

I. IMPLEMENTATION OF THE SURVEY

The survey was carried out according to the Decision Number 121/QĐ-TCTK issued on 25/2/2010 by the Director General of the General Statistics Office and the survey plan promulgated under this Decision.

1. Objectives and coverage of the survey

The 2010 labour and employment survey collect information on two periods (April and October) from the selected sample households to calculate basic indicators of population, indicators reflecting labour force and working-time use. Objectives of the survey are:

- To collect basic information on labour market, comparable with international standards;
- Assessing the impacts of the global economic downturn to the labour market in Viet Nam;
- Data would represent to the national level, urban/rural, 6 socio-economic regions for periods 1 and 2; to the national level, urban/rural, 6 socio-economic regions and 63 provinces/cities for 2 periods.

2. Contents of the survey

Apart from identification information, the content of the survey consist of main information:

- *For population information:* Sex, Age, Ethnicity.
- *For usual residents aged 15 and over:* Marital status, Education level.
- *For employed persons aged 15 and over:* Occupation, Industry, Employment status, Average monthly income, Full-time or part-time working status, Hours worked, Time of current work, Change in occupation, Under-employment.
- *For unemployed persons aged 15 and over:* Duration of unemployment, Action of looking for a job, Work experience, Reason for leaving previous job.
- *For economically inactive persons aged 15 and over:* “Reason for economical inactivity” was collected.

The survey content is presented in the questionnaire of “The 2010 labour force survey” of the period 1 and period 2 (The Annex 3).

3. Recruitment and train for field workers

Enumerators are the direct force to implement the survey, play an important role to the quality of information gained in particular and to the success of the surveys in general. Hence, a compulsory demand is to choose those who are responsible, have educational level of higher-secondary school and over (in the difficult situation, lower-secondary school educational level is accepted) and have been trained carefully. Each enumerator takes responsibility of one enumeration area. Provinces/cities need to use most of the enumerators who have participated in the recent statistical surveys and stabilizing this force at least through the period 2.

Team leaders are the force that directly controls the daily task of each enumerator, decides the sufficiency and accuracy of the information collected. Each team leader takes responsibility of 2-3 enumerators.

Supervisors who are Statistical officers directly participate in the survey are organized for all three levels of Central, province and district. Provincial and district supervisors are in charge of examine supervision process of team leaders and support them in accomplishing their tasks.

Trainings for the fieldworkers were conducted in two steps:

- *Step 1:* General Statistical Office organized 2 training courses for centrally governed province/city staffs (one for the North provinces/cities and one for the South provinces/cities), each course lasts for 2 days in the early half March of 2010.
- *Step 2:* Provincial Statistical Offices organized the training for enumerators, team leaders and supervisors (include backup enumerators and team leaders), each course lasts for 4 days in the late half March of 2010 for the period 1. In the training courses, combination of interviewing practice and training was taken, and questionnaire record.

For the period 2, Provincial Statistics Office held the training supplement for enumerators, team leaders and supervisors. It lasted for 1 day in the second half in

August 2010. The purpose of this training was to review knowledge trained in the period 1, inform a few remarks and changes. For new staff participating in period 2 for the first time then they were trained for 4 days as the period 1.

4. Fieldwork and quality control

The fieldwork was conducted for about 15 days, starting from 1/4/2010 and ending on 20/4/2010 for the period 1 (from 1/10/2010 and ending on 20/10/2010 for the period 2). Each enumerator is assigned to enumerate on an average of 3 households per day, however in the first 2 days one should not exceed 2 households per day per enumerator in order to help the enumerator correct errors, especially system errors in questionnaire record and interview.

Everyday, enumerators conduct interview and questionnaire records under strict control and guidance of the team leaders. Apart from the task of observing and checking the work of enumerators, team leaders are given the responsibility to conduct random spot checks to make sure that all enumerators had performed their task with high standards.

After the questionnaires had been checked and edited at the field, questionnaires are transferred to the Provincial Statistics Offices, where the questionnaires were checked again, mainly focusing on logical and coding examination. After that, Provincial Statistics Offices sent all the checked questionnaires to the Statistics Informatics Center of Zone I as plan to entry and tabulate data.

5. Data processing

Data entry and questionnaire edition are carried out at the Statistics Informatics Center of Zone I in Hanoi.

A number of consistency checks are carried out, and followed by data edition. As soon as the data entry for a province was completed, a list of inconsistencies was printed out for verification and correction, and then data files were updated with these corrections.

6. Calculation of sampling errors

Estimates from the sample survey were affected by two types of error: (1) non-sampling error, and (2) sampling error. Non-sampling error is the result of errors in implementation of data collection and processing such as visiting the wrong dwelling, interviewing the wrong household, mis-understanding of questions by respondents, other errors on the part of respondents or enumerators and wrong data entry. Although many efforts were made to minimize non-sampling errors, but these errors cannot be completely avoided are difficult to evaluate statistically.

On the other hand, sampling error can be evaluated statistically. The sample of respondents in the sample survey is only one of many possible samples that could be selected from the total population using the same sample design method and required sample size. Each of these possible samples could give different results from the sample actually selected. Sampling error results from variation in results from the many different possible samples. Although it is not possible to know this variation precisely, it can be estimated from the sample survey results.

Sampling error is usually measured using *standard errors* for specific statistical indicators (mean, percentage, etc). The standard error is, in fact, the square root of the variance. Standard errors can be used to calculate confidence intervals which contain the true value for the population. For example, for a given statistical indicator calculated from the sample survey, the true statistical value will fall within the interval plus or minus two times the standard error for that indicator with confidence equal to 95% for all possible samples of the same size and sample design.

If the sampling unit is selected following simple random sampling, then it is possible to use formulas to directly calculate standard errors for the sample. However, the sample of the labour force survey was designed with strata, and therefore a more complicated formula must be used. Computer software that could be used to calculate standard errors for stratified samples includes the standard error calculation module of ISSA or STATA. These programs use the Taylor linear expansion method to estimate variance for estimates of means and proportions for sample surveys.

The Taylor linear expansion method considers the percentage or mean as a ratio estimate, $r = y/x$, for which y is the total sample value of variable y , and x is the total number of events in the group or sub-group being studied. The variance of r is calculated using the following formula, where standard errors are the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2} \sum_{h=1}^H \left[\frac{m_h}{m_h-1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

where:

$$z_{hi} = y_{hi} - rx_{hi}, \text{ and } z_h = y_h - rx_h$$

In which:

- h - indicates the strata ranging from 1 to H ,
- m_h - is the total number of enumeration areas selected in strata h ,
- y_{hi} - is the total of weights of variable y for enumeration area i , in strata h ,
- x_{hi} - total number of weighted events in enumeration area i in strata h , and
- f - the overall sampling rate, (if this value is very small it can be dropped).

Sampling error in the sample survey is calculated for a few selected key indicators. Results are presented in an Annex for estimates at the national, urban and rural, and 6 socio-economic region levels and for 63 provinces/cities. For each variable, the statistical estimate (R), standard error (SE), relative standard error (SE/R) and 95% confidence interval ($R \pm 2SE$) are presented in Annex 1.

In order to evaluate the sample's reliability, the standard errors were calculated for some key following indicators:

TABLE 1: STANDARD ERRORS OF NATIONAL LEVEL FOR SOME KEY INDICATORS

No	Indicator name	Unit	R	SE	SE/R	R - 2*SE	R + 2*SE
1	Labour force participation rate of population aged 15 and over	%	77.4	0.19	0.002	77.0	77.7
2	Labour force participation rate of male population aged 15 and over	%	82.0	0.19	0.002	81.6	82.3
3	Labour force participation rate of female population aged 15 and over	%	73.0	0.23	0.003	72.6	73.5
4	Employment to population ratio of population aged 15 and over	%	75.3	0.20	0.003	74.9	75.7

No	Indicator name	Unit	R	SE	SE/R	R - 2*SE	R + 2*SE
5	Employment to population ratio of male population aged 15 and over	%	80.1	0.20	0.002	79.7	80.5
6	Employment to population ratio of female population aged 15 and over	%	70.8	0.24	0.003	70.3	71.3
7	Average monthly income of wage workers aged 15 and over	Thousand VND	2 519	20.65	0.008	2 477	2 560
8	Average monthly income of wage male workers aged 15 and over	Thousand VND	2 668	20.98	0.008	2 626	2 710
9	Average monthly income of wage female workers aged 15 and over	Thousand VND	2 297	27.71	0.012	2 242	2 353
10	Average weekly hours worked of workers aged 15 and over	Hour	45.0	0.11	0.002	44.8	45.2
11	Average weekly hours worked of male workers aged 15 and over	Hour	45.8	0.11	0.002	45.5	46.0
12	Average weekly hours worked of female workers aged 15 and over	Hour	44.1	0.12	0.003	43.9	44.4
13	Urban unemployment rate of population aged 15 and over	%	4.05	0.10	0.025	3.85	4.26
14	Rural underemployment rate of population aged 15 and over	%	4.13	0.17	0.042	3.79	4.48
15	Labour force participation rate of population in the working age	%	83.8	0.17	0.002	83.4	84.1
16	Labour force participation rate of male population in the working age	%	86.7	0.17	0.002	86.4	87.0
17	Labour force participation rate of female population in the working age	%	80.7	0.22	0.003	80.2	81.1
18	Employment to population ratio of population in the working age	%	81.4	0.18	0.002	81.0	81.7
19	Employment to population ratio of male population in the working age	%	84.6	0.18	0.002	84.3	85.0
20	Employment to population ratio of female population in the working age	%	77.9	0.23	0.003	77.4	78.4
21	Average monthly income of wage workers in the working age	Thousand VND	2 533	20.88	0.008	2 492	2 575
22	Average monthly income of wage male workers in the working age	Thousand VND	2 679	21.10	0.008	2 637	2 721
23	Average monthly income of wage female workers in the working age	Thousand VND	2 315	28.18	0.012	2 259	2 372
24	Average weekly hours worked of workers in the working age	Hour	45.6	0.11	0.002	45.4	45.8
25	Average weekly hours worked of male workers in the working age	Hour	46.3	0.11	0.002	46.0	46.5
26	Average weekly hours worked of female workers in the working age	Hour	44.8	0.12	0.003	44.6	45.1
27	Urban unemployment rate of population in the working age	%	4.29	0.11	0.026	4.07	4.50
28	Rural underemployment rate of population in the working age	%	4.26	0.18	0.042	3.90	4.61