CHAPTER 1

INTRODUCTION

1. Background and objective

Labor force statistics have been compiled by the National Statistical Office since 1963 when the survey was initiated. The year 1984-1997 three rounds of the survey for the whole kingdom had been conducted each year; the first round enumeration is held in February coinciding with the non-agricultural season, the second round is normally held in May in with new labor force come from students who just finish their schooling and the third round is held in August, during the agricultural season. Commencing from the year 1998, another round of the survey in November has been conducted.

Due to the increasing demand of data for formulating plans and policy at provincial level, the National Statistical Office has expanded sample size to propose statistical data at provincial level commencing from survey in February and August, 1994. For the fourth round in November 1998, data was presented at the first time and presentation data at provincial level.

After the economic crisis in the mid of 1997, the need of labor force data for planning and policy making were more in demand. In the year of 2001, the survey was conducted monthly. The survey data of three months were combined to present the quarterly. Data of February, May and August were presented in order to compare with the previous labor force survey and since September 2001, data were presented monthly. Beginning from the survey in January 2001, 5 items has been revised; age of persons in labor force was adopted from 13 years of age and over to 15 years of age and over in order to agree with the child labor law. The standard classification of occupation, industry and employment status were adopted, and area of local administration which the former sanitary which were included in non-municipal area were presently included in municipal area.

The main objective of this survey is to estimate the number and characteristics of the labor force in the country and in different regions periodically.The statistical data derived from this quarter of the survey include:

1. the number of persons in and out of the working age (15 years and over) by sex

2. the number of working age population by labor force status, age, sex, marital status, educational attainment

3. the number of employed persons by interesting characteristics such as age, sex, educational attainment, occupation, industry, work status, hours work,

4. the number of unemployed persons by interesting characteristics e.g. duration of searching for job, type of previous work.

2. Coverage

Population reside in the private and special household.

3. Reference week

Reference week refer to seven days before the interviewing date for example if the interviewing date was February 9, 2004 " during 7 days before interviewing date " was during February 2nd- 8th, 2004.

4. Definition

The National Statistical Office has adapted and changed the concepts and definitions used in the Labor Force Survey (LFS) Project many times since the initial year. The purposes of changes were to improve the completeness of the collected data with respect to the real socio-economic situation of the country and to serve for users requirement. In this report, the concepts and definitions used have been introduced since 1983 and some definitions together with the minimum age limit which have been changed to 15 years is adopted since 2001.

The revised definitions used in the survey are listed in following.

Employed persons

Persons, 15 years of age and over who during the survey week,

1. worked for at least one hour for wages/salary, profits, dividends or any other kind of payment, in kind; or

2. did not work at all or worked less than one hour but

2.1 receives wage/salary, profits from business enterprise or farm during the period of absence; or

2.2 not receive wage/salary, profits from business enterprise or farm during the period of absence but had regular jobs or business that they would be return to work.

3. worked for at least one hour without pay in business enterprises or on farms owned or operated by household heads or members.

Unemployed persons

Persons, 15 years of age and over who during the survey week did not work even for one hour, had no jobs, business enterprise or farms of their own.

Persons in this category include :

1. those who had been looking for work, applying for a job or waiting to be call to work during the last 30 days before interview's date.

2. those who had not been looking for work during the last 30 days before interview's date but available for work during the last 7 days before interview's date.

Current labor force

All persons 15 years of age and over who, during the survey week, were either employed or unemployed as defined above.

Seasonally inactive labor force

Persons 15 years of age and over, who during the survey week, were neither employed nor unemployed as defined above, but were waiting for the appropriate season, being persons who usually worked without pay on farms, or in business enterprises engaged in seasonal activities owned or operated by the head of the household or any other member of the household.

Total labor force

All persons 15 years of age and over, who during the survey week, were in the current labor force as defined above or were classified as seasonally inactive labor force as defined above.

Persons not in the labor force

Persons classified in this category are those who were neither employed nor unemployed during the survey week, nor classified as seasonally inactive labor force as defined above. They include:

1. persons who, during the survey week were under 15 years of age,

2. persons who, during the survey week were 15 years of age and over, but were neither employed nor available for employment because they were

2.1 engaged in household work,

2.2 engaged in studies

2.3 too young (below 18 years of age) or too old (above 60 years of age)

2.4 incapable of work because of physical or mental disability or chronic illness,

2.5 voluntarily idle,

2.6 working without pay, profits, dividends or other payments for persons who were not members of the same household,

2.7 working without pay, profits, dividends or any other payments for charitable organizations and institutions,

2.8 otherwise not available for employment.

Job

A job is defined as any of the following:

1. Work for cash wages, salaries or for pay "in kind," or

2. Work for profit on own farm or in own or partly own business, or

3. Work without pay or profit on a farm or in a business owned or operated by the head or any member of the household.

Occupation

Occupation refers to the kind of work performed by a person at his job. Most persons generally hold only one job. For a person having more than one job, only the job at which he worked for the greater number of hours during the survey week was recorded. If the number of working hours for each job was exactly the same, the job which gave him the higher income was recorded. If the number of working hours and the income earned from each job were the same, the

job for which he had preference was recorded. If the respondent could not give his preference, the job at which he had been working for the longest time was the one recorded.

Before 2001, the survey used the classification which was suitable to Thailand's occupation based on International Standard Classification of Occupation, 1958 (ISCO-58). Since January 2001, the survey used International Standard Classification of Occupation, 1988 (ISCO-88) of the International Labor Organization (ILO).

Industry

The term "industry" as herein used refers to the nature of economic activity undertaken in the establishment in which a person worked or the nature of business in which he was engaged during the survey week. If a person had more than one job, the industry corresponding to the occupation recorded was asked.

Before 2001, the survey used the classification which was suitable to Thailand's industry based on International Standard Industrial Classification, (ISIC) 1958. Since January 2001, the survey used the third revision of the International Standard Industrial Classification, (ISIC) 1989, of the United Nations (UN).

Work status

Work status refers to the status of person's occupation in the survey week. Work status was classified as follows :

1. An employer is defined as a person who operates his own enterprise for profit or dividends and hires one or more employees in his enterprise.

2. A government employee is defined as a person who works for pay in a government agency or government enterprise. Included in this category, therefore are civil servants, police, municipal officers, and employees or government enterprises.

3. A private employee is a person who works for pay a non-governmental enterprise owned and operated by an employer.

4. An own account worker is a person who operated an enterprise on his own account or jointly with others in the form of a partnership either for profit or dividends but without engaging any employees.

5. An unpaid family worker is a person who works without pay on a farm or in a business enterprise owned or operated by the household head or any other member.

6. A member of a producers' cooperative is a person who hold a "self-employment" job in a cooperative producing goods and services, in which each member takes part on an equal footing with other members in determining the organization of production, sales and/or other work of the establishment, the investments and the distribution of the proceeds of the establishment amongst their members.

Since January 2001, the survey used the International Classification of Status in

Employment, 1993 (ICSE-93) of the International Labor Organization (ILO) which add one more status to those used in the previous year, that is a member of a producers' cooperative.

Hours worked

Hours worked mean hours actually worked during the survey week. For a person holding more than one job, his hours worked would be the sum total of hours worked on all jobs. For a person who had a regular job but was not at work during the survey week, the hours worked would be recorded zero. Before 2001, for a person who had a regular job but was not at work during the survey week, the number of hours normally worked in a week is taken as the hours worked

Wage or salary

Wages or salaries mean basic wages or salaries payable for the specified time or piece of work, not including overtime payments, bonuses or other fringe benefits.

Duration of looking for work

Duration of looking for work is the length of time during which an unemployed person had been looking for work. It is counted from the day he started looking for work to the end of the survey week.

Survey week

A survey week is the reference period of last 7 days before interview's date which information on labor was obtained.

Enumeration period

The enumeration period is the 1st-12th for each month which actual interviews were conducted.

Types of households included in the survey

Households included in the scope of the survey can be divided into two types:

1. Private households which include one person household, i.e. single persons who make provision for their own food or other essentials of living without combining with any other persons, or multi person households, i.e. groups of two or more persons making common provision for food or other essentials for living, residing in any of the following types of housing: wooden dwellings, cement dwellings, row houses, apartments, boats, rafts, etc.

2. Special households which include persons living in group living quarters within the compound of a factory, or in a dormitory, or boarding house which is not exclusively for students.

Household not included in the above mentioned types, e.g. inmates of penal institutions, priests, soldiers living in military barracks, students living in dormitories, etc., were classified as institutional households and not covered in the survey.

Level of educational attainment

Educational levels are classified as follows:

1. None means all persons who have never attended school or had no education.

2. Less than elementary means all persons who have completed a grade lower than Pratom 6 (or formerly Pratom 7 or Matayom 3).

3. Elementary level means all persons who have completed Pratom 6 (or formerly Pratom 7 or Matayom 3) or higher but not lower secondary level.

4. Lower secondary level means all persons who have completed Matayom 3 (formerly Matayomsuksa 3 or Matayom 6) or higher but not upper secondary level.

5. Upper secondary level

5.1 Academic means all persons who completed Matayom 6 (formerly Matayomsuksa 5 or Matayom 8) in general education schools or completed higher but not higher level.

5.2 Vocational and technical means all persons who have completed a lower secondary and have then completed the three year course required for this level in vocational and technical colleges or completed higher but not higher level.

5.3 Teacher training means all persons who have completed the teacher traningcourse and receiving a certificate equivalent to upper secondary level or completed higher but not higher level.

6. Higher level

2.1 Academic means all persons who completed a course receiving academic diploma, bachelor, master and doctoral degree level.

2.2 Higher technical education means all persons who completed vocational or technical education, and receiving vocational diploma and the degree of bachelor.

2.3 Teacher training means all persons who completed a course receiving educational diploma, bachelor, master and doctoral degree level.

7. Short course vocational training means all persons who have completed a vocational course of less than twelve months duration and have received a certificate or other document certifying completion of such a course. The educational requirements for persons taking such courses vary, but the minimum requirements are completion of at least grade 4 (Pratom 4) or the equivalent.

8. Other means all persons who have completed types of education other than the aforementioned.

APPENDIX A

METHODOLOGY

1. Sample design

A Stratified Two-Stage Sampling was adopted for the survey. Provinces were constituted strata. The primary and secondary sampling units were blocks for municipal areas/villages for non-municipal areas and private households/persons in the special households respectively.

Stratification

Provinces were constituted strata. There were altogether 76 strata. Each stratum was divided into two parts according to the type of local administration, namely municipal areas and non-municipal areas.

Selection of primary sampling unit

The sample selection of blocks/villages were performed separately and independently in each part by using probability proportional to size-total numbers of households. The total sample blocks/villages was 5,796 from 109,966 blocks/villages.

The total number of sample blocks/villages selected for enumeration by region and type of local administration was as follows:

Region	Total	Municipal areas	Non-municipal areas
Bangkok	312	312	-
Central (excluding Bangkok)	1,968	1,080	888
North	1,236	696	540
Northeast	1,296	720	576
South	984	528	456
Total	5,796	3,336	2,460

Selection of secondary sampling unit

Private households were our ultimate sampling units. A new listing of private households were made for every sample block/village to serve as the sampling frame. In each sample block/village, a systematic sample of private households were selected with the following sample size:

Municipal areas   : 15 sample households per block

Non-municipal areas   : 12 sample households per village

Before selecting sample private households in each sample block/village, the list of private households was rearranged by household's size-member of the household.

All special households located within the sample areas were included in the sample and the persons in the special household were systematically selected for the interviewing.

The total number of sample private households selected for enumeration by region and type of local administration was as follows:

Region	Total	Municipal areas	Non-municipal areas
Bangkok	4,680	4,680	-
Central (excluding Bangkok)	26,856	16,200	10,656
North	16,920	10,440	6,480
Northeast	17,712	10,800	6,912
South	13,392	7,920	5,472
Total	**79,560**	**50,040**	**29,520**

The Rotation Sampling

In order to improve the quality of estimators, the national Statistical office (NSO) has applied the contemporary sampling method , " Rotation Sampling", to the 2004 Labour Force Survey (LFS) since 2002. The sampling plan has been designed as 4 rotation groups and 2 -2 -2 pattern. With this method, the samples of BLK / villages will be divided into 4 rotation groups and this causes the number of PSUs in each province to be equal to a quarter of that of total PSUs. In each PSU, two household sample sets will be selected for operation use. The selected sample households will be interviewed for two continuous quarters. And these households will not be interviewed until the next two quarters. This procedure will result in the 50 % repeated household samples during the continuously sequent quarter and the 0 – 100% repeated household samples during the same quarter in the continuously sequent year.

In 2004, PSU in each rotation group will be replaced quarter by quarter. And this will be done until 4 groups is completely rotated in 2002 , and will be used in LFS 2005 and some parts of LFS 2006. In 2007, PSU in each 2004 rotation group will be replaced in the same way until 2008.

2. Method of estimation

The survey results were at regional and provincial level. At the regional level the results were presented separately for the Bangkok and the remaining 75 provinces were classified by region, municipal areas and non-municipal areas.

Let

$$g = 1, 2, 3, \ldots, 20 \quad (\text{age - sex group})$$

$$k = 1, 2, 3, \ldots, m_{hij} \quad (\text{sample block / village})$$

$$j = 1, 2 \quad (\text{type of local administration})$$

$$i = 1, 2, 3, \ldots, A_h \quad (\text{province})$$

$$h = 1, 2, 3, 4, 5 \quad (\text{region})$$

Estimate of the total number of persons with characteristic X

1. Adjusted estimate of the total number of persons with characteristic X for the gth age-sex group, j[th] area, i[th] province, h[th] region was based on the formula :

$$x''_{hijg} = \frac{x'_{hijg}}{y'_{hijg}} Y_{hijg} = r_{hijg} \, Y_{hijg} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

where

x'_{hijg} is the ordinary estimate of the total number of persons with characteristic X for the gth age-sex group, j[th] area, i[th] province, h[th] region.

y'_{hijg} is the ordinary estimate of the total population for the gth age-sex group, j[th] area, i[th] province, h[th] region.

Y_{hijg} [1/]   is the estimate, based on the population projection of the total population for the ith age-sex group, j[th] area, l[th] province, h[th] region.

r_{hijg} is the ratio of the estimate of the total number of persons with characteristic X to the estimate of the total population for the gth age-sex group, j[th] area, i[th] province, h[th] region.

[1/] Population projections for Thailand 2000-2025, Quality of life and social development office, National Economic and Social Development Board, the Nineth National Economic and Social Development Planning, May 2003.

The formula of the estimate from a stratified two-stage sampling was as follows.

i) $$x'_{hijg} = \frac{1}{m_{hij}} \sum_{k=1}^{m_{hij}} \frac{1}{P_{hijk}} \frac{N_{hijk}}{n_{hijk}} x_{hijkg}$$ ……….…………………… (2)

where

x_{hijkg} is the total number of persons with characteristic X for the gth age-sex group, k^{th} sample block/village, j^{th} area, i^{th} province, h^{th} region.

N_{hijk} is the total number of listing households in the kth sample block/village, j^{th} area, i^{th} province, h^{th} region.

n_{hijk} is the total number of sample households in the kth sample block/village, j^{th} area, i^{th} province, h^{th} region.

P_{hijk} is the probability of selection of the kth sample block/village, j^{th} area, i^{th} province, h^{th} region.

m_{hij} is the total number of sample block/village in the jth area, i^{th} province, h^{th} region.

ii) $$y'_{hijg} = \frac{1}{m_{hij}} \sum_{k=1}^{m_{hij}} \frac{1}{P_{hijk}} \frac{N_{hijk}}{n_{hijk}} y_{hijkg}$$ ……….…………….…………. (3)

where

y_{hijkg} is the total number of the population enumerated for the gth age-sex group, k^{th} sample block/village, j^{th} area, i^{th} province, h^{th} region.

2. Adjusted estimate of the total number of persons with characteristic X for the jth area, i^{th} province, h^{th} region was based on the formula :

$$x''_{hij} = \sum_{g=1}^{20} x''_{hijg}$$ ……….……………….………….(4)

3. Adjusted estimate of the total number of persons with characteristic X for the gth age-sex group, i^{th} province, h^{th} region was based on the formula :

$$x''_{hig} = \sum_{j=1}^{2} x''_{hijg}$$ ……….…….……………….(5)

4. Adjusted estimate of the total number of persons with characteristic X for the ith province, h^{th} region was based on the formula :

$$x''_{hi} = \sum_{j=1}^{2} x''_{hij} = \sum_{g=1}^{20} x''_{hig} \qquad \text{.. (6)}$$

5. Adjusted estimate of the total number of persons with characteristic X for the gth age-sex group, j^{th} area, h^{th} region was based on the formula :

$$x''_{hjg} = \sum_{i=1}^{A_h} x''_{hijg} \qquad \text{.................................... (7)}$$

where

A_h is the total number of provinces in the hth region and $\sum_{h=1}^{5} A_h = 76$

6. Adjusted estimate of the total number of persons with characteristic X for the jth area, h^{th} region was based on the formula :

$$x''_{hj} = \sum_{i=1}^{A_h} x''_{hij} = \sum_{g=1}^{20} x''_{hjg} \qquad \text{.................................... (8)}$$

7. Adjusted estimate of the total number of persons with characteristic X for the gth age-sex group, h^{th} region was based on the formula :

$$x''_{hg} = \sum_{i=1}^{A_h} x''_{hig} = \sum_{j=1}^{2} x''_{hjg} \qquad \text{.................................... (9)}$$

8. Adjusted estimate of the total number of persons with characteristic X for the hth region was based on the formula :

$$x''_{h} = \sum_{i=1}^{A_h} x''_{hi} = \sum_{j=1}^{2} x''_{hj} = \sum_{g=1}^{20} x''_{hg} \qquad \text{.................................. (10)}$$

9.   Adjusted estimate of the total number of persons with characteristic X for the jth area was based on the formula :

$$x''_j = \sum_{h=1}^{5} x''_{hj} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (11)$$

10. Adjusted estimate of the total number of persons with characteristic X for the gth age-sex group of whole kingdom was based on the formula :

$$x''_g = \sum_{h=1}^{5} x''_{hg} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (12)$$

11 Adjusted estimate of the total number of persons with characteristic X   for the whole kingdom was based on the formula :

$$x'' = \sum_{h=1}^{5} x''_h = \sum_{j=1}^{2} x''_j = \sum_{g=1}^{20} x''_g \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots.(13)$$

3. Data Collection

Labor force information for this survey quarterly which was conducted during the 1st-12th of April-June 2008 was obtained through interviews head or member of households of 4,680 households in the Bangkok, 45,360 households in other municipal areas and 29,520 households in non-municipal areas or a total of 79,560 households throughout the kingdom. Fourty four enumerators with previous experience in survey operations were employed in the Bangkok, while in the other provinces (changwats), the field staff comprised 830 enumerators.

4. In round figures

In the statistical tables, all absolute figures are independently rounded to the nearest thousand; hence the group total may not always be equal to the sum of the individual figures.