THE 2009 VIETNAM POPULATION AND HOUSING CENSUS

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This paper divided by three parts as follows, Part I summarizes in recent population censuses in Vietnam; Part II presents some achievements and experiences gained from the last 1999 population and housing census; and Part III describe a preparation of General Statistics Office (GSO) for the next 2009 census taking and its overall plan.

I. Recent Population Censuses in Vietnam

Viet Nam has a long record of census taking dating back many centuries. However, most of the early censuses were really no more than population counts designed to keep track of persons who were required to pay taxes or who might be needed to fight in local wars. Thus they were sporadic and sought few details. The first real census of an independent Vietnam was conducted late in 1979. Given the resources and technical skills available at that time, the census provided surprisingly good benchmark data as a springboard for national development.

The first census which could really be thought of as a modern census, introducing internationally recognized census concepts, design features and processing, was conducted in April 1989. It was felt by the many people and organizations who participated in this census that the coverage of persons resident in Vietnam was near complete and the results were of very high quality. For the past decade this census has provided a rich source of demographic, social and economic data for a wide range of users.

The third census was conducted in April 1999. As will be seen, many of the features of the 1989 census were incorporated into the design and conduct of the 1999 census. In addition, however, the 1999 census added new questions and extended its scope in some areas to provide even more comprehensive data. The

two censuses together will provide a rich source of data to analyze the current situation and key trends over the past ten years.

II. Experiences gained from the 1999 population and housing census

Unlike the previous censuses undertaken in 1979 and 1989, the 1999 census was carried out in a complicated socio-economic context and condition. But, it was successfully conducted, as the position and importance of the population information in evaluating the situation in the 1990s and in establishing socio-economic plans and policies for the decade 2001-2010. That is why the census had received the concern of authorities at all level as well as the enthusiastic support of the people, and donors.

A lot of lessons learnt from the 1999 census, among them most valuable are presented as follows:

i). Mapping/Listing operation

Good quality of EA map and household list – Important factor ensures the census's success

A successful census requires that each enumerator should have complete information about the area to be covered and the location of each household to be interviewed. A very intensive field programme is necessary to reach this position. Work on mapping started several years before the census but the main mapping fieldwork started in October 1998 and continued until March 1999. The country was divided into enumeration areas (EA), with the intention that each EA would serve as a workload for an enumerator. Once these enumeration areas were formed, the task of drawing maps for each one could begin. The completed maps were required to show clear boundaries with neighboring EAs, to mark the location of each census dwelling, and to be of standard scale and easy for enumerators to follow. Quite apart from the EA maps, it was also necessary to have reliable up-to-date maps for all administrative levels-the communes, wards and urban clusters, districts, towns and provinces-as an important way of exercising control over the complex and extensive field programme involved in the census.

The next major preparatory task was to complete household listing forms for each household. The household listing work commenced early in 1999 and was completed just before the start of the training of enumerators. These listing forms

provided further guidance to enumerators on the size of their EAs, helped in planning their work and ensured that census counts were accurate. The listing forms contained information about the location of each household, the name and other details about the household head, and the number of males and females usually resident in that household.

These maps and lists appeared to be important instruments for quality control. A system of EAs maps and household lists by province and urban/rural residence was set up. It have been used as a master sample frame for the 3% sample survey of the census. This system also used as a master sample frame for many other surveys of the GSO and various Ministries after the census.

ii). Inside census sample survey

Sample survey can reduce cost of the census and time of data processing

In the 1999 census, the sampling was adopted. The use of sampling may introduce errors, known as sampling errors. The use of sampling may have advantages it brings to include new topics to the census, to produce advanced results and, to reduce costs. But it has disadvantages. It is not possible to produce results in more detail, nor to generate data for small geographic levels.

Most topics were covered as core items, and canvassed for the entire population. Additional information required to measure birth and death rates were based only on the 3% sample. The reasoning behind this approach was that the specialization required for in-depth interviews with female respondents required additional training. This training would be expensive for the entire country and, in any case, there were reasonable fears that an attempt to extend coverage would lower the quality of the results.

Based on estimates of expected sampling errors and the experience of 1989, a sample size approximately to 3 percent of the total population was selected. This would provide very precise estimates at the national and regional levels, and for most purposes, would provide tolerably good results for each province, a major consideration in the design process. To provide robust estimates of birth and death rates for urban and rural areas, it was necessary to over-sample urban areas. The final sampling design sampled 7 percent of urban households and 2 percent of rural households. It was envisaged that the sample results would be cross-tabulated with

the core results for the same areas, to provide an advanced set of tabulations covering the full range of census topics.

The sample survey of the census also provide planners, policy-makers and other potential data user with main data of the census in short time after the census completion. In the case of the 1999 census, the sample results were available in January, 2000, 7 months after census taken place.

A comparison of completed and sample results shows that they are very consistent each others. The difference which are over 5% mainly occurred in the too detailed sub-group, or in concrete age group where cases are very few (for example, currently school attaining of persons aged 30 and over; widow under 19 years old, etc).

For national level, the representativeness of the sample figures are very high. So, analysis results based on the sample data, especially when broader groups were regrouped, would not differ much from the completed results.

iii). Data processing

In late 1998, the Central Data Processing Centre (CDPC) conducted test runs to develop its data processing system, using records from the pilot survey of the census. Three different applications were tested for data entry (adapting standard packages known as IMPS, ISSA and FOXPRO). From these tests it was decided that the version based on ISSA was the best-suited to the Viet Nam census.

The decentralized data capture was applied. Data entry and on-line editing facilities were provided at 9 centers. Each centre established a computer network for census data processing with a server HP LH3 and 12 to 53 PCs. For the entire country, 240 PCs were used for processing and 10 servers (two in CDPC). A total of 450 data entry operators were engaged to work in two shifts. The network in each regional computer centers is connected to the CDPC network through a telephone dial-up system. Thus, as data entry was completed in each province, data files were transferred to the CDPC server.

Keyers were not permitted to modify or correct recorded information. However, there were a number of checks provided to ensure the keyed data were valid, but most of these checks were in the form of warning messages to control for key stroke errors and column shifting.

A number of consistency checks were carried out (the edits were specified in CONCOR) and records in error were edited on-line by special editors. As soon as data entry for a district was completed, a listing of inconsistencies was printed out for checking and, correction and updating of files.

A system of management and control was developed by Central Data Processing Center (using a VISUAL FOXPRO application) to help managers to monitor the processing. All stages in the cleaning of data are monitored under this system, from the receipt of the questionnaires, to data entry, verification, checking, listing of inconsistencies, data correction, combining EA data files into higher geographic levels, production of frequency tables, and data backup. The system also provides the mechanism to validate the geographic identification of keyed data, to avoid duplication or omission of EAs. For managers, the system generates different kinds of reports, for example, to keep track of the status of each EA, to calculate the quantity and quality of work of the data entry operators and print salaries due, or to provide frequencies of imputed values to subject matter specialists to ensure the rules were properly applied.

iv). Production of electronic media and data dissemination

Electronic media of the census results – effective way to fully utilize data

In the 1999 census, efforts were made to provide census products and services to the public as much and easy as possible. Thanks to the rapid development in computer technology, apart from the traditional mode of census data dissemination through printed publications, electronic media such as CD-ROM, data bases were used to release the 1999 census results. It is first time Vietnam these media were released.

For the 1999 census, the following productions were made:

1. CD ROM of micro and macro data of the 3% sample

This CD ROM provides the ability for making of tables from the original data by Cross Tab. Data users can also get the basic demographic data at provincial level included some mapping illustration; view the ready aggregated tables and analysis; and convert the original data into some common formats such as Text, SPSS and Access.

2. CD ROM of micro and macro data of each province (64 province)

As the CD ROM above-mentioned, this CD ROM provides the ability for making of user friendly designed tables from the micro data of the province by Cross Tab. Data users can also get a ready tabulated tables of this province and of all its lower administrative units (district, commune). The mapping illustration and data-converter facilities are available in this CD ROM.

3. CD ROM of macro data of completed results

This CD ROM contains the tabulated tables of the country, all provinces, districts and communes. Data users can get any table of any administrative unit from CD ROM. It also included the mapping illustration and data-converter facilities as of two previous CD ROMs.

Regarding the data dissemination issue, the new approach was made. It is that the GSO have organized some training courses on how to use the census's electronic media for policy makers, administrators and data users of many Ministries/Branches in central, and for staff of Provincial Statistics Office in local level. The electronic media of the census are highly appreciated by data users inside and outside of Vietnam.

III. Preparation of the General Statistics Office for the 2009 census

It is planned that the next population and housing census of Vietnam will be conducted at the time point of 0 hours of 1 April 2009.

The General Statistics Office (GSO) is an agency under direct authority of the Government to implement state management responsibilities and powers in statistics field; to perform statistical activities and provide socio-economic information to agencies, organizations and individuals as regulated by the law; to operate state management in public services and implement some concrete responsibilities and rights regarding state- ownership representatives in state-owned enterprises which are under management of the General Statistics Office as regulated by the law.

With above-mentioned function, GSO plays a decisive role in the process of census operations. As for the previous censuses, Population Census Steering Committee (PCSC) at central is established under leadership of Prime Minister. It comprises

representative from other related Ministries such as Ministry of Public Security, Ministry of Finance, Ministry of Defence, General Statistics Office, etc. Prime Minister or Vice Prime Minister is Chairman, Director-General of GSO is Permanent Vice-Chairman of this PCSC.

An office of PCSC will set up and is responsible to undertake all the census operations. A personnel of this office is recruited mainly from GSO and its leaders are headship of the Department for Population and Labor Statistics, General Statistics Office.

After central PCSC set up, PCSC of province, district and commune also established. There is one office for each local PCSC to be responsible to help their PCSC authorities in implementing census operation.

Until establishment of the PCSC, GSO is responsible to do the preparation works for the census. Some strategies could be applied in the 2009 census as follows:

i). To use sample survey technology to expand the census content and to economize the census expenditure.

In order to improve the effectiveness of the census design, it is intended to apply the strategy of two-phase approach for questionnaire design. A comprehensive questionnaire (short form) contains only some core questions to interview whole population. Apart from core questions as in the short form, sample survey questionnaire (long form) with sample size about 15 percent will cover the questions on marital status, qualification, employment, fertility, death, housing.

This approach is used in many countries in the world, but it just applied in the 1989 and 1999 census in Vietnam. But there were only two questions on fertility and deaths included in the sample with sample size of 5% in the 1989 and 3 % in the 1999. If in the 2009 census will use the above-mentioned approach, it would safe about 50 percent of budget and shorten of the time of data provision to 4 months.

ii). Based on selection of appropriate technology of data processing and fully utilization of the GSO's informatics facilities, to speed up in rate of provision of census data.

The decentralized method of data processing will be applied. Moreover, GSO consider that the Intelligent Character Recognition (ICR) technology will be used for data capture. The use of ICR might requires a huge amount for the purchasing

One component of the 2009 census is to collect adequate and precise data on age, gender, and other relevant indicators such as ethnic minorities, migrants, male/female ratio at birth, etc. including piloting new methods for data collection, processing and analysis.

Since Vietnam will conduct the Census earlier than other countries in the region, opportunity to learn experience of other countries will be limited but with careful preparation of the census we believe that the Census will be successful.

Annex 1: The overall plan of the 2009 census

Activity	Time	Responsible
Set up overall plan of the census	Jul. – Sep. 2006	GSO
Submit overall plan of the census to the Prime-Minister		GSO
Release Decision on the 2009 census and its overall plan	Nov. 2006	Prime Minister's Office
Purchase of scanner and software for applying Intelligent Character Recognition (ICR) technology	Jul. – Dec. 2006	GSO/UNFPA
Test of ICR (using questionnaire of the 2006 population change survey)	Jan. – Jun. 2007	GSO
Establishment PCSC at central level	Jul. 2007	
Establishment of PCSC at province, district and commune level	Aug. – Dec. 2007	
Pre-test		
Pre-test design	Oct. 2006 – Feb. 2007	
Workshop on pre-test	Mar. 2007	
Finalization of the pre-test documents	Apr. – May. 2007	
Printing documents for the pretest	Jun. – Jul. 2007	
Recruit personnel for the pretest	May. 2007	
Selection of areas and advocacy for the pretest	Aug. – Oct. 2007	
Training on mapping/listing, interview and supervision technique	Aug. – Sep. 2007	
Pre-test fieldwork	Oct. 2007	
Preparation of pre-test evaluation report	Nov. – Dec. 2007	
Pre-test evaluation workshop	Jan. 2008	
Data processing (Use ICR)	Feb. – Apr. 2008	
Set up data processing system and tabulation plan	Apr. – Jun. 2008	
Set up plan of advocacy and publicity	Apr. – May. 2008	

campaign		
Pilot survey		
Finalization of documents	Jan. – Mar. 2008	
Printing document	Apr. 2008	
Select pilot survey areas	Apr. 2008	
Recruitment pilot staff	May. 2008	
Advocacy program	Aug. 2008	
Pilot survey fieldwork	Aug. 2008	
Coding operation for the pilot questionnaire	Sep. 2008	
Data processing	Oct. –Dec. 2008	
Census		
Finalization of documents for mapping/listing	Sep. 2008	
Printing mapping and household documents	Sep. 2008	
Equip data processing facilities	Mar. – Dec. 2008	
Design of advocacy materials	Aug. – Sep. 2008	
Printing advocacy materials	Nov. – Dec. 2008	
Preparation of report on the pilot	Sep. 2008	
Finalization of census document	Oct. 2008	
Printing census document (quest., manuals, etc)	Nov. – Dec. 2008	
Training of master trainers on mapping, listing	Sep.– Oct. 2008	
Training on mapping, listing for fieldworkers	Oct. 2008	
Mapping, listing operation	Oct. 2008 – Jan. 2009	
Recruitment census personnel	Nov. – Dec. 2008	
Training of provincial master trainers	Dec. 2008	
Advocacy and publicity campaign	Jan.– Apr. 2009	
Training of district master trainers	Jan. 2009	
Training of interviewers and supervisors	Feb.– Mar. 2009	

Checking EA map and household lists	28 Mar. 2009 – 31 Mar. 2009	
Census fieldwork	1st – 15th Apr. 2009	
Post Enumeration Survey	May.– Jun. 2009	
Preliminary count	Apr. – Jun. 2009	
Handover census questionnaires	May. – Jul. 2009	
Coding	Jul. 2009 – Mar. 2010	
Processing of survey data	Jul. 2009 – Mar. 2010	
Workshop on dissemination of sample results	Apr. 2010	
Processing of remaining data	Jan. 2010 – Dec. 2010	
Analysis report (Monographs)	Apr. 2010 – Dec. 2011	
Workshop on dissemination of completed results	Mar. 2011	
Production electronic media for the census results included data bases	July 2010 – Dec. 2011	