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## **AN OVERVIEW OF SOCIO-ECONOMIC SURVEYS IN VIETNAM: METHODS, ACHIEVEMENTS AND CHALLENGES**

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### **ABSTRACT**

This article introduces the General Statistics Office in Hanoi, Vietnam, and gives a description of socio-economic surveys conducted since the early nineties in Vietnam, with a discussion of their methods and achievements, as well as remaining challenges. The trade-off between sample size and the accuracy of estimates in the context of a developing country is discussed. Issues such as data cleaning and dissemination are covered as well. Future perspectives are mentioned.

**KEY WORDS:** Vietnam Living Standards Surveys; Vietnam Household Living Standards Surveys; Vietnam Multi-Purpose Household Surveys.

### **1. INTRODUCTION: DATA COLLECTION AND PUBLICATIONS OF THE GSO (GENERAL STATISTICS OFFICE)**

The General Statistics Office (GSO) is an agency under the direct authority of the Government of Viet Nam, with the functions of management in the field of statistics and the provision of quantitative information about socio-economic conditions in the country to every agency, organization and individual in accordance with the Government's regulations. It collects data for regular reporting, conducts censuses and sample surveys.

GSO's data collection is based on three tools: regular report systems, censuses and sample surveys. Regular report systems include the State Enterprises Report System, the Report System for government agencies which manage administrative records (customs, finance, education, health, ...), and the report system for local statistics offices.

Censuses include the Population and Housing Census conducted in 1979, 1989 and 1999; the Agriculture and Rural Census conducted in 1994; the Economic Census conducted in 1995; and Non-State-Enterprises Censuses conducted between 2001 and 2004.

Sample surveys include monthly surveys such as Retail Prices, Domestic Trade Turnover surveys, Industrial Output surveys; seasonal surveys such as Agriculture Crop surveys (rice, industrial crops, ...); annual surveys such as Non-state Industrial surveys, Construction surveys, Non-state Trade surveys, Fishery surveys, Non-state Transport surveys, Livestock surveys; irregular surveys such as Inter-censal Demographic surveys, Socio-economic surveys (household living standards surveys), etc.

Statistics compiled by the GSO concern the Population and Labor Force, National Accounts, Agriculture, Forestry and Fishery; Industry; Investment and Construction, Trade, Price and Tourism, Transport, Postal services and Telecommunication as well as Social Indicators.

Statistical publications include regular and irregular publications. Regular statistics publications include the Monthly Socio-economic report, Viet Nam's main statistical data for the first quarter, the first half, the first nine months and

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for the whole year, Today's Price Index, Exports and Imports of goods, the journal Statistical Scientific Information and its special issues, the "Statistical Information" pamphlet, the journal "Figures and Events", the Statistical Handbook and the Statistical yearbook. Irregular statistics publications include: results of population censuses, results of agriculture and rural censuses, results of household living standards surveys, results of inter-censal demographic surveys and results of labor force and employment survey, as well as some other publications.

The remainder of the article describes the various socio-economic surveys conducted in Viet Nam and discusses their methods and achievements (section 2). Section 3 discusses remaining challenges and concludes.

## **2. SOCIO-ECONOMIC SURVEYS IN VIETNAM: METHODS AND ACHIEVEMENTS**

### **2.1 Vietnam Living Standards Surveys of 1993 and 1998**

The Vietnam Living Standards Surveys (VLSSs) of 1993 and 1998 applied the World Bank's Living Standards Measurement Study (LSMS) format (Vietnam, 1994 and 2000). The VLSS was conducted for the first time in 1993 and was repeated in 1998. These surveys were funded by UNDP (United Nations Development Program) and the Swedish International Development Agency (SIDA), and were technically supported by the World Bank.

The contents of the surveys covered not only core topics reflecting living standards such as household income and expenditure, but also other topics related to living standards, such as housing, education, health and nutrition status (measurement of height, weight and arm circumference of all household members), employment, agricultural activities, non-farm business activities, migration, fertility, savings and credit, and the use of basic economic infrastructure and social services.

The sample sizes for VLSS 1993 and 1998 were 4,800 and 6,000 households respectively among which about 4,300 households in 1993 were re-interviewed in 1998, creating a panel sample across a five-year period of time. For each survey, the sample was divided into ten and each month one tenth of the sample was covered by the VLSS. As a result the field work took about 12 months for each survey.

The surveys used three types of questionnaires: a household questionnaire, a community questionnaire and a price questionnaire. The community questionnaire includes a school questionnaire, a commune health center questionnaire and a pharmacy questionnaire (community questionnaires were administered in rural areas only). Community and price questionnaires are meant to complement the household questionnaire in order to explain the conditions and environment in which surveyed households live.

In the VLSSs, the questionnaires wrote out the exact questions to be asked in order to ensure that each question was understood in the same way by interviewers and respondents.

The data collection method consisted of face-to-face interviews. The data reference period was two weeks, four weeks, or the past twelve months or longer depending on the frequency of the subject under investigation.

Field work personnel were organized into teams. Each team consisted of a supervisor, two interviewers, an anthropometrist and a data entry operator.

Each team was equipped with a desktop computer so that data entry was done in the field. This ensured that collected data for the first round could be checked for errors and corrected by re-interviewing households in the field during the second round. A high level of supervision ensured the quality of the survey: one supervisor for every two interviewers, one anthropometrist and one data entry operator.

VLSS 93 and VLSS 98 were implemented at the highest standards of the World Bank LSMS program. The outcome from the surveys was highly appreciated by domestic and international users. These surveys for the first time provided a comprehensive picture of living standards of people in Viet Nam. Besides survey results abstracts in hard copy format, raw data sets were released widely to policy makers, researchers and other users for further in-depth analysis. Many publications resulted from the issue of these data; we note for example two collections of edited

articles written by both Vietnamese and international authors, and two collections of edited articles published by the World Bank (Haughton et al, 1999, Haughton et al, 2001, Dollar et al, 1998, Glewwe et al, 2004).

However, VLSS 93 and 98 had some limitations. These surveys did not provide estimates at the provincial level because of their small sample sizes. There was a long period of time between the two VLSSs. The cost per household interviewed was high, at \$163 per household.

## **2.2 Multi-Purpose Household Surveys**

In order to provide estimates at provincial levels, the GSO conducted Multi Purpose Household Surveys (MPHS) annually from 1994 to 1997 and during 1999. Sample sizes for 1994 to 1997 were 47,000 households and 25,000 households in 1999. Because MPHSs are larger than VLSSs in terms of sample sizes the contents of MPHSs are simpler than those of VLSSs.

Survey topics include Income, Expenditures, Education, Employment, Agricultural activities, Health and Housing. Data collection was performed in the field in February of survey each year. Questionnaires are “compact”, which means that they consist of tables of short questions.

MPHS had some critical problems. A large number of interviewers were recruited (1,500 vs. 30-38 in VLSSs). As a result the survey was insufficiently supervised. Data entry was performed centrally in Hanoi for the surveys from 1994 to 1997. As a result data entry was slow and no correction of errors was performed in the field. In 1999 VHLSS data entry was done in provinces in order to overcome the limitations of data entry in previous years. Topics in 1999 included income and expenditure only. It became clear that annual living standards surveys such as MPHS were too frequent while the pattern of living standards changed slowly every year. Furthermore the implementation capacity of the GSO as well as financial resources did not support such a high frequency for the survey. Raw data were not distributed.

## **2.3 Vietnam Household Living Standards Surveys during 2000-2010**

In order to overcome the limitations of MPHS, in 2000-2010 the GSO decided to conduct Vietnam Household Living Standards Surveys (VHLSSs) every two years in 2002, 2004, 2006, 2008 and 2010. During these years, the survey covers a core module. Every four years or more, extended modules are included additionally.

The core module includes the following topics:

- Basic demographic information on all household members (age, sex, relationship to head)
- Household expenditures (food, education, health, etc.)
- Household income (wages and salary, farm production, non-farm production, remittances, etc.)
- Employment and labor force participation
- A small number of questions on education (literacy, highest diploma, fee exemption)
- A small number of questions on health (use of health services, health insurance)
- A small number of questions on housing (type of housing, electricity, water source, toilet, etc.)
- Assets and durable goods
- Participation in poverty programs
- Information on local infrastructure collected by a community questionnaire

Possible extended modules to be attached to VHLSSs every four years are as follows:

- Detailed information on agricultural activities and non-agricultural household businesses, borrowing and lending activities
- Detailed information on the health and education of household members; questionnaires for commune health center and local schools
- Infrastructure, environment, local institutions and governance

The VHLSS 2002 covered only the core module. The 2002 VHLSS questionnaire is similar in many respects to the 1998 VLSS questionnaire. Six of the 9 sections in the questionnaire are very similar to those of the 1998 VLSS: Household Roster, Education, Employment, Other Income, Housing, Food Expenditures and Non-Food

Expenditures. The Health Section is similar to that in the 1997-98 VLSS, but also incorporates ideas from the 2001-2002 Vietnam Health Survey.

The exact questions asked to households are printed out in the questionnaires. Comparability with past surveys was ensured, especially for expenditure and income data.

The sample size was of 75,000 households, of which 30,000 were interviewed on every topic (these households were called income and expenditure households), and the other 45,000 households were interviewed on all topics other than expenditure (these households were called income households).

The sample was divided into four sub-samples. The field work for VHLSS 2002 was implemented in four rounds (four quarters), where each round covered one sub-sample.

Field workers are GSO staff members. Two to three interviewers are supervised by one supervisor. Training of trainers in the North and South of Viet Nam were conducted. Training for interviewers in each province was conducted by the trainers.

Data entry was implemented at provincial level.

The VHLSS 2004 was conducted with the following changes compared to the VHLSS 2002. First, because of the high similarity of households in each cluster, the number of surveyed households was reduced from 75,000 households in 2002 to 46,000 households in 2004, of which 9,300 were expenditure households. Second, VHLSS 2004 collected data in two rounds (May and September) instead of four rounds in 2002 in order to simplify management issues for local statistical offices, but still ensure the seasonality in data collection. Third, in addition to the core module, two other extended modules were collected: detailed information on agricultural land and non-agricultural household businesses.

For VHLSS 2002 and 2004, three levels of data cleaning were conducted at the district, provincial and national levels. At the district level, errors were discovered by survey supervisors and were checked with survey households if needed. At the provincial level, errors were uncovered by the data entry program and during the tabulation and analysis phases. At the central level, errors discovered through tabulation and analysis. Errors were found by using logical checks within sections (age vs. married status, for example) and between sections (income vs. expenditure), and examining possible range (price, productivity).

As VLSS 1993 and 1998, VHLSS 2002 and 2004 were very successful surveys. They provided very important source of information for evaluating and designing socio-economic plans, programs and policies and national and provincial levels. As of this writing, raw data were issued for VHLSSs up to 2002.

### **3. REMAINING CHALLENGES AND CONCLUSIONS**

However, some challenges remain for household living standards in Viet Nam. The most critical challenge of VHLSS is that the household interview is long. It takes about six to eight hours to complete an interview. A long interview creates a burden not only for households, but also for interviewers. The fact that people tend to hide their income is another critical challenge for VHLSS.

The sample size versus the possibility of small area estimates is an additional challenge for VHLSS. Bigger sample sizes give higher accuracy of estimates, but in order to have a sufficient accuracy of estimates at provincial levels, the sample size for provinces leads to such a big sample size at the national level that the survey turns out to be too expensive and too difficult to implement. Finally limited budgets are always a challenge for VHLSS, especially for extended modules.

Future considerations will include issues such as the frequency of surveys in light of the rapidity of change in living standards in the country, details of rotation schedules to achieve optimal and practical panels, and the use of small sample estimation methods to help with limitations related to small sample sizes.

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