)

In fact, these programs calculate two sets of expenditures variables. One set is an expenditure variable most comparable to the 1992-93 VLSS; these variables have names that end with “1”. The other set is the “best” (most comprehensive) expenditure variable using the 1997-98 VLSS; these variables have names that end with “2”. The details of the differences between these two sets of variables are explained in detail in comments included in these five Stata programs.

The Stata programs that I wrote, with assistance from staff of the GSO, to calculate nominal and real expenditures for the 2002 VHLSS are very similar to these programs. Again, there are 5 programs:

1. Foodexp.do (calculates food expenditures, separating into rice and other food)
2. Nonfdexp.do (most nonfood expenditure, including “use value” of durable goods)
3. Ehu02.do (calculates expenditures on education, health care and utilities)
4. Renth02.do (calculates imputed rental value of housing)
5. Hhexpe02 (adds all nominal expend., uses deflators to calculate real expend.)

These programs also calculate two sets of expenditures variables. One set is an expenditure variable most comparable to the 1992-93 and 1997-98 VLSS surveys; these variables have names with “1” in them (usually at the end, but sometimes in the middle of the name). The other set is the “best” (most comprehensive) expenditure variable using the 2002 VHLSS; these variables have names that end with, or at least include, “2”.

Again, the details of the differences between these two sets of variables are explained in detail in comments in the five programs.

The rest of this section discusses some important aspects of each of these programs. The discussion focuses on three possible problems that could cause the expenditure numbers in the 1997-98 VLSS and the 2002 VHLSS not to be comparable, namely:

- a) Changes in the design of the questionnaire;
- b) Changes in the way the survey was implemented, in particular who the interviewers were, what their incentives were, and the amount of supervision;
- c) Changes in the willingness of the households to cooperate in the survey

A. Foodexp.do

There were very few differences in the food expenditure sections of the 1997-98 VLSS and the 2002 VHLSS household questionnaires. Both questionnaires have two subsections, one for “holiday” (mainly Tet) food expenditures and the other for “regular” (rest of the year) food expenditures. The 1997-98 VLSS asked for information on 18 different food items for holiday food expenditures. The 2002 VHLSS asked for 24 holiday food items. The differences in the items are:

- i) The 1997-98 VLSS combines beef and buffalo meat into one category, while the 2002 VHLSS separates them into two categories. This change should have almost no effect since consumption of buffalo meat is very rare; only 729 of the 29,521 households in the 2002 VHLSS (2.5% of the households) report holiday consumption of buffalo meat.
- ii) The 2002 VHLSS adds a category for “processed meat” that was not included in the 1997-98 VLSS. This was quite common, with about one half of the 2002 VHLSS household reporting such expenditures. Even so, it may have been recorded in the “other category” of the 1997-98 VLSS, which specifically asks about “processed foods”. One should also keep in mind that the holiday food section covers only 1-2 weeks of the past 12 months.
- iii) The 2002 VHLSS asks about consumption of “beverages” and “canned or bottled refreshment” (both non-alcoholic), which was not asked about in the 1997-98 VLSS. Only about 25% of households in the 2002 VHLSS reported holiday expenditures on such items, and it is possible that they were included in the 1997-98 VLSS in the “other” category. It seems best to leave them in, and any overestimation they may cause is likely to be very small because this only concerns expenditure patterns for 1-2 weeks over the past year.
- iv) The 2002 VHLSS included cigarettes and tobacco, but since this is not a food item it will have no effect on calculating food expenditures. (The 1997-98 VLSS collected cigarette and tobacco expenditure in the non-food expenditure section of the questionnaire.)
- v) The 2002 VHLSS specifically asks about meals outside the home, which is not explicitly asked in the 1997-98 VLSS questionnaire. About 35% of

households report such expenditures in the 2002 VHLSS. This was included in total food expenditure because it could have been picked up in the “other” category of the 1997-98 VLSS and this period covers only 1-2 weeks of the past 12 months.

Another difference in the two survey questionnaires is that the 1997-98 VLSS allowed respondents to choose the units (grams, kilograms, liters, etc.) for the quantities reported, while the 2002 VHLSS stipulates a particular unit (kilograms for most solids and liters for liquids). However, the quantity data were not used in calculating food expenditures, only the expenditure data were used, so this should not affect the calculation of food expenditures using the 2002 VHLSS.

Now turn to the “regular” food expenditures. The two questionnaires again differed in the number of food items that they recorded. The 1997-98 VLSS asked for 45 food items, while the 2002 VHLSS asked for 58 food items. The differences are as follows:

- i) The 1997-98 VLSS included a category for barley/malt/millet/kaoliang that is not included in the 2002 VHLSS. This is very unlikely to have any effect because only 9 of the 5999 households in the 1997-98 VLSS reported consumption of this item.
- ii) The 2002 VHLSS added a category “instant noodle, rice soup” that was not included in the 1997-98 VLSS. About 60% of households report expenditures on this in the 2002 VHLSS. Mr. Phong of the General Statistics Office (GSO) explained that in 1997-98 instant noodles and instant soup were very rare, but now they are common, so this should not affect the comparability of the two questionnaires. (In addition, this item also included “noodle”; Mr. Phong said that this item *was* common in 1997-98 and was included in a different item (#308) in the 1997-98 VLSS.
- iii) The 2002 VHLSS added a category “fresh pea” that was not included in the 1997-98 VLSS. About 55% of households report expenditures on this in the 2002 VHLSS. In Vietnamese, the item translated as “bean” in 1997-98 VLSS includes both this item and the item translated as “bean” in the 2002 VHLSS (as specific types). This suggests no serious problems of comparability; the two items are included in both surveys, the only difference is that they are aggregated into a single item in the 1997-98 VLSS while they are disaggregated into two separate items in the 2002 VHLSS.
- iv) The 2002 VHLSS has two items for spices, “spices, condensed soup” and “seasoning, spice”, while the 1997-98 VLSS has only one: “MSG”. Mr. Phong explained that the first refers to something like bullion cubes, which he says are a “new product” in Vietnam that was not widely available in 1997-98, and the second is simply MSG. Thus there seems to be little problem of comparability.
- v) The 2002 VHLSS added a category “chewing gum” that was not included in the 1997-98 VLSS. However, this was reported by only 4.6% of the

households in the 2002 VHLSS (1413 out of 29,521), so it is unlikely to have any noticeable effect on comparisons across the two surveys.

- vi) The 2002 VHLSS has three categories for milk products (“condensed milk, powdered milk”, “cream, yogurt” and “fresh milk”) while the 1997-98 VLSS has only one (“milk and other milk products”). However, only the “condensed milk, powdered milk” category is commonly purchased in Vietnam, reported by about 33% of the households in the 2002 VHLSS. In contrast, “cream, yogurt” is reported by only 16% of the households and “fresh milk” is reported by only 6% of the households. In my judgment this difference in questionnaire design will have very little effect on comparability across the two surveys.
- vii) The 2002 VHLSS asked about five kinds of non-alcoholic beverages (other than coffee and tea), namely “beverages”, “bottled and canned refreshment”, “fruit juice”, “bottled and canned purified water” and “bottled and canned tonic water”. In contrast, the 1997-98 survey had only one category, “beverages”. The fraction of households reported the different kinds of beverages in the 2002 VHLSS was not particularly high, specifically 17% report “bottled and canned refreshment”, 8% report “fruit juice”, 4% report “bottled and canned purified water” and 7% report “bottled and canned tonic water”. Again, I think that this change in questionnaire design will have almost no effect on the comparability of the two surveys.
- viii) The 2002 VHLSS divides coffee into two types, “instant” and “ordinary” (the latter was translated as “powder coffee” but it is really just ordinary coffee), while the 1997-98 VLSS had only one category. However, neither kind is very common in the 2002 VHLSS, 9% for “instant coffee” and 10% for “powder coffee”. (in the 1992-93 VLSS, 9% of households report buying coffee, and in the 1997-98 VLSS, 11% report buying coffee; and in 2002 VHLSS 19% report either instant coffee or powder coffee)
- ix) The 2002 VHLSS includes tobacco and betel leaf as two categories that are not in the food expenditure section of the 1997-98 VLSS (they are in the non-food section of that survey). This is irrelevant for calculating food expenditures.

Thus in terms of categories of goods, the two survey questionnaires are quite comparable.

The only other difference in questionnaire design is that the 1997-98 survey asks a question “...how often did your household usually purchase or barter for [item]?” In responding to that question, households were allowed to choose any time unit that was convenient. In contrast, the 2002 questionnaire did not allow households to choose the time unit, but were simply asked, “... how many times each month (average)...?” That is, they could not choose the time unit but had to respond in terms of how often per month (on average). However, in the 1997-98 VLSS “month” was chosen 81.4% of the time (average over all food categories) and week was chosen 17.1% of the time, so most responses were unaffected by this change, and of those that were forced to change it was

only from week to month. Thus it seems unlikely that this change would have a sizeable impact on the comparability of the food expenditures in the two surveys.

After calculating comparable numbers for nominal expenditures for rice and other food items for the two surveys, we see a 17.7% **decrease** in annual per household nominal expenditures on rice, and a 17.4% **increase** in annual per household nominal expenditures on non-rice food items. This is shown in Table 1. Combining all food items, there was a 5.8% increase in household nominal expenditures on food. Given a general price increase of 9.0% during this time period, expenditure on food declined slightly in real terms. Yet these are household means, and household size dropped from 4.70 members to 4.43 members over this time period. In per capita terms, nominal food expenditures increased by 12.1% (from 1,462.1 to 1,638.9), which is slightly more than the rate of inflation. This is what one would expect, since the income elasticity of food is generally positive although less than 1, and overall incomes have increased (as explained more below). The fact that the proportion of total expenditures devoted to food decreased from 51.0% in 1997-98 to 46.5% in 2002 implies that the income elasticity is less than 1.

The data on rice and non-rice nominal expenditures also show a major switch from the main staple food, rice, to a more varied diet. This is consistent with a general increase in household incomes. More specifically, the quantity of rice consumed per household per year, according to the two surveys, dropped from 691.2 kg. to 460.3 kg. over this time period. (These quantity numbers are calculated in the Stata program “quantchk.do”.) This 33.4% drop in the quantity of rice consumed reflects this shift in the diet, although a small part of it is explained by the decrease in average household size (from 4.70 to 4.43). The main reason that the quantity dropped much more steeply than the expenditures dropped is that, on average, households are buying more expensive varieties of rice. For example in Hanoi “ordinary” rice is about 3500 Dong per kilogram, while more expensive varieties are 5,500 Dong per kilogram.

(I tried to check whether this significant drop in rice consumption is seen in agricultural production and trade data. Overall, there is little change in the amount of rice available per capita in 1998 and 2002, as seen in the production and trade data. Moreover, the estimated amount of rice produced per capita in 1998 and 2002 is more than twice the amount reported in the surveys. Yet much of the rice is not consumed directly but instead is fed to animals or used to make rice products (noodles, alcohol, etc) for human consumption. Also, the rice consumption quantities do not include rice consumed in meals away from home, which is increasing very fast in Vietnam (in 1992-93 it was less than 7% of total food expenditures, while in 1997-98 it was 11.1% and in 2002 it was 13.5%) Thus the data on production and trade of rice is of little use to judge the accuracy of the rice consumption in the two surveys, in particular whether there are any problems with comparability of the two surveys.)

Even if the food expenditure sections in the household survey questionnaire had not changed at all, there could be problems in comparability if the interviews were conducted differently. In particular, the GSO is concerned that the training and the

incentives for interviewers in the 2002 VHLSS were lower than in the 1997-98 VLSS. In terms of training, interviewers were trained for 4 weeks in the 1997-98 VLSS but only for 5 days in the 2002 VHLSS. Regarding incentives, interviewers received 100,000 Dong per interview completed in the 1997-98 VLSS but only 18,000 Dong per interview completed in the 2002 VHLSS. Finally, supervision was weaker in the 2002 VHLSS. In the 1997-98 VLSS there was one full-time supervisor for every two interviewers, while in the 2002 VHLSS there was one “team leader” for every four interviewers.

It is not easy to check whether the factors discussed in the previous paragraph affected the comparability of the data in the two surveys. Yet one way to check this is to look for evidence that interviews were being done sloppily, in particular whether the interviewers in the 2002 VHLSS were “rushing” to get through the questionnaire without probing for whether households had expenditures on particular items that one would expect them to have. This was checked by calculating the average number of food items that households reported that they had purchased in the past year, separately for the holiday food expenses and the ordinary food expenses. After eliminating a few items that are not comparable across the two surveys (as explained above), in the 1997-98 VLSS households reported, on average, purchasing or producing for self-consumption 9.7 items for holiday food expenses and 23.4 items of ordinary food expenses. The analogous figures for the 2002 VHLSS are 10.6 items for holiday expenses and 24.0 items for ordinary food expenditures. Thus there is no evidence here that lower training, incentives or supervision led to omitting more items of food expenditure in the 2002 VHLSS than in the 1997-98 VLSS.

B. Nonfdexp.do

The Stata program nonfdexp.do calculates three types of non-food expenditure for each household. First, it adds up “daily” nonfood expenditures, which are expenditures on items that are purchased very frequently. Second, it calculates “annual” nonfood expenditures, which are for items that are purchased relatively infrequently. Third, it calculates the use value of durable goods. The following paragraphs describe how each of these were done, and what potential comparability problems could arise,

1. Daily Expenditures. There were several changes in the questionnaire design regarding collection of “daily” expenditures. Perhaps the most important is that the questions and reference periods were slightly different. In the 1997-98 VLSS the reference period was the past four weeks, and a single question was asked “What is the money value of the [item] that your household has purchased or bartered for in the past 4 weeks?”. In the 2002 VHLSS the reference period is, in effect, the past year, but it is obtained using two questions: “How many months did you buy [item] in the last 12 months?” and “How much did you buy each month?” These are clearly different ways of obtaining expenditure data. In the former the expenditures for the last month are asked, while in the latter the typical monthly expenditures during the past year (for those months when the item was purchased) is asked. If expenditures on these items are really very “daily” or “regular” then this difference may not matter. But if they are sometimes

infrequent, then the method used in the 1997-98 survey would have more variance in the expenditures because of the shorter recall period. Similarly, the mean number of items reported by households would be higher in the 2002 VHLSS. To check this, the mean number of “daily expenditure” items reported in both surveys was calculated. In the 1997-98 VLSS this mean was 3.1, while in the 2002 VHLSS it was 4.1. Some of this increase is probably due to increased living standards, but some of it is almost certainly also due to the change in the design of the questionnaire. This increased “smoothing” in the 2002 VHLSS will tend to reduce inequality in expenditures (relative to what would have happened if the questionnaire had not changed) and thus reduce poverty. However, this effect is probably quite small because the increase in the average number of items was not dramatic and because these expenditures account for only about 10% of total expenditures in the 2002 VHLSS.

Another issue is the fact that the items included in the “daily” expenditures of the two surveys were not exactly the same. The 1997-98 VLSS asked about 15 items while the 2002 VHLSS asked about 21 items. The 1997-98 survey asked about betel leaf, which was covered in the food expenditure section of the 2002 VHLSS. The 2002 VHLSS made the following changes:

- i) Cleaning items such as laundry soap, dishwashing soap and house cleaning products were divided into two categories, while they had been a single category in the 1997-98 VLSS;
- ii) Shampoo and bath soap were in two categories, while they were a single category in the 1997-98 VLSS;
- iii) Toothpaste and toothbrushes were separated from toilet paper and razor blades, while all of these were a single category in the 1997-98 VLSS;
- iv) Books, newspapers and magazines were added (they were collected in the “annual” expenditure of the 1997-98 VLSS);
- v) “Entertainment” was added (it was in the “annual” expenditure of the 1997-98 VLSS);
- vi) Haircut and hairdressing were added (they were collected in the “annual” expenditure of the 1997-98 VLSS);
- vii) “Lotion, powder and lipstick” was added as a separate category.

While the changes in the above paragraph may appear to be substantial, they primarily reflect some slight disaggregation or moving a few items from one part of the questionnaire to the other. Also, together all daily expenditures account for only 10% of total household expenditures, so it seems unlikely that this change in questionnaire design would have a large impact on calculation of total expenditures. Finally, some of these items are not purchased by most households. Only 22% of the households interviewed report purchases of “lotion, powder and lipstick” only 16% report purchases of books, newspapers and magazines, and only 9% report purchases of “entertainment”.

2. Annual Expenditures. Now turn to “annual” non-food expenditures. The 1997-98 VLSS collected information on 51 items, while the 2002 VHLSS collected

information on 48. In both surveys the recall period is the past 12 months. The specific differences in the items asked are:

- i) The 1997-98 VLSS separates underclothing from other ready-made clothing, while the 2002 VHLSS groups them as a single item/category;
- ii) The 1997-98 VLSS has three items, construction materials, expenses for building new house, and home repairs/painting, that are not in the 2002 VHLSS; however, these items are not included in total expenditures in the 1997-98 VLSS because they are thought to be accounted for in the calculation of imputed rent (see below);
- iii) In the 1997-98 VLSS, bike tires and tubes and bike spare parts are in two separate categories, but they are aggregated into one category in the 2002 VHLSS;
- iv) In the 1997-98 VLSS, motorbike/car tires and tubes and motorbike/car spare parts are in two separate categories, but they are aggregated into one category in the 2002 VHLSS;
- v) The 2002 VHLSS has a category, “maintenance and repair of living tools”, that is not included in the 1997-98 VLSS;
- vi) The 1997-98 VLSS has a category, cyclo and ferry fees, that is not in the 2002 VHLSS (presumably it is aggregated into the other transportation expenses);
- vii) The 1997-98 VLSS has three categories, books/newspapers/magazines, entertainment, and haircut/hairdressing that are not in the annual expenditures of the 2002 VHLSS; but as explained above they are in the “daily” non-food expenses of the 2002 VHLSS;
- viii) The 2002 VHLSS has three categories, sports instruments, internet, and arrange parties, that are not in the 1997-98 VLSS.
- ix) The 2002 VHLSS divides insurance into two types (life/security and other), while the 1997-98 has only one general insurance category; however, insurance expenses are not included in consumption expenditures in either survey.
- x) The 2002 VHLSS asks about lending money, repaying debts, and making investments, which are not included in the 1997-98 VLSS. These are not consumption expenditures, so they were not included in the calculation of consumption expenditures for 2002.

Overall, these changes are minor and are unlikely to have a noticeable effect on calculations of non-food consumption expenditures. A more serious worry is whether the lack of incentives for (and reduced supervision of) interviewers led to a situation in which the 2002 VHLSS omitted some expenditures on non-food items. As with food items, this was checked by calculating the mean number of items per household (only for those items which are clearly comparable across the two surveys). The 2002 VHLSS had 10.2 items per household (plus 0.7 for weddings and funerals) while the 1997-98 VLSS had 9.7 items per household (plus 0.5 for weddings and funerals). Thus there is no obvious evidence of overlooking non-food expenditures in the 2002 VHLSS, relative to the 1997-98 VLSS.

3. Durable Goods. Finally, consider durable goods. The design of the questionnaires from the two surveys regarding the collection of durable goods reflects two potentially important changes. First, the 2002 VHLSS included many goods that are primarily production goods as opposed to consumer durables, while the 1997-98 VLSS questionnaire included only consumer durables (it did collect household productive assets, but in another part of the questionnaire). Second, the 2002 VHLSS questionnaire added two questions. The first question asks whether the item is used for consumption purposes, for production purposes, or for both, and the second question, asked only of those households who report “both”, asks for a percentage figure that divides use into consumption and production purposes (e.g. 40% of use is for production purposes and 60% is for consumption).

To make the data from the two surveys comparable, the first step was to drop goods added in the 2002 VHLSS that have little or nothing to do with household consumption. First, any good that was reported to be used for production purposes only was dropped (some goods for which data were collected in the 1997-98 VLSS could have been used only for production purposes, such as cars and boats, yet the instructions for that survey (in the interviewer manual) stipulated that only items that were primarily used for consumption purposes should be included. Second, any good that was not included in the 1997-98 questionnaire and is almost exclusively a production good was excluded; thus the following items were dropped: land or water surface, livestock, farming equipment, shop or workshop, wagons, metal and wood working equipment, printers and photocopy machines, fishing nets, and containers for any of the above. Any remaining goods were considered to be goods that were also picked up in the 1997-98 survey. Since the 1997-8 VLSS did not ask households to divide the use of the remaining goods into consumption use and production use, the information in the 2002 VHLSS that make this distinction was not used. Thus the full value of all the goods that remained was effectively assigned to consumption use.

The list of “remaining” goods still differs somewhat between the two surveys, but the differences are very minor. First, the 1997-98 VLSS included electric current stabilizers, wardrobes, and clocks, which were not included in the 2002 VHLSS. Both electric current stabilizers and clocks were common in the 1997-98 VLSS, but their median current values were only 50,000 Dong and 40,000 Dong, respectively, which is about three dollars; thus they were not included in the 2002 VHLSS. Regarding wardrobes, they are relatively rare (only about 10% of households reported them in the 1997-98 VLSS) although they are valuable; this durable good was included in a more general category of wardrobes and cupboards in the 2002 VHLSS. Second, in the 2002 VHLSS boats with and without motors were asked for separately, while in the 1997-98 VLSS these categories were combined. This different treatment is unlikely to have had any effect on household reporting on ownership of boats, and in any case boats are relatively rare, with only about 3% of households reporting that they had them in the 1997-98 VLSS.

Thus there is little reason to think that questionnaire design had much effect on the comparability of the data from the two surveys. Yet a potentially more serious

problem arises, which is that households may underreport their ownership of durable goods, or less well trained or less motivated interviewers in the 2002 VHLSS may not probe as much as was done in the 1997-98 VLSS. To check this, the (weighted) mean number of durable goods owned by households is reported in Table 2 for these two surveys and for the 2001-02 Vietnam Health Survey, which provided training, incentives and supervision for interviewers that were similar to those provided by the 1997-98 VLSS. Table 2 also reports, for the 2002 VHLSS, the percentage contribution of each good to the total current value of household durable goods.

The most notable aspect of Table 2 is the importance of motorbikes; they account for one half of the value of all durable goods, although they account for about 39% of the use value because of their relatively low depreciation rate. As one would expect, motorbike ownership increased dramatically from 1997-98 to 2002, from 0.24 to 0.47. Note that the mean value of motorbikes is slightly higher for the 2001-02 Vietnam Health Survey, at 0.53. This may indicate a small amount of under-reporting of motorbike ownership in the 2002 VHLSS, but it is also possible that the 2001-02 Vietnam Health Survey included some motorbikes that were primarily used for “production” purposes (even though that the instructions to the interviewers in that survey were to exclude such cases). Almost all other durable goods also show increases in ownership, sometimes dramatically so.

A few goods show a decline in ownership in Table 2, in particular radio/cassette players, cameras, electric fans, bicycles, sewing machines, wardrobes, beds and chairs and tables. For some of these goods this makes sense; radio/cassette players, bicycles and sewing machines are less popular than they were a few years ago. But for the other goods, such as beds and tables and chairs, this makes no sense at all. After some checking and discussions with GSO, the main reason for this apparent drop became clear. In the 1997-98 VLSS, interviewers recorded each item on a separate line, no matter how small its value, while in the 2002 VHLSS interviewers were allowed to “aggregate” goods with a value of less than 200,000 Dong (about \$13) into a single line on the questionnaire. Thus for goods that households are likely to own more than one, and the value of some could be less than 200,000 Dong, the 2002 VHLSS undercounts the actual number of goods owned. However, the current value of the goods should not be undercounted, because the interviewers were instructed to write down the total value whenever they aggregated in this way. These instructions appear to have been followed. Take for example beds. The mean number of beds per household appears to drop from 2.01 in 1997-98 to 1.16 in 2002, which almost certainly reflects this change in the instruction to interviewers. However, the mean value of beds owned by households was unchanged: 589,000 Dong in 1997-98 and 585,000 Dong in 2002. Another case is tables and chairs. The number appears to have dropped from 0.89 to 0.68, but the mean total value per household increased from 375,000 in 1997-98 to 471,000 in 2002.

Comparison of other durable goods with the data from the 2001-2002 Vietnam Health Survey shows very close matches for some goods (color TV, black and white TV, refrigerator, washing machine, water heater and perhaps air conditioner) but higher figures for the 2001-02 survey than for the 2002 VHLSS for other goods (stereo, radio

cassette, bicycle, boats and phones). For most of these (radio/cassette, bicycle, and perhaps boat), households are likely to own more than one and some are likely to be of low value, so this apparent change probably reflects the “aggregation” instruction to interviewers in the 2002 VHLSS. While there may be a small amount of under-reporting in the 2002 VHLSS in the ownership of goods, for the two items that are most important in terms of percent of total use value (motorcycles and color TVs) the two surveys (the 2002 VHLSS and the 2001-02 Vietnam Health Survey) are pretty close.

A final important issue regarding durable goods is their estimated depreciation rates. The annual “use value” of durable goods is the current value multiplied by the sum of the depreciation rate and the interest rate. Somewhat surprisingly, the depreciation rates calculated using the 2002 VHLSS are, in most cases, much lower than the depreciation rates calculated using the 1997-98 VLSS. The issue then arises: which depreciation rates should be used in the 2002 survey to make the results most comparable to the use value of durable goods calculated from the 1997-98 VLSS? The decision was made to use the 1997-98 depreciation rates to calculate use values for 2002, instead of using depreciation rates generated internally from the 2002 VHLSS survey. The basic reason was that comparability implies using the same depreciation rates.

Yet this decision on depreciation rates could be a mistaken, for two reasons. First, perhaps the goods themselves were different in 1997-98 and 2002 in the sense that the physical depreciation changed. An important example of this is motorbikes recently imported from China; they were much more common in 2002 and they are thought to be of lower quality and presumably thus depreciate faster. Second, perhaps changes in real prices were different – the idea here is that, holding constant physical depreciation, there could be differences in changes in real prices of goods due to changes in market structure. The example of motorbikes also applies here. Sometimes the government restricts their import, which raises their prices, and sometimes increased competition (for example, from Chinese motorbikes) lower prices for a given type of motorbike. Thus the “opportunity cost” of owning a durable good for one year could really be different in 1997-98 than in 2002, due to differences in price trends for that good.

However, there is little reason to think that either possibility explains the higher estimated depreciation rates in 1997-98. Consider the physical depreciation of motorbikes, which is the most obvious possible change in the physical depreciation of durable goods (and motorbikes account for about 39% of the use value of durable goods). The depreciation rate is actually higher in the 2002 VHLSS, so the decision to use the 1997-98 depreciation rate would, if anything, lead to downward bias in the use value of motorbikes. It is true that, on average, the depreciation rates of other goods were higher in 1997-98 than in 2002, but it is not clear that this represents changes in physical depreciation. It could just as well reflect difficulties that households had in reporting accurate information in 97-98 because inflation had been relatively high in the preceding years. Another possible cause of the difference in depreciation rates is the above-noted change in procedure in which durable goods of low value were combined into a single line on the 2002 VHLSS questionnaire; this could have an effect on calculated depreciation rates. Second, consider changes in real prices. For the three most important

goods with good price data, we have: 1. The price of motorbikes increased substantially from 97 to 98, while it was falling in 2001 to 2002, so for this item the depreciation was higher in 2002 survey than in 97-98 survey; 2. The price of bicycles prices was falling in 97-98 but steady in 2001-2002, so its price trend is the opposite of that of motorbikes; 3. The price of color TVs fell slightly from 1997 to 1998 but rose slightly from 2001 to 2002, so again the trend is in the opposite direction of the trend in motorbike prices. Overall, there is no obvious reason, in terms of either physical depreciation or changes in price trends, why estimated depreciation rates are higher in the 1897-98 VLSS than in the 2002 VHLSS; this difference may simply be due to other reasons, such as the impact of higher inflation before 1998 on individuals' recall or the change in the 2002 VHLSS that allowed interviewers to aggregate goods of low value. For purposes of maintaining comparability, the 97-98 depreciation rates were used (instead of the 2002 rates) because total expenditures for the 1997-98 survey have been widely reported for the past 5 years, and it would be troublesome to revise those figures using depreciation rates calculated from the 2002 survey.

(Note: For completeness the final expenditure data set created, hhexpe02.dta, also has variables calculated using the depreciation rates calculated using the 2002 data; these variables are denoted by a "0" at the end, or near the end, of the variable name. For details see the comments in the actual program files.)

C. Ehu02.do

This program gets expenditures on education, health and utilities in two ways, one of which is comparable to the "1" variables in the 1997-98 VLSS (and the 1992-93 VLSS) and the other of which is the "best" for the 2002 survey ("2" numbers).

For education, the calculations simply use the total in question 5 (part h) of Section 2 of the 202 VHLSS questionnaire. (The "check2.do" program showed that the components of 5a – 5g always added up to "5h"). This question is very similar to question 2 (part l) of Section 2.D of the 1997-98 VLSS questionnaire, except that the 1997-98 VLSS probed for 11 categories of education expenditures, while the 2002 VHLSS probed for only 7 categories. However, this difference primarily reflects greater aggregation. In the 1997-98 questionnaire, transportation/meals/lodging costs was a separate category, but this was included in the "other" category of the 2002 questionnaire. Also, contributions to parents' associations and building funds were two separate categories in 1997-98 but one category in 2002. Finally, fees for examinations and contributions for special events were included in 1997-98 but dropped in 2002; the mean value of the sum of these two was about 13,000 Dong per student, which is less than \$1. Thus there seems to be no changes in questionnaire design that would have a large effect on comparisons of the education expenditure data from the two surveys.

Table 1 shows that nominal expenditures on education increased by only 6.3% from 1998 to 2002, which is slightly less than the rate of inflation. Yet these means are household means, and household size decreased; in per capita terms, expenditures on education increased by 12.7%, which is a little higher than the rate of inflation. This is

still a small increase, but there have been no major changes in school fees from 1998 to 2002, nor any major increases in school enrollment rates (UNESCO website shows no change in Vietnam's high primary enrollment rate and a gradual increase in the secondary enrollment rate).

For health, the situation is somewhat more complicated. First, the 1997-98 VLSS questionnaire collected a large amount of detailed information on health care expenditures. However, most of that information was not used to calculate a "comparable" (to the 1992-93 VLSS, and also to the 2002 VHLSS) health expenditure variable. Instead, the comparable number is the sum of the response to two questions, one on expenses for hospital inpatient visits in the past 12 months and one on all other medical expenses for the past 12 months. Both questions were asked of each individual household member, as opposed to asking about the household as a whole.

For the 2002 VHLSS, questions were again asked of individual household members about uses of health services in the past 12 months, with one question on outpatient expenses and another on outpatient expenses. However, a separate recording was made for each visit to a health service provider, which is a major difference between the two surveys. In principle, the method used in the 2002 VHLSS is less susceptible to under-reporting because it asks for information about each episode or visit. Yet this may not have a large effect because most individuals who report health expenditures reported that they had only one visit to a health provider in the last 12 months. More specifically, of the 23,473 individuals (in the 30,000 households with expenditure data) who report that they visited a health facility in the last 12 months, 81.6% (19,143) report that they visited only one time. Of the rest 13.7% report two visits, 3.3% report three visits, and the remaining 1.5% report four or more visits (the highest number being 12 visits). On the other hand, there is another complication, which is that expenditures on medicine (which account for a large fraction of total health expenditures) were asked at the household level instead of at the individual level. This could lead to underreporting of such expenditures compared to the 1997-98 survey, which asked at the individual level.

Overall, the differences in the design of the questionnaires in the 1997-98 VLSS and the 2002 VHLSS could lead to problems of non-comparability of health expenditure data, but it is difficult to know what direction the bias may be. The 2002 VHLSS collected more detailed information on visits to health care providers but less information on expenditures on medicines, so these two biases go in the opposite direction. Looking at Table 1, we see that expenditures per household increased by 10.1%, which is not much more than the rate of inflation (9.0% from January 1998 to January 2002). However, because household size decreased from 4.70 to 4.43 over this period per capita health expenditures increased somewhat faster, at 16.7% (from 153.56 to 179.24). Even so, it is still true that health expenditures have declined slightly as a percentage of total household expenditures, which seems inconsistent with general increasing income and the fact that health care has often been shown to be a luxury good. However, the price of health care has increased only slightly higher than the rate of inflation (10.8%) and health care expenditures were only 5.4% of total expenditures in 1997-98, so lack of

comparability of health care expenditures should not have a large effect on overall comparability of total expenditure data from the two surveys..

Finally, the Ehu02.do program calculated expenditures on utilities, in particular water, electricity and garbage disposal. Very little changed in the 2002 VHLSS questionnaire, as compared to the 1997-98 VLSS questionnaire. The only real change is that households were asked to give an annual figure for all three types of utilities in the 2002 VHLSS, while in the 1997-98 VHLSS they could choose the time unit that was most convenient for them. In the 1997-98 VHLSS, over 90% preferred providing a monthly amount, and it is possible that requiring them to provide an annual amount could have caused some errors. However, it seems unlikely that errors would have had much effect on the calculation of total expenditures, because as seen in Table 1 expenditures on utilities as a whole are only about 3% of total expenditures in both 1997-98 and 2002.

D. Renth.02

This program calculates the “rental value” of housing by regressing the reported value of the household on a large number of dwelling characteristics. It then multiplies the estimated value for each household by 0.03, which is the median ratio of annual rent over total value for the small number of observations that rent on the private market. The details are explained in comments contained in this program.

For purposes of comparability between the 1997-98 VLSS and the 2002 VHLSS (and the 1992-93 VLSS), these calculations are not used. Instead, for all 3 surveys the comparable expenditures on housing are calculated as a given percentage of other non-food expenditure. Specifically, in urban areas the value of housing is calculated as 21.4% of other non-food expenditure (including the use value of durable goods) and in rural areas the value of housing is calculated as 11.8% of other non-food expenditure (including the use value of durable goods).

This is an admittedly crude procedure, but little else could be done to attain comparability between the 1992-93 and 1997-98 VLSS surveys. The two fundamental problems are: 1. A very underdeveloped housing rental market in Vietnam; and 2. Changes in land laws in the mid-1990's that had a major impact on households' assessments of the value of their dwellings even in cases where there was little physical change to the dwelling. Yet since estimated imputed rent accounts for only about 7.4% of total expenditure, the specific procedure chosen is unlikely to have a major impact on the calculation of total household expenditures.

E. Hhexpe02.do

Finally, the program Hhexpe02.do adds up all of the nominal numbers from the other programs. For the “comparable” nominal numbers, the rental value of housing is simply calculated as 11.8% of all other non-food expenditures in rural areas and 21.4% of all other non-food expenditures in urban areas, as explained above. This probably

underestimates increases in the rental value of housing over time; the mean rental rate calculated by predicting the value of housing and multiplying it by 0.03 (the “best” estimate for 2002) is 50% higher than the rental rate obtained by multiplying all other non-food expenditures by these inflation factors.

As explained above, this program calculates variables that are comparable to those in the 1997-98 and 1992-93 VLSS surveys, and it also calculates a “best” estimate for the 2002 VHLSS. The former are denoted with a “1” in the name of the variable and the latter are denoted with a “2” in the name of the variable. Note also that the GSO and the World Bank agreed that the best way of generating comparable durable good “use values” for the 2002 VHLSS was to use the 1997-98 depreciation rates for both surveys. This was explained above. (The file created by this program also creates variables based on the 2002 depreciation rates; these are denoted by a “0” in the name of the variable.)

Here are the names of the most important nominal expenditure variables created by the program `hhexpe02.do`, which creates the Stata data set **hhexpe02.dta**:

1. `foodnom`: Household nominal food expenditures per year, including self production
2. `pcfdxnom`: Per capita nominal food expenditures per year, including self production
3. `nonfood1`: Household nominal nonfood expenditures per year, comparable to 97-98
4. `nonfood2`: Household nominal nonfood expenditures per year, best for 2002
5. `hhex1nom`: Household nominal total expenditures per year, comparable to 97-98
6. `hhex2nom`: Household nominal total expenditures per year, best for 2002
7. `pcex1nom`: Per capita nominal total expenditures per year, comparable to 97-98
8. `pcex2nom`: Per capita nominal total expenditures per year, best for 2002

The program `hhexpe02.do` also adds some other useful variables to the `hhexpe02.dta` data set, such as sampling weights. Note in particular the two sampling weight variables to use for the 30,000 households with expenditure data are `wt30` (equal weight for households) and `hhzswt30` (equal weight for individuals). The last thing that this program does is to calculate real expenditures. This is explained below.

Finally, consider comparisons of the nominal numbers in the 1997-98 and 2002 surveys with those from Vietnam’s National Accounts data. This can be done both in terms of levels and in terms of growth rates. The figures are the following:

	Surveys	National Accounts	Ratio
1998 private consumption per capita	2868.6	3410	0.841
2002 private consumption per capita	3527.2	4374	0.806
Percentage increase, 1998 to 2002	23.0%	28.3%	--

The growth rate in national accounts is somewhat higher than the growth rate in the two surveys. This could represent increased undercounting in the surveys. Indeed, it is likely that the method used to calculate the value of imputed rent underestimates the actual growth in imputed rent over time. On the other hand, the World Bank (or is it the IMF?) has sometimes claimed that national accounts overestimate economic growth in Vietnam. A thorough investigation of the discrepancy in national accounts and the two surveys will be left to future (hopefully, the near future) investigation.

II. Real Expenditures

The Stata program `hhexpe02.do` uses regional and time price deflators to calculate real expenditures in both January 2002 Dong and January 1998 Dong. This was done using information provided by the GSO (contact person is Mr. Tung). First, three monthly price indices were obtained for the time period from January to December 2002: rice price index, other food price index and non-food price index. Each of these is used to deflate the appropriate nominal expenditure variables. In addition, the GSO calculated regional price deflators (separately for urban and rural areas) for food and non-food items. Finally, to obtain figures in January 1998 prices, rice consumption expenditure expressed in January 2002 Dong was deflated by 1.1392, non-rice food consumption expenditure was deflated by 1.0786, and non-food consumption expenditure was deflated by 1.0619. These three deflators were provided by the GSO. For the actual values of the various regional and price deflators, see the program file (`hhexpe02.do`).

Here are the names of the most important real expenditure variables created by the program `hhexpe02.do`, which creates the Stata data set **`hhexpe02.dta`**:

1. `foodreal`: Household real food exp. per year, including self prod., Jan. 2002 prices
2. `foodrl98`: Household real food exp. per year, including self prod., Jan. 1998 prices
3. `pcfdxrl`: Per capita real food expend. per year, including self prod. Jan. 2002 prices
4. `pcfxrl98`: Per capita real food expend. per year, including self prod. Jan. 1998 prices
5. `nonfd1rl`: Household real nonfood exp. per year, compar. to 97-98, Jan. 2002 prices
6. `nfd1rl98`: Household real nonfood exp. per year, compar. to 97-98, Jan. 1998 prices
7. `nonfd2rl`: Household real nonfood exp. per year, best for 2002, Jan. 2002 prices
8. `nfd2rl98`: Household real nonfood exp. per year, best for 2002, Jan. 1998 prices
9. `hhexp1rl`: Household real total exp. per year, comparable to 97-98, Jan. 2002 prices
10. `hhx1rl98`: Household real total exp. per year, comparable to 97-98, Jan. 1998 prices
11. `hhexp2rl`: Household real total expend. per year, best for 2002, Jan. 2002 prices
12. `hhx2rl98`: Household real total expend. per year, best for 2002, Jan. 1998 prices
13. `pcexp1rl`: Per capita real total exp. per year, comparable to 97-98, Jan. 2002 prices
14. `pcx1rl98`: Per capita real total exp. per year, comparable to 97-98, Jan. 1998 prices
15. `pcexp2rl`: Per capita real total expend. per year, best for 2002, Jan. 2002 prices
16. `pcx2rl98`: Per capita real total expend. per year, best for 2002, Jan. 1998 prices

Table 3 presents mean values of expenditures for both the 1997-98 VLSS and the 2002 VHLSS, all in January 1998 Dong. The household means tend to underestimate increases in real expenditures because they do not account for the decrease in household size noted in Table 1. Turning to the per capita figures, real food expenditures increased modestly for Vietnam as a whole, increasing by 5.5% over the four year period. Real non-food expenditures increased much more dramatically, by 28.2%. Overall, total (food + non-food) real expenditures increased by 16.9% over four years, which implies an annual real rate of growth of 4.0%. Table 3 also presents figures separately for urban and rural areas. Real per capita income increased by 20.0% in urban areas and 13.0% in rural areas. Thus growth in real expenditures was about 50% higher in urban areas than in rural areas. This gap in growth rates is disconcerting but is not as extreme as that from 1992-93 to 1997-98, during which time the growth in per capita expenditures in urban areas was twice as high as the rate in rural areas. {Note: the reason that this disparity seems smaller in Table 1 is that prices in rural areas increased faster than prices in urban areas.}

III. Poverty Lines and Poverty Estimates

The poverty line to apply to the 2002 VHLSS was calculated very similarly to the way it was done for the 1997-98 VLSS. The starting point is a basket of food derived from the 1992-93 VLSS that provides 2100 calories per day, for one year. This food basket, which is shown in Table A.2.2 in the 1999 “Attacking Poverty” report, is reproduced in the first column of Table 4 (except that food items for which no prices could be found are omitted). The food poverty line for the 1997-98 VLSS was the cost of this basket. Using prices from the 1997-98 VLSS price questionnaire, the cost of this basket, for those goods for which prices could be found, was 1,206,703 (in January 1998 prices). Since about 6.9% of expenditures on this food basket were on items for which no price could be obtained (these goods were “other meat” or “other fruits”, etc.), this figure is multiplied by 1.06946, which gives a cost of this food basket of 1,290,521 (in January 1998 prices).

(Note, in the 1999 “Attacking Poverty” report the food poverty line for the 1997-98 VLSS was 1286,833. The slightly higher line here is due to some data cleaning of the price data in the 1997-98 VLSS price questionnaire that was done after the calculations were done for that report. Yet the difference is very small, and has very little effect on calculations of poverty for 1997-98; for example, applying this slightly higher food poverty line to the 1997-98 VLSS raises the food poverty rate from 15.0% to 15.2%.)

The 2002 VHLSS did not collect prices, so median prices, as given by the GSO’s Trade and Price Statistics Department are used. This raises the question of whether these prices are comparable to what would have been collected if the 2002 VHLSS had had a price questionnaire. This is investigated in Table 4 for January 1998 prices. The cost of the food basket using 1998 median prices from the GSO is 1,229,682, which is about 1.9% higher than the GSO prices. The cost of this same food basket in January 2002 was 1,317,315, again using GSO median prices. To make this strictly comparable to what would have been collected using a price questionnaire in the 2002 VHLSS, this number is

divided by 1.019043, which gives a cost of the good basket (not counting goods for which no prices could be found) of 1,292,698. Finally, multiplying this by 1.06946 to account for the cost of food items for which no price could be found gives a food poverty line of 1,382,489.

To obtain a general poverty line, we need to take the non-food part of the 1997-98 poverty line (see Appendix 2 of the Attacking Poverty report) and multiply it by the GSO's non-food price index. The non-food poverty line in January 1998 prices was 503,038. The GSO estimates that non-food prices increased by 1.0619 from January 1998 to January 2002, so the non-food component for the poverty line is 534,176 (that is, $503,038 \times 1.0619$). Adding this to the food poverty line gives a general poverty line of 1,916,664.

Table 5 reports food poverty and overall poverty by applying these poverty lines to the expenditure numbers calculated as explained above. These were calculated in the program "poverty.do" (in particular, the "Case 1" assumptions). Note that any increased tendency of the survey to underreport the expenditures of wealthy households should have little impact on the poverty numbers.

For Vietnam as a whole, the poverty rate is 28.9%, and the food poverty rate is 10.9%. In urban areas the poverty rate is 6.6%, while in rural areas it is 35.7%. These are substantial declines from the 1997-98 VLSS, when the overall poverty rate was 37.4% and the food poverty rate was 15.0%. Looking at the eight regions, poverty dropped in all regions except the Central Highlands and the Southeast. The lack of change in the Central Highlands may reflect the drastic decline in coffee prices in the past four years. The slight increase in the Southeast probably reflects the fact that the boundaries for this region have changed; it now includes two provinces that had previously been considered to be part of the central coast region.

IV. Next Steps

The GSO needs to do three things, in consultation with donors, in the next three months:

1. These poverty lines and poverty calculations should be checked one more time, to be certain that there are no errors. I left the programs with the GSO when I left on June 2, 2003.
2. The sample design for the 2004 VHLSS needs to be planned. I strongly suggest that half of the sample should be households that were interviewed in the 2002 VHLSS, and the other half should be "new" households. Also, the GSO has raised the possibility of reducing the sample that completes the income and expenditure questionnaire from 30,000 to 15,000, since 30,000 is still considered to be too small of a sample to produce province-level poverty rates and such a reduction would reduce the cost and work of the survey. I am in complete agreement with this suggestion.

3. The questionnaire for the 2004 VHLSS should be prepared for a pilot test in September, 2003. In principle, the GSO and donors have agreed that the same questionnaire will be used. This will be considered to be the “core” questionnaire of the VHLSS (although there was some suggestions of adding a few more questions on governance issues as part of the core). More importantly, there was general agreement, although not much discussion, about adding two modules that collect data on household businesses and on agriculture. I have contacted two possible consultants, Loren Brandt for the agriculture module and Wim Vijverberg for the household business module. Both could come to Hanoi in early September, as could I, to work on these modules in time for a pilot test later in September. Both consultants have worked in the 1997-98 VLSS data and have experience in designing modules in household surveys on these subjects. The GSO should consult with donors to confirm that this is what they want to do for the 2004 survey.

In the longer run the GSO needs to set up some kind of data dissemination plan for the 2002 VHLSS. I expect that there will be a lot of interest in using the data from donors and from independent researchers, and as I understand it the new statistical law that was just passed allows the GSO to make the data available (as long as certain precautions are undertaken) to other parties. The quicker the data become available the more useful they are for evaluating policies.

One final thing to note is that I have spent all my time working on the expenditure data, and I did not look at the income data or the programs that the GSO has developed to calculate total income. This would take at most one day of my time, and I could do this sometime next week if there is interest in my doing so.

Table 1: Nominal Expenditures in the 1997-98 VLSS and the 2002 VHLSS

Expenditure Category	1997-98 VLSS		2002 VHLSS		Percent Change Over Time
	Mean	Percent of Total Exp.	Mean	Percent of Total Exp.	
Rice	2276.4		1873.1		-17.7
Other food	4595.6		5393.9		+17.4
Total food	6872.0		7267.3		+5.8
Nonfood exp.	2174.2		3178.3		+46.2
Education	780.3		829.4		+6.3
Health	721.8		794.7		+10.1
Durable goods	1637.9		1917.8		+17.1
Garbage	10.0		13.1		+31.0
Water	59.4		67.7		+14.0
Electricity	307.7		407.2		+32.3
Rent	919.8		1164.1		+26.6
Total	13,483.1		15,639.3		+16.0
Household size	4.70		4.43		
Per cap. expend. (populat. weights)	2868.6		3527.2		+23.0
urban pc exp	5165.7		6361.4		+23.1
Rural pc exp	2204.5		2662.9		+20.8

Note: All figures are total (not per capita) expenditures, calculated giving each household equal weight (as opposed to giving each person equal weight), unless otherwise indicated.

Table 2: Mean Number of Durable Goods Owned

Item	1997-98 VLSS	2002 VHLSS	2001-02 Hlth Surv.	% of Total Value (2002)
Video	0.17	0.24	0.32(includes DVD)	2.0
Color TV	0.39	0.58	0.59	9.8
Black and white TV	0.18	0.13	0.14	0.3
Stereo	0.05	0.06	0.11	1.3
Radio/cassette playr	0.48	0.26	0.47	0.7
Computer	0.01	0.03		1.4
Camera	0.03	0.01		0.2
Refrigerator	0.09	0.13	0.13	2.6
Air conditioner	0.01	0.01	0.02	0.5
Washing machine	0.02	0.04	0.04	1.1
Electric fan	1.21	0.81		1.6
Water heater	0.01	0.04	0.04	0.4
Gas stove	0.07	0.18		1.7
Electric stove	0.21	0.38		1.0
Car	0.00	0.00		0.5
Motorbike	0.24	0.47	0.53	49.5
Bicycle	1.12	0.80	1.33	2.6
Boats	0.05	0.05	0.13	1.0
Sewing machine	0.17	0.07		0.3
Wardrobe	1.14	0.92		7.9
Bed	2.01	1.16		5.8
Chairs, tables	0.89	0.69		4.7
Phone	0.07	0.14	0.20 (include mobil)	1.4
Pump	0.16	0.23		1.0
Electric generator	0.01	0.01		0.1

Note: All means are weighted so that each household, as opposed to each individual gets an equal weight.

**Table 3: Real Expenditures in the 1997-98 VLSS and the 2002 VHLSS
(January 1998 prices)**

	1997-98 VLSS (thousand Dong)	2002 VHLSS (thousand Dong)	Percent Change Over Time
<i>All Vietnam</i>			
Food expenditure			
per household	6468.1	6438.5	-0.5%
per capita	1376.1	1452.1	+5.5%
Nonfood expend.			
per household	6522.2	7885.1	+20.9%
per capita	1387.6	1778.4	+28.2%
Total			
per household	12,990.3	14,323.6	+10.3%
per capita	2763.8	3230.4	+16.9%
<i>Urban</i>			
Food expenditure			
per household	8513.1	9177.3	+7.8%
per capita	1941.8	2158.0	+11.1%
Nonfood expend.			
per household	12659.5	15477.8	+22.3%
per capita	2887.6	3639.5	+26.0%
Total			
per household	21,172.7	24,655.1	+16.4%
per capita	4829.4	5797.5	+20.0%
<i>Rural</i>			
Food expenditure			
per household	5820.6	5556.3	-4.5%
per capita	1212.5	1236.8	+2.0%
Nonfood expend.			
per household	4579.0	5439.3	+18.8%
per capita	953.9	1210.8	+26.9%
Total			
per household	10,399.6	10,995.5	+5.7%
per capita	2166.4	2447.6	+13.0%

Table 4: Cost of Food Basket

Name	Quantity	Vlss 98 Price	Cost Vlss 98 Pri	GSO 98 price(median)	Cost GSO 98 pri (median)	GSO 02 price (median)	Cost GSO 02 pri (media
Ordinary Rice	169.56	2997	508171.32	2939	498336.84	3318	562600.
Sticky Rice	5.89	3989.1	23495.799	4483.5	26407.815	4710	2774.
Corn/Maize	2.09	2208.4	4615.556	1888.5	3946.965	1938	4050.
Cassava	9.37	1024.1	9595.817	1000	9370	1000	93
Sweet Potato	11.41	1397.1	15940.911	3217.75	36714.5275	3140.6	35834.2
Wheat/egg Noodle	0.68	13572.1	9229.028	12552.94118	8536	11764.70588	80
Arrow Root Noodle	0.83	9015.3	7482.699	11350	9420.5	10450	8673.
Pork Meat	5.19	18703	97068.57	22842	118549.98	21414.33333	111140.
Beef/Buffalo Meat	0.146	32299.4	4715.7124	32000	4672	35868	5236.7
Chicken	2.27	19416.4	44075.228	22500	51075	22594	51288.
Duck/Other Poultry	0.73	12274.4	8960.312	13821.5	10089.695	13713	10010.
Lard/Cooking Oil	1.46	10016.7	14624.382	11449.9	16716.854	9679.15	14131.5
Fresh Fish/Shrimp	11.01	13807	152015.07	11800	129918	11515.1	126781.2
Chicken/Duck Egg	0.44	22890.1	10071.644	22850	10054	22510.13	9904.45
Tofu	3.06	3577	10945.62	4421	13528.26	4412.5	13502.
Peanut/Sesame	0.92	9620.5	8850.86	9640	8868.8	9444.4	8688.8
Bean	1.01	7926.7	8005.967	6310	6373.1	6281	6343.
Water Morning Glory	15.02	1003.8	15077.076	1233	18519.66	1462.5	21966.
Cabbage	5.92	2355.4	13943.968	1997	11822.24	2208.5	13074.
Tomato	3.44	3955.3	13606.232	3500	12040	3605.5	12402.
Orange	0.49	6301.8	3087.882	6092	2985.08	7963.5	3902.1
Banana	6.64	2041.6	13556.224	2812.5	18675	2179.5	14471.
Mango	0.57	11666.7	6650.019	10000	5700	10111	5763.
Fish Sauce	5.99	4517.2	27058.028	5500	32945	6000	359
Salt	5.71	997.9	5698.009	1009	5761.39	1250	713.
MSG	0.765	27536	21065.04	25757.57576	19704.54545	26931.56733	20602.649
Sugar/Molasses	2.55	7011.9	17880.345	7200	18360	7000	178
Milk Products	0.04	17632.2	705.288	17632.24181	705.2896725	18522.67003	740.9068
Alcohol/Beer	4.05	13723.3	55579.365	9475.8	38376.99	14005.59848	56722.673
Tea	2.54	24828.7	63064.898	27372.5	69526.15	31572.5	80194.
Kohlrabi	6	1977.65	11865.9	1997	11982	2208	132
			1206702.769		1229681.682		1317315.4

Ratio GSO98/VLSS98

1.019042728

Table 5: Poverty Rates in 2002 VHLSS

	Food Poverty	General Poverty
All Vietnam	10.9	28.9
Urban	1.8	6.6
Rural	13.6	35.7
Red River Delta	5.4	22.6
Northeast Mountain	15.2	38.0
Northwest Mountain	46.5	68.7
North Coast	17.9	44.4
Central Coast	8.9	25.2
Central Highlands	29.5	51.8
Southeast	3.0	10.7
Mekong Delta	6.4	23.2