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CONDUCTING A LABOR FORCE SURVEY IN DEVELOPING COUNTRIES.

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BUREAU OF LABOR STATISTICS (DEPT. OF LABOR)

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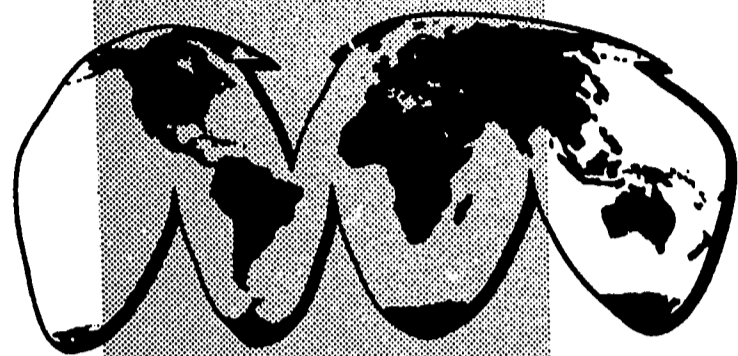
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APPLICABLE TO THOSE SITUATIONS WHERE A DECISION HAS BEEN MADE TO CONDUCT A LABOR FORCE SURVEY, THIS MANUAL OUTLINES AND DESCRIBES SURVEY PROCEDURES WITH AS LITTLE TECHNICAL TERMINOLOGY AS POSSIBLE FOR ALL WHO PARTICIPATE WITH THE CHIEF STATISTICIAN IN THE SURVEY. LABOR FORCE CONCEPTS TRADITIONALLY USED IN INDUSTRIALIZED COUNTRIES ARE MODIFIED FOR APPLICATION TO ECONOMICALLY DEVELOPING COUNTRIES. THE MANUAL FORMAT FOLLOWS THE GENERAL ORDER RECOMMENDED FOR CONDUCTING A LABOR FORCE SURVEY--(1) DETERMINE THE LABOR FORCE CONCEPTS AND DEFINITIONS APPLICABLE TO THE AREA TO BE SURVEYED, (2) HAVE A SMALL TECHNICAL STAFF LAY-OUT PLANS FOR THE SURVEY, (3) DESIGN THE QUESTIONNAIRE AND DRAW UP INSTRUCTIONS TO ENUMERATORS, (4) CONDUCT A PRETEST OF THE QUESTIONNAIRE OR A PILOT SURVEY, AND ANALYZE THE RESULTS, (5) DESIGN THE SAMPLE, (6) RECRUIT PERSONNEL FOR THE MAIN SURVEY, (7) CONDUCT INITIAL TRAINING FOR THE STAFF, (8) COMPLETE THE TABULATION PLANS, (9) CONDUCT THE FIELD ENUMERATION, (10) PROCESS THE COLLECTED DATA, (11) COMPUTE THE ESTIMATES, (12) COMPUTE THE SAMPLING ERROR OF THE ESTIMATES, (13) ANALYZE THE FINDINGS, AND (14) PUBLISH A REPORT. A LIST OF LABOR FORCE SURVEYS IN DEVELOPING COUNTRIES, CASE STUDIES OF SAMPLING DESIGNS, SAMPLE SCHEDULES, INTERNATIONAL RESOLUTIONS, EXCERPT FROM AN ENUMERATOR'S MANUAL, AND A BIBLIOGRAPHY ARE INCLUDED. (ET)

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**UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary**

BUREAU OF LABOR STATISTICS

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**CONDUCTING A LABOR FORCE SURVEY
IN DEVELOPING COUNTRIES**

**Prepared for
AGENCY FOR INTERNATIONAL DEVELOPMENT**

**UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary**

BUREAU OF LABOR STATISTICS

September 1964

Preface

This manual is intended as a training guide for the professional staff which is conducting a labor force survey in developing countries. Such a survey is the best and cheapest method of obtaining dependable information on total employment, unemployment and underemployment. It should be directed by a trained and experienced statistician, but most staff members will usually have limited training or experience in the technical subject of labor statistics. The manual therefore describes procedures in nontechnical language. It covers all phases of the survey from purpose to final publication and provides a substantial amount of reference material.

The manual was prepared for the Agency for International Development (AID) by Matilda R. Sugg under the supervision of Lloyd A. Prochnow in the Bureau of Labor Statistics, Division of Foreign Labor Conditions, William C. Shelton, Chief.

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Conducting a Labor Force Survey in Developing Countries

Chapter I. Introduction

The Employment Problem in Less-Developed Countries

The primary employment objective in the economic development of a nation is to provide a satisfactory level of employment for its working population. The employment level is generally considered satisfactory when all, or nearly all, members of the labor force have employment and purchasing power sufficient to support a rising standard of living. But this level of employment is not static; there is an ever increasing number of people seeking paid employment. The increase stems from two sources: (a) increases in population; and (b) the fact that an increasing proportion of the population of working age seeks employment as job opportunities increase.

In order for the decisionmakers in government and private industry to formulate employment policies to attain the objective of full employment, statistical data are needed on the number and characteristics of the employed, the unemployed, and the underemployed. The basic information needed is the age and sex of persons in the labor force; their education, experience, and skills; and their geographic location. There is in general a paucity of such data in developing countries.

The Role of Labor Force Surveys in Solving These Problems

A sample survey of the labor force will yield statistical information which contributes significantly toward a knowledge of the characteristics of the employed, unemployed, and underemployed.

Uses of Labor Force Data. The specific ends to which governments, educational institutions, business men, trade unions, and individual decisionmakers will use these facts will differ according to the situation, but the survey will provide data from which a country may:

1. Assess the potential manpower which is available for economic development; its education, experience, skill, and other pertinent characteristics.
2. Evaluate the kinds of jobs which must be provided if unemployment and underemployment are to be minimized.
3. Project future manpower resources, which, when compared with the future manpower requirements, will help identify employment and training needs.
4. Anticipate possible limitations on development caused by shortages of particular skills.

5. Determine differences in employment, unemployment, and underemployment according to the different economic, social and ethnic groups existing within the population.

Characteristics of a Household Survey of the Labor Force. The unique circumstances of each country will determine what particular information is needed most urgently, and what kind of study is most practical for acquiring that information. Consideration must be given in each case to the need for obtaining the desired knowledge; the relative urgency of the various competing needs; and the feasibility of allocating scarce resources of personnel and equipment to each specific project.

In this context then, it is necessary to consider the particular characteristics of a labor force survey. First, what information is obtainable by such a survey? Second, can this information be obtained more efficiently through a labor force survey than from some other source? Third, how expensive is a labor force survey in comparison with other types of statistical projects?

Data obtainable from a household survey of the labor force:

1. The unique contribution of the household survey of the labor force is a current count of unemployment and underemployment, to the extent that they can be defined for purposes of measurement.

2. Provided that the number in the total population is known or has been estimated for a given time period, the labor force survey will provide a count of that population classified according to its attachment to the labor force; i.e., employed (including the underemployed), unemployed, or not in the labor force.

3. The survey can provide a classification of the employed, and the unemployed, according to demographic characteristics: sex, age, race or color, marital status, etc.

4. The survey can provide a classification of the employed labor force by broad industry groups and by broad occupational categories; and a classification of the unemployed by industry group and occupational category of the most recent or usual job prior to unemployment.

5. The labor force survey can provide its information promptly, within a few weeks after the reference period.

Alternative sources of these data:

1. All the information obtained in a labor force survey can be obtained through a population census. However, a census is more expensive and requires more time than a sample survey. In practice, a labor force sample survey is usually used to supplement the census by providing estimates of employment and unemployment between censuses, which

are usually taken at 10-year intervals. The survey can be conducted more quickly and at less cost than a census. Furthermore, it permits use of more experienced and better trained interviewers than a census. Whereas a census requires a large number of enumerators who are hired for a brief period and must be quickly trained in the interest of economy, the labor force survey, on the other hand, uses only a small number of enumerators over a longer period of time, making intensive training feasible.

2. Establishment sample surveys provide estimates of the number of persons employed in each industry surveyed. In addition, they provide estimates of average hours and earnings in each industry. Such surveys, however, are subject to certain limitations; for example, they exclude important segments of the working population such as: agricultural workers, the self-employed, domestic servants, and unpaid family workers. Also, they result in some double counting of individuals when one worker holds two jobs in a given reference period.

When establishment surveys are conducted monthly or quarterly, the observed changes in employment, hours, and earnings are highly sensitive indicators of economic conditions. However, sample surveys of establishments on a repetitive basis are technically feasible only when there is a total count of employment in the industries surveyed at least as often as every 5 years. That is, each industry surveyed requires a census or some type of complete

count of employment to be used as a benchmark ^{1/} for the sample survey.

3. Administrative statistics from a social insurance system may provide a count of all employed workers who are covered by the system and a count of the persons who receive benefits. Often a count of persons registered as unemployed by a State Employment Service is available. Maximum use should be made of whatever statistics are available. The usual disadvantages of such statistics are incomplete coverage and a long time lag between the date of reference and the availability of the statistics.

Costs:

A labor force survey is a relatively expensive undertaking. Since it must be conducted by personal interviews, requiring enumerators and a field organization, it is more expensive than surveys which can be conducted by mail. It is more expensive than an establishment survey in which data on many workers can be collected at one time. Furthermore, conducting surveys of any kind is more expensive than obtaining statistics accumulated as a byproduct of the performance of an administrative function.

^{1/} A benchmark, in statistical terminology, is a complete count of a given population at a given point in time. Later estimates are computed by estimating the change occurring in the time period elapsed.

Purpose of This Manual

The present manual is applicable to those situations where a decision has been made to conduct a labor force survey. Once a survey has been decided upon, many decisions of a technical nature must be made. A qualified statistician, preferably one who has had experience in conducting surveys, must be on the spot to make these decisions. This manual outlines and describes survey procedures with as little technical terminology as possible. It is directed to all the people who participate with the statistician in the survey.

Planning a labor force survey presupposes an understanding of the underlying concepts and measurement techniques. Before outlining the methods for measuring the labor force, this manual discusses concepts. It first reviews the traditional labor force concepts and definitions generally used in industrialized countries; and then suggests modifications in these concepts and definitions for application to economically developing countries.

Summary of Procedure for Conducting a Labor Force Survey

In the conduct of any survey, there is a certain continuity of procedures, although there is a great deal of overlapping. One person may be designing the sample (step 5 below) while another is writing instructions to enumerators. But all

these functions are interrelated. Decisions made after step 4, for instance, or step 8, may require modification of work done in any of the earlier steps.

Nevertheless, the following framework indicates the general order in which things may be done. This is the order which is followed in this manual.

1. Determine the labor force concepts and definitions applicable to the area to be surveyed.
2. Have a small technical staff lay-out plans for the survey.
3. Design questionnaire and draw up instructions to enumerators.
4. Conduct a pretest of the questionnaire or a pilot survey, and analyze the results.
5. Design the sample.
6. Recruit personnel for main survey.
7. Conduct initial training for staff.
8. Complete the tabulation plans.
9. Conduct the field enumeration.
10. Process the collected data.
11. Compute the estimates.
12. Compute the sampling error of the estimates.
13. Analyze the findings.
14. Publish a report.

Chapter II. Review of Concepts and Definitions in General Use

Prerequisite to measurement of the labor force is the formulation of definitive and measurable criteria by which to define and classify the labor force and its parts; and, equally important, to identify those parts of the population which are not in the labor force.

The labor force survey seeks to account for the total population, each individual in the population being classified according to his labor force status. Therefore, in thinking about the definitions it is useful to begin with consideration of the total population.

Total Population Accounted For

The population of an area can be considered as consisting of two parts:

1. The labor force, or those persons who are available to supply the labor for the production of economic goods and services. It therefore, comprises all persons who have jobs or who are seeking jobs in the labor market.

2/ References to the United States Survey are to the Current Population Survey, conducted monthly by the U. S. Bureau of the Census for the Bureau of Labor Statistics, which publishes the findings in the Monthly Report on the Labor Force.

2. All others, those persons who are not in the labor force.

In order to estimate the number of persons in the labor force and to classify them into meaningful categories, it is necessary to define the labor force as sharply as possible. This requires the identification of all groups of persons in the labor force and those outside the labor force. The definitions must permit the classification of each person in the population. Each person must be counted once and only once.

Cited in this chapter are the definitions currently in use in the United States; 2/ and those recommended by the Eighth International Conference of Labour Statisticians, at its meeting in Geneva in November and December 1954.

Labor Force Components Defined

The labor force is defined by defining its parts. The civilian labor force has two parts: the employed and the unemployed. The total labor force is the civilian labor force plus the Armed Forces.

In the United States, two groups, by definition, are excluded from classification as members of the labor force:

1. Children below the age of 14, and

2. Inmates of institutions such as prisons and homes for the aged.^{3/}

These are the only persons in the population whose classification is automatic. All other members of the population are classified according to the answer to specific questions about their labor force attachment.

Definition of the Employed

In the United States.^{4/} Among the noninstitutional population 14 years of age and over:

Employed Persons comprise (a) all those who during the survey week did any work at all either as paid employees,^{4/} or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family, and (b) all those who were not working or looking for work but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, or labor-management dispute, or because they were taking time off for various other reasons, whether or not they were paid by their employers for the time off.

Each employed person is counted only once. Those who held more than one job are counted in the job at which they worked the greatest number of hours during the survey week.

Included in the total are employed citizens of foreign countries, temporarily in the United States, who are not living on the premises of an Embassy (e.g., Mexican migratory farm workers).

Excluded are persons whose only activity consisted of work around the house (such as own home housework, and painting or repairing own home) or volunteer work for religious, charitable, and similar organizations.

Group b above constitutes a category called "with a job but not at work," a subgroup of the employed. This category does not include persons on layoff during the survey week, even though they may have instructions to return to work. Nor does it include persons who "have a job" in the sense that they expect to start work at a date later than the survey week.

^{3/} Persons in: (a) penal institutions; (b) homes for the aged, infirm, and needy; (c) mental institutions, including mental hospitals for veterans; (d) nursing, convalescent, and rest homes; and (e) other hospitals and homes providing specialized care.

^{4/} Employment and Earnings, Vol. 10, any monthly issue; Technical Note, p. 3E. It should be noted that in this manual the term "employee" is used in its American meaning, that is, it includes wage earners as well as salaried workers.

International Resolutions: 5/

1. Persons in employment consist of all persons above a specified age in the following categories: (a) at work; persons who performed some work for pay or profit during a specified period, either 1 week or 1 day; (b) with a job but not at work; persons who, having already worked in their present job, were temporarily absent during the specified period because of illness or injury, industrial dispute, vacation or other leave of absence, absence without leave, or temporary disorganization of work due to such reasons as bad weather or mechanical breakdown.

2. Employers and workers on own account should be included among the employed and may be classified as "at work" or "not at work" on the same basis as other employed persons.

3. Unpaid family workers currently assisting in the operation of a business or farm are considered as employed if they worked for at least one-third of the normal working time during the specified period.

4. The following categories of persons are not considered as employed: (a) workers who during the specified period were on temporary

or indefinite layoff without pay; (b) persons without jobs or business or farms who had arranged to start a new job or business or farm at a date subsequent to the period of reference; (c) unpaid members of the family who worked for less than one-third of the normal working time during the specified period in a family business or farm.

Differences between United States definition of employment and international resolution:

These two definitions of employment are almost the same, with the following exceptions:

1. The United States definition specifies persons aged 14 and over; the international resolution does not specify the lower age limit, but merely says "above a specified age."

2. The United States definition classifies individuals according to activity during a specified calendar week; the international resolution says "during a specified period, either 1 week or 1 day."

3. The United States definition classifies as employed unpaid family workers who worked 15 hours or more in the family business; the international resolution considers unpaid family workers employed "if they worked for at least one-third of the normal working time during the specified period."

5/ Based on the resolutions of Eighth International Conference of Labour Statisticians, Geneva, 23 November, 3 December 1954. Reproduced as appendix E of this volume.

Definition of Unemployment

In the United States.

Unemployed persons comprise all persons who did not work at all during the survey week and were looking for work, regardless of whether or not they were eligible for unemployment insurance. Also included as unemployed are those who did not work at all and (a) were waiting to be called back to a job from which they had been laid off; or (b) were waiting to report to a new wage or salary job within 30 days (and were not in school during the survey week); or (c) would have been looking for work except that they were temporarily ill or believed no work was available in their line of work or in the community. Persons in this latter category will usually be residents of a community in which there are only a few dominant industries which were shut down during the survey week. Not included in this category are persons who say they were not looking for work because they were too old, too young, or handicapped in any way.

The category, "unemployed" includes persons who have never had a job, if they were not working but were seeking work during the survey week. 6/

International Resolutions:

1. Persons in unemployment consist of all persons above a specified age who, on the specified day

or for a specified week, were in the following categories: (a) workers available for employment whose contract of employment had been terminated or temporarily suspended and who were without a job and seeking work for pay or profit; (b) persons who were available for work (except for minor illness) during the specified period and were seeking work for pay or profit, who were never previously employed or whose most recent status was other than that of employee (i.e., former employers, etc.) or who had been in retirement; (c) persons without a job and currently available for work who had made arrangements to start a new job at a date subsequent to the specified period; (d) persons on temporary or indefinite layoff without pay.

2. The following categories of persons are not considered to be unemployed: (a) persons intending to establish their own business or farm, but who had not yet arranged to do so, who were not seeking work for pay or profit; (b) former unpaid family workers not at work and not seeking work for pay or profit.

6/ As a matter of procedure, the basic question put to the respondent regarding persons who did not work in the survey week is: "Was looking for work?" If the reply is an unqualified "yes," the person is classified as unemployed without further questioning. On the other hand, a person who is not looking for work because of temporary illness or belief that no work is available ordinarily is classified as unemployed only if this information is volunteered.

Differences between United States definition of unemployment and international resolution.

1. The United States definition specifies persons aged 14 and over; the international resolution does not specify the lower age limit, but merely says "above a specified age."

2. The United States definition classifies individuals according to activity during a specified calendar week; the international resolution says "during a specified period, either 1 week or 1 day."

Other than these two differences, the two definitions of unemployment are the same. The most significant point is that both definitions specify that in order to be classified as unemployed, the individual must have been seeking work during the reference period.

Definition of the Armed Forces

In the United States. The Armed Forces include all members of the Armed Forces on active duty stationed either in the United States or abroad (excluding civilian employees of the various services).

The total labor force must include the Armed Forces, in order to provide a complete picture of manpower utilization, including a complete age-sex distribution of the labor force.

International Resolutions:

The resolution of the Eighth Conference does not define the Armed Forces but refers to the total

labor force as the sum of the civilian labor force and the Armed Forces.

Definition of Underemployment

In the United States. The United States survey does not define underemployment nor use the term. It does provide a count of part-time workers, i.e., employed persons who worked less than 35 hours during the survey week. Such workers are classified by their usual status at their present job (either full-time or part time) and by their reasons for working part time during the survey week (economic or other reasons).

"Economic reasons" include:

- Slack work
- Material shortages
- Repairs to plant or equipment
- Start or termination of job during the week
- Inability to find full-time work

"Other reasons" include:

- Holiday
- Labor dispute
- Bad weather
- Own illness
- Vacation
- Demand of home housework
- School
- No desire for full-time work
- Full-time worker only during peak season.

In effect, the group designated as "Part time for economic reasons" constitutes the visible (as defined in the following section) underemployed, while the group "Part time for other reasons," is made up of (1) people who voluntarily chose part-

time work and (2) those whose part-time work might occur even under conditions of a fully employed labor force.

International Resolutions:

The Ninth International Conference of Labour Statisticians passed a resolution dealing with the measurement of underemployment, which is reproduced as Appendix E of this manual.

The definition of underemployment is:

Underemployment exists when persons in employment who are not working full time would be able and willing to do more work than they are actually performing, or when the income or productivity of persons in employment would be raised if they worked under improved conditions of production or transferred to another occupation, account being taken of their occupational skills. Underemployment appears in various forms, some of which can be measured with reasonable accuracy by means of statistical inquiries. The following major categories of underemployment may be distinguished:

-visible underemployment, which involves shorter than normal periods of work and which is characteristic of persons involuntarily working part time;

-invisible underemployment, which is characteristic of persons whose working time is not abnormally reduced but whose earnings are abnormally low or whose jobs do not permit full use of their capacities or skills (sometimes called disguised underemployment), or who are employed in establishments or economic units whose productivity is abnormally low (sometimes called potential underemployment).

Underemployment, according to this definition, excludes persons who are unemployed or who are not in the labor force but who are willing to take employment though they do not seek it.

Differences between United States and international resolutions:

The international resolutions have given considerable attention to underemployment, whereas the United States survey does not even define the term. The United States group "employed part time for economic reasons" is comparable with group designated "visible underemployed" by the international resolution.

Other Definitional and Conceptual Clarifications

The Time Element: Choice of the Reference Period. People change their activities from time to time.

Some uncertainty in classifying individuals arises from the fact that they engage in different activities at different times. To eliminate this uncertainty, it is the practice to determine a person's labor force status by what he actually did during a specific time period, giving priority to certain activities.

In the United States. In the United States, the time period is 1 week. Specifically, each month the survey week is the calendar week beginning on Sunday and ending on Saturday, which contains the 12th day of the month.

In measuring activity, the time period selected for the monthly survey was a calendar week. Several considerations led to adopting a calendar week as the time reference for the surveys. First of all, the period used must be short enough so that the data obtained would be 'current' and the time reference would not tax the memory of the person giving the information. Second, it must not be so short that the occurrence of holidays or other accidental events would cause extremely erratic fluctu-

7/ Concepts and Methods Used in the Current Employment and Unemployment Statistics Prepared by the Bureau of the Census. Current Population Reports, Series P-23, No. 5, May 9, 1958.

ations in the information obtained. A calendar week seemed to fulfill these conditions as well as being a convenient and easily defined period of time.^{7/}

International Resolutions:

The international resolution refers to "a specified brief period, either one week or one day."

Differences:

While the United States specifies a 1-week reference period, the international resolution leaves it up to each country whether to use a 1-week or 1-day reference period.

It should be pointed out that this decision has a marked influence on the resulting statistics. If a 1-day reference period is used, unemployment will be higher and employment lower than if a 1-week reference period is used. This is because employment is given priority over unemployment. Hence, if a person is employed only 1 day of a reference week, he is classified "employed." When a 1-day reference period is used, there is a greater probability that the reference day will be a day of unemployment for this person rather than the 1 day of employment. Hence more such workers would be classified as unemployed than employed.

The Age Limits. Clearly, very young children are not in the labor force. A child can be considered as becoming a member of the labor force when he first does work, as defined above, for pay or profit, or as an unpaid family worker for the prescribed number of hours.

The United States uses a minimum age limit of 14 for the labor force. International resolutions do not specify the particular age, but say only "Persons in employment (and unemployment) consist of all persons above a specified age who. . ."

It is known in the United States that a relatively small number of children under age 14 work, even as unpaid family workers on their parents' farm or business. If all working children were included in the labor force, the effect on labor force statistics would be insignificant.

Old people are not excluded, by definition, from the labor force, no matter how advanced their age. Classification for people of all ages 14 and over is based upon activity during the survey week. If they are unable to work because of age or have voluntarily retired, they are classified "Not in the labor force."

The Concept of Work. In the context of defining the labor force, what activities are "work?" Going fishing is recreation for one man and work for another; driving a car may be either recreation or work depending on the circumstances.

The United States definitions and the international resolutions have distinguished between recreation and work by a simple concept. If a man receives pay from another person for doing an activity, that activity shall be considered "work." Or, if a man engages in an activity in the expectation of making a profit, the activity shall be "work." The person performing "work" in this sense, i.e., for pay or profit, is a member of the category "employed."

Implicit in this concept is the assumption that a money market exists, that the opportunity is present for a worker to sell his services or the goods he produces in a market.

This concept of work for pay or profit means that a housewife who works at home taking care of her family is not considered a member of the labor force. Her work is socially necessary and valuable; it is often arduous. Nevertheless, it is outside the money market. Her services do not enter into the labor market and do not contribute to the Nation's output of economic goods and services. Therefore, housewives engaged only in their own housework are not considered members of the labor force. Similar activity performed for another for pay would be considered as "work."

Similarly this concept is interpreted to mean that the inmates of institutions such as prisons and mental hospitals are not members of the

labor force even though they may perform some useful work in the institution. Such work is not in the competitive money market.

Unpaid Family Workers. Another group considered to be performing "work" are unpaid family workers. Sometimes the family dwelling place is also a place of business, a farm, or a family enterprise of some kind. Even though they receive no pay, members of the family do some of the work for profit which constitutes the economic work of the family enterprise. Conceptually, these unpaid family workers are a part of the Nation's labor force even though they work without pay, and even though they work in their own household. The question is how to distinguish the workers from the nonworkers; and family care from family enterprise. In practice, it is almost impossible to make a clear distinction between them. For example, how about the boy who milks the cow on a family farm? How about the girl who sweeps the floor and picks up the scrap leather from her father's shoemaking operations?

In general, the distinguishing feature of the genuine worker in such a situation is the length of time devoted to the family enterprise. Family members who work for long hours are considered workers; if they work only a very short time, they are considered as performing as family members, not as workers.

Therefore, the criterion used to distinguish between the worker

and nonworker among unpaid family members is the length of time worked. The United States includes among the "employed," unpaid family workers who worked 15 hours or more in a family business or farm. The international resolution includes "unpaid members of the family who worked for more than one-third of the normal working time during the specified period in a family business or farm."

Persons with a Job but Not at Work. A person who has a job from which he is temporarily absent is classified as employed, even though he did not work at all during the survey period. This classification includes people absent from their jobs because of illness, bad weather, vacation, or strikes. If a person is temporarily laid off from his job (laid off, that is, at the initiative of the employer and thus involuntarily as far as the worker is concerned) and if he did not work at all during the survey period, he is classified as unemployed.

The definition of this category is the same in the United States and in the international resolution.

The "Seeking Work" Concept. Persons who did not work during the survey period are classified as either: (a) unemployed or (b) not in the labor force. Obviously, unemployment cannot be defined as simply "not working during the survey period." Many people are not working for a variety of reasons. They are retired; they are housewives; they are full-time

students; they have independent means and do not want to work. Certainly these persons are not the real unemployed that the survey seeks to identify. The real unemployed are those persons who are available, willing, and able to work at the specified time, yet who are not able to find work.

Evidence that a person is in fact willing and available for work is sought by determining his activities during the survey period. It is believed that, if a person really is available for work, he is looking for a job, either by applying at the mill or shop, registering at an employment service office, or answering an ad in the paper. If he did none of these things, it is concluded that he was in fact not available for work, hence outside the labor force.

A person is considered "seeking work" if he (a) had made efforts to find a job within the preceding 60 days and was waiting, during the survey week, for the results of those efforts, or (b) if he would have been looking for work except that he was temporarily ill or he believed no work was available in his line of work or in his community.

Priorities in Classifying Individuals. A person may be engaged in more than one activity during the reference period, for instance employed on Monday and unemployed the rest of the week. But it is a basic principle of the labor force concept that each person is counted once and

only once. Therefore, it must be determined how to classify individuals who do more than one thing during the reference period.

In the United States, first priority is given to "work." If a person did any work at all, even 1 hour, for pay or profit he is classified as employed. It does not matter if he also looked for work, or was a full-time student.

Second priority is given to "seeking work." A person who did no work during the survey week and who was seeking work is classified as unemployed. Seeking work includes not only active seeking, but waiting for a job after having applied for a job within the past 60 days. "Seeking work" takes priority over "with a job but not at work." If a man does no work in the survey week because he is on vacation or sick leave, he is usually classified "with a job but not at work," and he is considered as employed. But if he seeks work during his vacation, he is classified as unemployed. Similarly, a student or retired person, usually classified as "not in the labor force," is classified as unemployed if he looked for work during the survey week.

The international resolution does not speak of priorities. But implicit in the definitions is the same priority system: employment over unemployment; and unemployment over "with a job but not at work" and "not in the labor force."

Not in the Labor Force. The United States definitions and the international resolutions discussed so far permit identification and classification of the labor force. Roughly speaking, the labor force includes all members of the population who are working or seeking work. All the others, that is, all members of the population who are neither working nor seeking work, are classified as "not in the labor force." The latter category includes:

Automatically, without reference to activity during the reference period:

1. Children below working age
2. Inmates of institutions (prisons, etc.).

Other persons not working or seeking work during the reference period:

3. Housewives
4. Students
5. Retired persons
6. Disabled persons
7. Voluntarily idle persons.

Chapter III. The Application of Labor Force Concepts in Developing Areas

The concepts and definitions used in the United States are applicable to the labor force of the United States. The international resolutions, on the other hand, are not as precisely focused. The statistical experts from the various countries who formulated and approved the resolutions recognized that each country must determine the precise concepts and definitions applicable to its own labor force.

Perhaps the most significant aspect of the labor force in developing countries, as contrasted with the industrialized countries, is the prevalence of underemployment. Some people are fully employed, some are totally unemployed. But in between these extremes, there are large numbers of people who have no regular job yet do some kind of occasional, intermittent work. Furthermore, many people who work for long hours earn so little that they cannot be considered adequately or fully employed in any meaningful sense, in spite of the long hours devoted to work. Where these conditions exist, underemployment may be the most important problem to be investigated in the labor force survey. Hence, there is a need for further clarification of the concepts regarding underemployment; and a need for definitions which will result in meaningful measures of the marginal groups who are neither fully employed nor fully unemployed.

This section will examine the pertinent concepts and definitions used in labor force surveys, with

particular reference to the characteristics of developing countries. Before discussing underemployment, it is necessary to consider the definitions of employment and unemployment in this frame of reference.

Employed

When the United States definition of "employed persons" is used, the resulting count includes both the fully employed and the partially employed; i.e., persons who did any work for pay or profit, and persons who worked 15 hours or more as unpaid family workers during the survey week. In a developing country, with a low level of economic activity, this definition of employment results in classifying almost the total labor force as employed, and very few members of the labor force as unemployed. Many people who are in fact unemployed in the sense that they have no job and would be willing to take one if offered, do perform one or more hours of casual work at irregular intervals. Even 1 hour of casual work for pay results in the person's being classified "employed."

For example, Simon Rottenberg's appraisal ^{8/} of labor force concepts as applied to the Is'nd of Antigua brings forth the following comment:

^{8/}Rottenberg, Simon. "Labor Force Measurement in a Pre-Industrial Economy," Southern Economic Journal (Athens, Georgia, October 1951). Vol. 18:2, p. 221.

There is a great deal of intermittent or casual employment in the island. Many persons chronically without work will "catch" employment; they may "make a message" (run an errand) now and then for a shilling, or carry some fruit to market in St. John's City for sale, or weed a peasant's cane plot. They find employment of this kind infrequently and at irregular intervals. They are, in substantive terms, either 'unemployed' or 'out of the labor force;' they are not 'employed.' If they managed to have found a few hours of either wage or own-account employment in this way in the week preceding their enumeration, however, standard labor force measurement techniques applied in the United States would classify them as 'employed' persons. In any meaningful sense, they are not employed persons.

Similarly, many genuinely unemployed workers who live on a family farm perform work around the farm for want of something better to do. Thus they qualify as unpaid family workers and as "employed" if they spend more than the prescribed minimum number of hours doing chores around the farm.

To be significant in a less-developed economy, the concept of "employed" must distinguish between regular bona fide employed workers and the partially employed or underemployed. This requires first, for each country, a concept of what con-

stitutes the "fully employed" individual in the particular economic environment. The first requirement for the fully employed is that he work a full workweek. Whether a full workweek is 35 hours or 48 hours does not matter for the purposes of this discussion. Part-time workers, those who work less than the full workweek, are not among the fully employed.

But not all who work the full number of hours per week can be considered fully employed. Some, even while working long hours, are not fully employed. Hence a distinction, among full-time workers, between the fully employed worker and the underemployed worker must be made. The distinction may be:

1. According to his earnings.

Conceptually it is clear that a worker who works a full workweek (say 40 hours or more per week) and who earns an adequate wage can be considered fully employed.

In practice the concept of an adequate wage is variable; the minimum weekly wage must be arbitrarily set for the purpose of measurement. It may be the legal minimum wage for a 40-hour week; the amount an unemployed worker receives in unemployment benefits; or some other logical minimum wage. But even if a given level of wages is defined as "adequate" for this purpose, accurate wage data cannot be collected from the type of household interview usually conducted in a labor force survey.

2. According to his productivity (or output per man-hour).

Conceptually a person who works a full workweek and who produces goods or services whose value is sufficient to permit him an adequate financial return can be considered fully employed.

In practice it is virtually impossible to determine the value of goods or services produced by any individual. An approximation of that value can be reached by making the assumption that earnings of workers are correlated with what they produce. In other words, a worker whose output has high value per hour of work receives high wages; the worker whose output has little or no value receives very low wages. While this assumption is generally true, it is questionable in specific application. Even if this assumption is made, the difficulty of collecting data on earnings must be considered.

3. According to his attitude toward his job and his desire for additional work.

Conceptually a person who is working at a job commensurate with his ability and who has no desire to take a higher level job is fully employed. If he is working at a job below his capabilities and would take a higher level job if available, he is underemployed, even though he works a full workweek.

In practice the distinction may be made by questioning the full-time worker with regard to his attitude toward his work and his ability to perform a higher grade skill. Such questioning is difficult and expensive, and answers are unreliable.

Thus, although practical difficulties prevent clear-cut distinctions, people at work can conceptually be classified into four groups:

1. The fully employed, who work full time with adequate earnings and/or adequate output per man-hour.

2. The part-time employed who are willing and available to do only part-time work.

3. The part-time underemployed; that is, persons working part-time who are willing and available to work full time.

4. The full-time underemployed; that is, full-time workers whose earnings and/or output per man-hour are so low as to exclude them from the "fully employed."

The latter two categories are the underemployed. Note that persons "with a job but not at work" may also be classified into these four groups.

Unemployed

The concept "not working but seeking work" is deficient as a meaningful criterion of unemployment in some areas. If a person is without a job and cannot visualize the

possibility of acquiring one, there is a strong possibility that he will not bother looking for one. In the United States and other highly industrialized countries, this may be the exceptional case, but in highly agricultural economies where there are large numbers of self-employed and unpaid family workers, and where commercial or industrial jobs are scarce relative to the demand for jobs, this may be very common.

The inapplicability of the Western definition of unemployment to underdeveloped economies has been recognized by many competent economists. Simon Rottenberg, again referring to the Island of Antigua, comments on this point as follows:

There is a large pool of persons who will accept work even at very low levels of earnings, and the economy does not frequently create new job vacancies. The expectation of locating jobs is chronically depressed. In these circumstances, which are not special but general, active search for work is so frequently fruitless that almost no one actively seeks employment. If work does become available, informal lines of communication are sufficiently effective so that the villagers come to know

^{9/} Rottenberg, Simon, op. cit., p. 223.

^{10/} Koop, John C. Sample Survey of Labour Force in Rangoon, a Study in Methods. Directorate of Labour, Rangoon, 1955, p. 7.

quickly where employment is available and the terms on which it is offered. If a person actively pursues income, he does so, ordinarily, by creating some form of self-employment rather than by attempting to find wage employment. Where no one actively seeks work, the application of the requirement of active pursuit in the standard definition of unemployment will cause unemployment to be enormously understated. ^{9/}

In a study made of the labor force in Rangoon, Burma, the following comment is made:

Little is known regarding the question of how actively unemployed persons look for work under local circumstances. The practice of actively searching for work through the medium of the local employment exchange, or by interviewing prospective employers or addressing letters to them, certainly exists, but it cannot be claimed that all unemployed persons who genuinely want work follow these methods of seeking work. . . . The people who seek work actively, in the Western sense are the "educated" unemployed and they constitute a minority in the working population. In view of these considerations, if the definition of labour force is framed so as to include (besides the other categories) only those persons who actively search for work then its measure will not fully represent the number of persons working or potentially available for work which is the purpose behind its measurement. ^{10/}

Some insight into the effects of using the concept "not working but seeking work" can be gained from examination of the results of surveys conducted in Barbados in 1955.^{11/} It is possible to contrast the unemployment figures relating to "crop time" with those relating to "hard times," that is, the seasonal low point of employment.

dcs

Unemployed persons in Barbados, age 15 and over, 1955
(In thousands)

	<u>Crop time</u>	<u>Hard times</u>
Unemployed:		
Available for work	18.3	20.7
Seeking work.....	11.6	7.2
Willing to work....	6.6	13.5

In "crop time," almost two-thirds of the workers available for work reported that they were actively seeking work. The balance, although willing and available for work, were not actively seeking it. Note the reversal of these proportions in "hard times;" that is, the time when a worker is not likely to find work even if he makes an active search. Although the number of workers available for work had increased, only one-third were now seeking work.

^{11/} Cumper, G. E. "Employment in Barbados," Social and Economic Studies. Institute of Social and Economic Research, University College of the West Indies. Jamaica W. I., June 1959. pp. 105-146.

^{12/} Cumper, *ibid.*, p. 114.

If the concept of seeking work were rigidly applied here in measuring unemployment, the survey would show a significant decline in unemployment while it appears that unemployment had increased.

Cumper comments on this phenomenon as follows:

The result showed that the number seeking work could not reasonably be used as an index of general unemployment, since it was uniformly lower in hard times than in crop. This is not an unexpected result for on the one hand the higher potential earnings in crop make it worthwhile to spend more effort on job-seeking, while on the other hand, it is firmly established in the worker's mind that in hard times the chances of getting a job are slight. But this result emphasized the fluidity of the labour market and the difficulty of establishing who is genuinely seeking work in an economy where there is no uniformly accepted method of showing the desire for work--as there is, for example, in the United Kingdom through the Employment Exchange system.^{12/}

In Jamaica, unemployment, as defined in a 1953 survey, included:

1. Those persons seeking work.
2. Persons normally economically active but not working or seeking work during the survey week.
3. Self-employed persons, temporarily inactive.

Later, in a 1959 survey in Jamaica, the following question was asked of those who had no jobs: "Do you want work and, if so, are you available for work?" All answering yes were classified as unemployed.

In a 1956 study of the labor force in British Guiana, unemployment was considered as including persons who:

1. Had no job or means of livelihood.
2. Did no work during the survey week.
3. Were capable and available for work.
4. Looked for work or wanted work during that week.

Thus, based on experience in these particular countries, the category "unemployed" should include, in addition to persons "not working but seeking work," also persons "not working but available for and wanting work." In order to conform to international standards and to be comparable with procedure in other countries, the unemployed "seeking work" should be identified. The group available for work although not actively seeking it can be shown separately.

Underemployed

As noted earlier, underemployed persons are included in the category "employed." Hence an analysis of underemployment requires breaking the "employed" group into subgroups distinguishing between fully employed and underemployed. The classification of "employed" (people

at work), on page 18 distinguishes two categories of underemployed (categories 3 and 4).

1. The part-time underemployed: persons working part time who are willing and available to work full time.

This group corresponds to the "visible" underemployed as defined by the international resolution. (See p. 10.)

2. The full-time underemployed; full-time workers whose earnings and/or output per man-hour are so low as to exclude them from the "fully employed."

This group corresponds to the "invisible" underemployed as defined by the international resolutions.

This manual recommends defining underemployment as consisting of these two mutually exclusive groups: (a) the part-time underemployed and (b) the full-time underemployed.^{13/} Part-time underemployment is relatively amenable to measurement; full-time underemployment is indeed almost invisible as far as measurement goes, and hence very difficult to measure.

^{13/} There is an overlapping which should be noted. Some workers among the part-time underemployed will also be working at very low levels of productivity and/or earnings; they can be considered as the "double-underemployed." But they will be counted only once, i.e., among the part time.

This definition is consistent with the definition contained in international resolutions quoted on page 8. A more thorough discussion of underemployment can be found in the report prepared for the Ninth International Conference of Labour Statisticians.^{14/} The full text of the resolution is reproduced in appendix E.

It may be of interest to review briefly some of the terms used by various observers in identifying and classifying underemployment. The international resolutions mention disguised underemployment and potential underemployment as subgroups of invisible underemployment. Disguised underemployment is defined as "persons whose working time is not abnormally reduced but whose earnings are abnormally low or whose jobs do not permit full use of their capacities or skills."

Other definitions using the term "disguised" follow.

^{14/} International Labour Office, Measurement of Underemployment. Report IV, prepared for the Ninth International Conference of Labour Statisticians. (Geneva, April-May 1957).

^{15/} Hsieh, Chiang, "Underemployment in Asia," International Labour Review. Vol. LXV, No. 6, (Geneva, June 1952) pp. 703-725.

^{16/} Robinson, Joan, Essays in the Theory of Employment. Macmillan and Co., limited. London, 1937. p.84.

Chiang Hsieh, in Underemployment in Asia.^{15/}

Agricultural production may absorb the total labour supply of the community but, with the same amount of capital, with the same institutional framework and with the same size of landholding, it may be possible that, by raising the intensity of work per hour, by improving the organisation of work and division of labour and by introducing simple labour-saving devices requiring little or no net addition to capital outlay, a number of workers could be released from the land without reducing total agricultural output. The proportion of the agricultural labour force which could be so released indicates the degree of disguised underemployment prevailing in the community in question.

British economist, Joan Robinson, in 1937:^{16/}

...a decline in demand for the product of the general run of industries leads to a diversion of labour from occupations in which productivity is higher to others where it is lower. The cause of this diversion, a decline in effective demand, is exactly the same as the cause of unemployment in the ordinary sense, and it is natural to describe the adoption of inferior occupations by dismissed workers as disguised unemployment.

Group of UN experts (1951):17/

...The significance of the term 'disguised' is that it is applied only to persons who are not normally engaged in wage employment. The disguised unemployed are those persons who work on their own account and are so numerous relatively to the resources with which they work that if a number of them were withdrawn for work in other sectors of the economy, the total output of the sector from which they were withdrawn would not be diminished, even though no significant reorganisation occurred in this sector and no significant substitution of capital.

The international resolution refers to potential underemployment as "persons who are employed in establishments or economic units where productivity is abnormally low."

No satisfactory means of dealing statistically with these various facets of underemployment has been developed. Hence they are not considered further here. Rather, an attempt is made to examine the possibility of measuring part-time and full-time underemployment.

Part-Time Underemployment. The part-time labor force can be identified

17/ United Nations. Measures for the Economic Development of Underdeveloped Countries. Doc. E/1986-ST/ECA/10 (New York, 1951). p. 7.

by determining the number of hours worked in a survey period and classifying workers accordingly. The international recommendation on this point reads:

The normal duration of work to be used as a basis of comparison in identifying persons in employment of less than normal duration may be the duration of work laid down by law or in collective agreements, or the duration of work which may be otherwise determined by the country concerned as representative of normal employment, in the occupation branch of economic activity or region concerned. (See appendix E.)

But further distinction must be made, i.e., the distinction between workers who work part time from choice and those who work part time only for want of a regular full-time job. The former group, working part time from choice, are not underemployed; only the latter group among part-time workers are the underemployed.

In order to determine whether a person working part time is to be considered underemployed, it is necessary to determine his own reasons and his attitude toward his part time status. In the United States, those reasons are classified into two groups, as seen in the previous chapter:

- a. For "economic" reasons
 - Slack work
 - Material shortages
 - Repairs to plant or equipment

Start or termination of
job during the week
Inability to find full
time work

- b. For "noneconomic" reasons
- Holiday
 - Labor dispute
 - Bad weather
 - Own illness
 - Vacation
 - Demand of home housework
 - School
 - No desire for full-time
work
 - Full-time worker only
during peak season

Those on part-time work for "economic" reasons constitute the part-time underemployed; those on part-time work for "noneconomic" reasons constitute the part-time employed. This measurement technique appears applicable to the labor force of developing countries. A different or modified set of reasons may be required.

Full-Time underemployment. Among full-time workers, it is necessary to distinguish between the fully employed and the underemployed. As discussed under employment previously, this distinction may be made by reference to earnings, productivity, or the worker's attitude.

One approach is to say arbitrarily that all workers earning more than a specified minimum are fully employed and those earning less are underemployed. For example, in Japan, the underemployed groups include all wage and salary workers

who earn less than the total allowance and benefits drawn by unemployed persons in receipt of relief; it also includes unpaid family workers.

In Barbados, workers who earned in the survey week less than the amount earned by an unskilled worker in a full week at the standard rate of pay were considered underemployed. Excluded, however, were all workers under 20 years of age, because "young people of age less than 20 will normally have earnings less than the adult rate even when fully employed."

The principal drawback to this approach is the necessity of asking a question about the earnings of each worker. This complicates the questionnaire and makes answering difficult or impossible for the housewife. In order to get accurate information about earnings, it is necessary to interview each worker in the sample households individually. Furthermore, questions about earnings may meet with resistance and result in refusals which a simpler questionnaire would not elicit. It may, however, be feasible to ask each worker to classify himself according to a simple wage scale such as:

Weekly earnings:
Under \$20 per week
\$20-\$29
\$30 and over

Another drawback to the earnings approach is the arbitrariness of any selected minimum. A subjective element enters into the determination

of whether or not a particular level of earnings is low. Whether it is low, in the sense that is significant in the context of identifying the underemployed worker, depends upon the ability and qualifications of the individual worker. For example, a skilled bricklayer may be considered underemployed if he works as an unskilled laborer; another man is fully employed when he does the same job.

To take into account this aspect, it is necessary to question full-time workers about their attitude toward the job held in the reference period: Whether they would be available for more work or for more suitable work. Obviously, this becomes very subjective; such questions cannot be asked of the housewife but must be directed to the worker himself.

Experiments with attitude questions have been tried successfully in some countries. For instance, in Japan, workers are asked about their desire for more work. Included among the underemployed are all full-time workers who report that they want to change jobs or that they are dissatisfied with their jobs. In the Philippines, workers reported wanting more hours of work are considered underemployed. Part-time workers who want more hours of work are the visibly underemployed; full-

^{18/} Jaffe, Abram J. "A Survey of Underemployment in Puerto Rico," Family Living Studies. International Labour Office (Geneva, 1961). p. 149.

time workers who want more work are the invisibly underemployed. In Antigua, self-employed persons who answered yes when asked if they would be willing to accept a job if offered one at the minimum wage were considered underemployed.

In a different approach, an interesting distinction was made in Puerto Rico, applicable only to the agricultural sector of the economy. It was known that "invisible" underemployment was present to some extent in the agricultural areas of Puerto Rico. It was decided that if a farm family consumed the major part of its farm's product, the self-employed and unpaid family workers on that farm could be considered underemployed.

A. J. Jaffe ^{18/} makes the following comment regarding this procedure:

In Puerto Rico, observations confirm that subsistence or quasi-subsistence farm workers fit the definition of invisible underemployed. They produce little; i.e., have low levels of productivity; and, unless some member of the family is employed outside the home, they live in poverty. Furthermore, in Puerto Rico there are very few such farmers; commercial crops are grown mainly on large plantations; the great majority of persons engaged in agriculture are employees. Therefore, even if the procedure used is not the best for ascertaining underemployment among the self-employed and unpaid family

workers in agriculture, it was felt that it would suffice in Puerto Rico. It has the great virtue of simplicity.

The Reference Period

In adapting labor force concepts to a developing country, the choice of a reference period is important because it affects the classification of individuals as between employment and unemployment.

The longer the period of reference--1 day, 1 week, 1 month, 1 year--the larger the number of persons who will be classified as employed and the fewer unemployed. A reference period of 1 week may be too short to give a clear picture of the underemployment situation. A reference period of 1 year gives a more complete picture, but such a long period taxes the memory of the respondent and therefore may not produce reliable results.

In general, the criteria which should be used to select a reference period would include the following considerations:

1. The period should be short enough to reflect the current status of the population.
2. The period should be short enough to obtain accurate reporting without taxing the memory of the respondents.
3. The period should be long enough to avoid erratic fluctuations due to holidays, seasonality, weather conditions, etc.

It may be feasible to use a 1 week reference period and repeat the survey at different seasons of the year, perhaps quarterly. If the survey can be done only once a year, each respondent can be asked about work activity in a recent week as well as during the whole past year.

The Age Limits

In general, it can be said that the more economically developed a nation becomes the older will be its children before becoming members of the labor force. As more children are educated and stay longer in school and as protective legislation effectively reduces child labor, the age of entrance to the labor market increases.

Conceptually, it is logical to include all working children in the labor force. But in practice, in either a Census or a sample survey, it is costly to survey the total child population when it is known that almost all the children are not in the labor force. A minimum age limit is set to avoid the expense of directing the labor force inquiry to all children.

Obviously, the minimum age limit should be set carefully. If the age cut off is too high, the result will be to understate the labor force.^{19/}

^{19/} It may be desirable to conduct a survey to determine the patterns of child labor. The comment above refers to a labor force survey in which no effort is made to study child labor.

If it is set too low, the result will be a waste of effort and of the funds expended in recording work information for young workers whose numbers are not significant in relation to the total labor force. The minimum age should be such that sig-

nificant numbers of workers are not excluded by the age limit.

In various countries Census and labor force surveys have chosen different lower age limits as follows:

	<u>Population queried regarding labor force status</u>
Japan.....	15 years of age and over
Trinidad and Tobago.....	15 years of age and over
United States.....	14 years of age and over
Canada.....	14 years of age and over
Puerto Rico.....	14 years of age and over
Israel.....	14 years of age and over
Jamaica.....	14 years of age and over
Rangoon, Burma.....	11 years of age and over
Philippines.....	10 years of age and over
Egypt.....	6 years of age and over
India.....	No lower age limit: total population queried

Conclusion

In conclusion, there is no single best set of labor force concepts and definitions applicable to developing countries. This manual does not prescribe a solution to the

problems discussed. Rather it is hoped that this manual will encourage experimentation with new and better ways to measure the labor force and its components in various parts of the world.

Chapter IV. Initial Planning of a Labor Force Survey

The Preparatory Work in a Labor Force Survey

Prior to the preparation of a statistical questionnaire or the selection of a sample for collecting labor force data, various decisions and preliminary operations are required. For example, decisions must be reached on the specific labor problems of the country. The intended geographic coverage of the survey must be determined. An estimated budget must be prepared. These and other major preliminary steps are discussed in this chapter. Since work may be undertaken on more than one of these steps simultaneously, the specific sequence of operations in a country may vary from the order in which these topics are discussed.

Defining the Nature of the Employment Problem

No survey should be undertaken unless there is a clear need for the data to be obtained. Those who have the authority and responsibility for establishing the procedures and methods of a labor force survey must know in advance the questions to be answered by the survey results. Consequently, a first step in planning a labor force survey is to define the nature of the country's employment problem and to list the questions for which a statistical answer is required.

The heterogeneity of labor force and employment conditions in

different countries and even within different regions of the same country is an incontestable fact. However, as a guide to preparing a list of questions for which statistical answers are required, the statement that follows is offered as being somewhat typical of developing countries, but not necessarily applicable to any one country.

It is well known that unemployment and underemployment exist in Country X. Yet no information is available about the magnitude of the problem nor the characteristics of the people involved. In order to minimize unemployment and underemployment and to determine the capacity of the labor force to fulfill certain occupational and professional requirements for development planning, knowledge of the current labor force characteristics is urgently needed by management, labor, and government.

One objective of the economic development of Country X is full employment of the labor force at wages adequate to support an increasing standard of living for the people. In moving towards the attainment of this objective, the following questions are being asked:

1. How close is Country X to the attainment of full employment at the present time?
2. How many members of the labor force are totally unemployed? How many are underemployed?

3. What are the characteristics of the employed, unemployed, and underemployed?--Age, Sex, Marital Status, Occupation, Occupational skills, Educational background, Industrial experience, etc.?

4. What changes have taken place in the employment, unemployment, and underemployment picture since last year or since the last census?

5. Is child labor increasing or decreasing?

6. To what extent are old people participating in the labor force?

7. Are more women entering the labor force than formerly?

8. How many working mothers are there in comparison with the past?

9. Does Country X have manpower possessing the necessary qualifications to meet the demands of new industries? Agriculture? Construction? etc.

Businessmen, industrialists, and farmers of Country X also need information regarding the potential demand for their products. For example, farm equipment manufacturers can plan their production more accurately when they have factual knowledge of the number and type of farmers and on employment and mechanization trends in the agricultural sector of the economy. Similarly, manufacturers of work clothing are interested in the number of manual workers; and manufacturers of office furniture and equipment, in the number of office workers.

Determining the Factual Information Required

After a list is prepared of the questions requiring statistical answers, the specific factual information required must be listed. Some of these data may be available from existing sources of information. Hence the final list of data to be collected in the survey will be determined, removing from the list any item which is answered by data already available.

As a guide in preparing a list of the factual information required, the following outline summarizes the basic information that is usually required:

1. The distribution of the population as between persons:
 - a. In the labor force.
 - b. Not in the labor force.
2. A distribution of the population in the labor force by:
 - a. Sex, age, marital status.
 - b. Activity during the survey period--whether employed, underemployed, or unemployed.
3. A distribution of the population not in the labor force by:
 - a. Age and sex.
 - b. Activity during the survey period: keeping house, in school, unable to work, unwilling to work, or other.
4. A distribution of the employed persons in the labor force by:
 - a. Industry in which employed.

b. Occupation in which employed.

c. Class of worker, i.e., wage and salary worker, self-employed, or unpaid family worker.

d. Number of hours worked during survey period.

e. For part-time workers only: reason for working part-time; whether or not desiring or seeking additional work.

f. For persons with a job but not at work: reason of absence from work—vacation, illness, strike, other.

g. Extent to which persons hold two or more jobs at the same time.

h. School enrollment.

i. Educational attainment of workers, and extent of special training.

j. Characteristics of family groups.

5. A distribution of the unemployed persons in the labor force by:

a. Duration of unemployment.

b. Industry of most recent or usual job.

c. Occupation of most recent or usual job.

6. Other additional information which may possibly be sought could include:

a. Migration; the extent of population shifts.

b. Work experience during the year.

c. Extent of work experience of persons not currently in the labor force.

d. Extent of employment of students.

e. Extent of child labor.

f. Extent to which married women and mothers of young children are working.

There are however, good reasons for keeping the number of questions to a minimum. The survey is likely to have better responses if the questionnaire is not too long or too complicated, and if the interviews can be reasonably short.

Preparation of Blank Tables

The next step is the construction of blank tables or table shells to designate in tabular form the data required and how they are to be reported. Appendix D presents table shells from the United States. These may or may not be appropriate for other countries; certainly some modification will be needed. They are intended to serve only as a guide in preparing table shells. When the table shells are formulated by the statistical personnel, they should be circulated to the eventual users of the data for suggestions on how to improve them. Circulation of the table shells is important for two reasons:

1. Some worthwhile suggestions will be forthcoming from the eventual users while it is early enough to profit from them.

2. The eventual users will appreciate being invited to participate in the decision making and will be more likely to support the project. This is good public relations.

Defining the Universe

It is necessary to define the exact geographical boundaries of the area to be surveyed. If the survey is to study the labor force conditions of the country as a whole, the definition of the universe should specify whether it includes offshore islands, territories, or any other loosely defined section of the country. Some of the following may also be excluded:

1. Sparsely settled areas;
2. Areas still largely untouched by the monetary economy (and where labor force concepts are not very meaningful);
3. Areas for which adequate data are already available as a result of special census tabulations of special surveys.

Defining the universe also requires an exact statement of the population to be surveyed. Ideally, the covered population would be equal to the total population of the area, since the labor force survey seeks to classify the total population. In practice, however, it may be desirable or necessary to limit the coverage so that the population actually surveyed is somewhat smaller than the population forming the

universe. This is to say that certain groups can be classified with respect to the labor force without being surveyed. Groups which are in the covered population, but not in the surveyed population, may include:

1. The Armed Forces

If an independent count of the number in the Armed Forces is available, the Armed Forces are not surveyed. They are automatically designated as being in the total labor force but excluded from civilian labor force. Members of the Armed Forces living at home while on active duty, on terminal leave, or on extended furlough are members of the household but would not be asked questions relating to labor force status; these questions would be asked only of civilians.

2. Children

Children below a specified age would be shown as members of households surveyed, but automatically designated as not in the labor force.

3. Inmates of institutions

Persons confined to prisons, homes for the aged, mental institutions, and certain hospitals and convalescent homes would not be surveyed, but classified automatically as not in the labor force.

Defining the Terms

Every term used in the general statement, which relates to the concepts involved in the survey should

be defined as precisely as possible. The principal terms have been defined, (as used in the United States and in international resolutions) in the previous chapters. If modifications are required, they should be decided upon with due consideration given to the objectives of the survey and the uses to which the information will be put. Precise definitions are required for the following terms in a labor force survey:

1. Total labor force, discussed in chapters II and III.
2. Civilian labor force, discussed in chapters II and III.
3. Employed, discussed in chapters II and III.
4. Unemployed, discussed in chapters II and III.
5. Underemployed, discussed in chapters II and III.
6. Industry.

The industry is the economic activity at the location where the person works. In order to give a clear and exact description of the industry, the information collected must give both a general and a specific function for the place of business; for example, cattle ranch, copper mine, fountain pen manufacturer, wholesale grocer, retail book store, road construction, shoe repair service. The classification of industries should conform to the International Standard Classification of all Economic Activities (United Nations, Statistical Papers Series M, No. 4, Revision 1, New York, 1958).

7. Occupation.

The occupation is the kind of work the person himself does. It should tell clearly and specifically the kind of work or nature of duties performed by the person; for example, auto mechanic, registered nurse, insurance salesman, stevedore, veterinarian. Occupational classification should conform to the International Standard Classification of Occupations (International Labour Office, Geneva, 1958).

8. Class of worker.

This classification tells whether a person worked for:

- a. A private employer.
- b. The government (local or federal).
- c. In his own business, farm, or profession.
- d. Without pay in a family enterprise.

9. Dwelling unit, discussed in chapter VIII.

Selecting a Reference Period

Labor force status of individuals is based upon their activity during a specified period. Hence, a reference period for each survey must be determined. As pointed out in chapter III, the length of the reference period affects the way individuals will be classified in the various labor force categories. Generally speaking, a 1-week reference period is considered most suitable. The period chosen should, so far as possible, be a normal work period,

without holidays or other unusual interruptions in work which affect the labor force.

Ascertaining the Frequency of The Survey

Whether a labor force survey should be conducted monthly, quarterly, or annually depends on two primary considerations:

1. The extent to which changes occur in the labor force. In a dynamic, volatile economy, frequent surveys are extremely valuable as an indicator of the changing economic situation. In a slower paced economy, there may be less need for measuring changes in the labor force. Seasonal variation in employment should be considered. The principal advantage of quarterly or monthly surveys is that they provide information regarding the seasonal variation in employment and unemployment. In the United States, the monthly survey, when established, revealed a surprising amount of seasonal change in the total labor force. If seasonal factors are of great importance, consideration should be given to the

^{20/} For a discussion of budget planning, see United Nations, Handbook of Statistical Organization, Studies in Methods, Series F, No. 6, ST/STAT/SER.F/6, New York, November 1954. Chapter 9, "Elements of Budget Planning."

possibility of conducting the survey often enough to measure the seasonality.

2. The availability of resources. The limiting factors are usually the number of qualified supervisory personnel and budgetary appropriations.

Preparing the Budget

The budget^{20/} for a labor force survey can be defined as a plan or outline which indicates the financial requirements of the survey as planned, showing the estimated cost of the personnel and all other items of expense. Government financing usually requires that the budget be presented for each fiscal year, to the agency which approves proposed expenditures prior to allocation of funds. Formulation of the budget should conform to the general plan and level of detail required by the financial agency of the government involved. Usually the statistical agency is advised in advance, by appropriate budget officials, as to whether there is a predetermined ceiling on the funds available. The budget must be prepared within the framework acceptable to the budget agency.

Cost considerations affect decisions. The advance budget should be as realistic as possible, taking into account the details of the survey plan and its requirements and, on

the other hand, knowledge of the local cost situation, based on accurate figures on salaries, wages, rents, and prices of all supplies and services.

The first budget may disclose a need for substantial modification of the survey plans in order to keep the cost within available funds. Early painstaking attention to the cost of the survey as planned, in relation to available funds, will help avoid distressing financial difficulties when the survey is in progress. The budget should allow for:

1. Personnel costs

- Technical personnel
- Administrative personnel
- Clerical personnel
- Field personnel

2. Other costs

- Office space rent: central office and field offices
- Utilities
- Travel and transportation of persons
- Transportation of things
- Communications
- Printing and duplication
- Supplies and materials
- Equipment: typewriters, adding and calculation machines, punching and tabulating machines, data-processing equipment.

Considerations with regard to:

1. Personnel costs

Show the number of full-time positions required and salary rate for each position, with titles; for instance statistician, cartographer, clerk, etc.

Indicate the expected duration of each person's assignment to the project, allowing time for holidays, vacations, sick leave, or any other anticipated leave with pay. Allow for overtime pay if necessary.

Estimate the costs for supplementary benefits if any; that is, costs to the agency for health benefits, retirement contributions, insurance, etc.

2. Other costs

Rent. Estimate the cost of renting office space adequate to accommodate the personnel and equipment required.

Utilities. Estimate cost of heat, lighting, water, and air conditioning if required.

Travel and transportation of persons. Estimate the number of persons who will travel on official business; the number of days each will travel; the average cost per day including purchase of bus, train, plane, (or other) tickets and the away-from-home subsistence cost of the traveler.

Transportation of things. Estimate the costs of parcel post, freight, express, or other method of transporting questionnaires and supplies to and from the field, and any other moving of equipment or supplies from one place to another.

Communications. Estimate the cost of telephone, telegraph, and postage.

Printing and duplication. Estimate cost of printing the questionnaires (remembering to make a liberal allowance for questionnaires to be used in training enumerators and clerical personnel), office and field record cards, work sheets, envelopes, etc., and the final report.

For the final report, the budget estimate needs to cover the cost of reproduction, the anticipated number of pages, and the number of copies to be made.

Supplies and materials. Estimate cost of pencils, paper, and other office supplies. Usually the statistical agency uses an average per employee to estimate this item.

Equipment. The nature and extent of machine use in processing and tabulating is a decision of the technical staff made with due consideration of the balance between machine cost and personnel cost. Estimates for equipment include the costs of desks, chairs, tables, and file cabinets, as well as typewriters, adding machines, and other office machinery.

Administration. The cost to the statistical agency of administering this survey must be estimated: that is, cost of servicing the personnel, (payroll, leave, etc.). Ordinarily, this item will be computed as a given percentage of the total funds allocated, in accordance with the policy of the particular agency.

Setting up a System of Financial Control

Of equal importance with the preparation of an adequate realistic budget is the establishment of an effective cost control system.^{21/} Modern cost control techniques help

^{21/} U. N. Handbook of Statistical Organization, op.cit., Chapter 10, "Cost Control of Statistical Operations."

the survey director to direct operations wisely and to accomplish maximum results for the money spent on the survey. A cost control system is an administrative device which makes it possible to control the expenditure of funds, to measure actual expenditures against estimated costs and accomplished work, and to assess the efficiency of the organization.

The control should be centered in an accounting office which sets up procedures pertaining to expenditures, and is responsible for conformance of expenditures to legislation and to general and government accounting principles.

When the budget is adopted, approval is given for expenditures for all the various items required to conduct the survey. The accounting of the expenditures for each item permits the statistical agency to know at all times how much money has been spent and how much remains. At the end of any fiscal period a statement can be issued by the accounting office giving totals for each expenditure item for review in light of the survey progress.

Planning a Publicity Campaign

As part of the initial preparation for a labor force survey, a publicity campaign should be planned to acquaint the population with the objectives of the survey. People are naturally reluctant to give information about their personal activities.

If the survey can win the support of community leaders in the social, religious, and business spheres, these leaders can use their influence to persuade respondents to supply the information willingly. Through the publicity campaign, the agency doing the survey can inform the public of the purpose and objectives of the survey. The publicity campaign may include:

1. Talks with local community leaders.
2. Newspaper reports on the objectives and purpose of the survey; frequent reports on the progress of the survey, the appointment of key personnel, etc.
3. Radio and television programs, with brief talks explaining various aspects of the survey; interviews with prominent leaders who express interest and confidence in the survey; panel discussions in which persons representing the public ask questions about the survey from survey personnel.
4. Where the general education and sophistication of the population are adequate, advance letters to respondents, informing them of their choice as respondents, quoting community leaders as to the value of the survey are sent.

Determining the Method of Collection

In an economically developing country, the only feasible method of collecting labor force data is by personal visit to the households in the sample. The alternatives, telephone interviews and mail questionnaires, are not recommended.

Hence the survey staff must plan from the beginning to have enumerators collect the information from a sample of households. It may be possible in the course of the survey to use both mail service and the telephone to contact households at which no one is found at home on the first visit, or where other conditions make the personal visit impractical. Particularly in a repetitive survey, the telephone may be a practical timesaver on second or third interviews with some respondents.

Considering Nonsampling Errors

Every survey is subject to error of two kinds:

1. Sampling errors result from the use of a sample rather than a complete count. To minimize sampling error at minimum cost is the basic objective of the sampling design, as discussed in chapter V.
2. Nonsampling errors result from faulty questionnaires, inadequate interviews, wrong responses, inaccurate processing of the data, and incorrect analysis of the findings.

In the initial planning stage, controls should be established to assure careful training, direction, and supervision at each stage in the survey. Errors creep in at every step; it requires continuous alertness on the part of the survey personnel to recognize potential sources of error and eliminate them.

The quality of the survey is subject to the control of the technical staff. Standards of excellence must be planned into the survey from the beginning to avoid careless work when deadlines must be met later on.

Preparing a Proposed Survey Calendar

A calendar should be drawn up giving a detailed statement of the various operations of the survey and the date each operation is to begin and end. Generally speaking, officials tend to underestimate the time actually required for each operation. Time must be allowed, not only for unforeseen problems, but also for sickness, holidays, vacations, and

other absences of staff members. The calendar should include the time of the following items:

1. Drafting the plans.
2. Designing the schedule; pre-testing and printing.
3. Writing instructions for enumerators and other personnel. Recruiting and training personnel.
4. Drawing and testing the sample.
5. Collecting the data.
6. Processing and tabulating the data.
7. Analyzing the findings.
8. Writing the report.
9. Publishing and distributing the report.

Chapter V. The Sampling Plan

The Sampling Problem

Following the initial planning of a labor force survey, as described in the preceding chapter, the method for selecting respondents must be determined. Although the labor force survey is intended to measure the labor force characteristics of the entire population in the area to be studied, it is generally neither necessary nor feasible to interview each member of the population. Instead, information is obtained from a sample, or a part, of the total population. Based on the data obtained from a specified sample of respondents, labor force information for the entire population is estimated.

In determining the procedure for selecting a sample of respondents, three basic criteria should be followed:

1. The procedure for selecting respondents should be objective so that the survey results are not influenced (or biased) by human choice.
2. The sampling plan should contribute toward the overall survey objective of yielding labor force data of maximum precision given a specified cost.
3. The sampling plan must be feasible.

To meet the above criteria for sample selection will require the ap-

plication of modern sampling methods, i.e., probability sampling. Such sampling refers to any method or combination of methods of sample selection based on the mathematical theory of probability. In terms of labor force surveys, probability sampling requires that at any stage of sample selection, the probability of selecting any individual or group of individuals must be known and all units must have a chance of being selected. The application of probability sampling, however, requires expert knowledge and should be undertaken only by a competent, trained statistician. When utilized appropriately, the technique permits an objective selection of respondents, and it is the only technique known which permits the mathematical calculation of errors arising from sampling.

Many alternative sampling plans based on probability theory are possible. However, there is no one detailed sampling plan that is uniformly applicable under all circumstances to all countries. For example, a labor force survey of a population that is spread over a wide geographical area may require a different sampling plan from a survey of a population which is located in a small geographical area. A choice among alternative sampling plans requires a knowledge of sampling theory and a critical evaluation of factors affecting the labor force survey including cost factors. Nevertheless,

although the detailed sampling plan for each country will usually vary, the most common sampling plan for a labor force survey is some form of multistage sampling--i.e., a plan whereby a sample of geographic areas within the specified universe is selected, and subsequently a sample of households within the chosen geographic areas is selected for interviewing. 22/

This chapter is not intended as a substitute for a textbook on sampling theory.23/ Rather, it is the purpose of this chapter (a) to discuss some factors affecting the preparation of a sampling plan for studying the labor force, and (b) to illustrate the basic sampling plan when a multistage sample design is utilized.

Some Factors Affecting the Development of a Sampling Plan

The development of a sampling plan for studying the labor force will be affected by several factors. These factors reflect the need for a

22/ In actual practice, the sample may be selected in several stages. For example, in a 3-stage selection, large areas may be selected first, smaller areas within the large areas may be selected secondly, and finally households selected within the smaller areas.

23/ See, for example, Hansen, Hurwitz, and Madow, Sample Survey Methods and Theory, Vol. I and II. John Wiley and Sons, Inc., New York, New York.

plan which is feasible while simultaneously assuring the most effective use of the resources available. Among the factors affecting the sampling plan are the following items:

1. The sampling unit to be interviewed.

A probability sample presumes that the total population can be divided into distinct and identifiable units, called sampling units, from which a specified sample is selected. In the case of multistage sampling, the sampling units are different at each stage of selection.

In developing procedures for selecting a sample of individuals from whom labor force data will be collected, it is necessary to determine whether the ultimate sampling unit--the sampling unit to be interviewed--should be (a) an individual who would report information for only himself, or (b) a group of individuals for whom information would be obtained on each. Practical considerations have resulted in countries utilizing a sampling unit comprising a group of individuals. The precise definition of the group is usually a household or all individuals residing within a specified dwelling unit. (Buildings such as apartment houses and hotels are considered as comprising several dwelling units.) Whatever unit is used, it must be precisely defined and readily identifiable by the interviewers when conducting the survey.

2. Size of sample.

In conducting a labor force survey, a common problem is to determine the size of sample to be utilized. Basically, this determination is the result of cost and accuracy considerations, and the type of sampling design to be utilized. In practice, budget limitations will generally be the controlling factor, and the goal of the statistician will be to develop a sampling design which will yield results of maximum accuracy for the funds available. Nevertheless, the sampling statistician must take responsibility for assuring that the published results are of sufficient accuracy for use in policy decisions. (This may require restricting the scope of the survey.)

For a specified sampling design, it is possible to ascertain the sample size required to yield an estimate of a labor force characteristic with a specified degree of precision provided information is available concerning the population distribution of the labor force characteristic to be estimated.^{24/} A knowledge of this distribution may be available from past experience. Where no previous information exists, some preliminary study may be necessary to obtain such information.

It must be noted, however, that the purpose of a labor force survey is to obtain estimates of several labor force characteristics. The sample size required for measuring

one characteristic may be either larger or smaller than the size of sample required to measure other characteristics. In practice, therefore, the statistician usually selects a sample of sufficient size to provide reliable estimates of the major characteristics, and accepts whatever precision is attained for characteristics of secondary importance. If the precision of the results will not be adequate and the budget cannot be increased, the scope of the survey must be modified.

3. Available materials for selecting sampling units.

As stated earlier, the probability of selecting any individual or group of individuals must be known. To achieve this objective, it is necessary to possess a list of all sampling units of the population or a list of all of some larger units containing the units for study. These lists are frequently called a frame.

In household surveys of the labor force, there is generally no list immediately available of all households in the universe. However, some list is available of the specific geographic areas which comprise the universe. Such a list serves as a basis for selecting for study a

^{24/} In terms of theory, the statistician must have some knowledge of the variance of the characteristics.

probability sample of geographic areas. The households within this sample of geographic areas can then be completely enumerated, and the data from this sample can be utilized to estimate the labor force characteristics of the universe. However, a more efficient procedure involves selecting for study a sample of specified geographic areas, listing the households within the selected areas, and then selecting a sample of households for enumeration.

In selecting areas for study, the method of selection will depend on the extent to which information exists for each area about the size of the labor force or some characteristic related to its size (e.g., population). If no information is available, each area would be selected with equal probability. Where information is available, such as from the previous population census, the selection may be made with probability proportionate to size.^{25/} (For operation and/or cost reasons, this latter method is frequently preferable to a selection based on equal probabilities.)

The most ideal information about the size of area would be current census data on the labor force.

^{25/} For example, if Area A has a labor force which is twice as large as the labor force of Area B, the probability of selecting Area A is twice the probability of selecting Area B.

However, such ideal information is rarely available. The census data may relate to a much earlier period. Furthermore, data on labor force may not have been collected as part of the population census, thus requiring the use of a related measure of size, such as total population in each area. Utilizing information which is less than ideal will not introduce bias into the final estimates, but it may contribute to increasing the sampling error.

4. Transportation factors.

Another factor affecting the sampling plan is the problem of transportation. Frequently, motor vehicles are not available, and public transportation may not reach every rural village. Although public transportation is generally available to reach the general vicinity of each village, enumerators may frequently be required to walk some distance. As a result, it is essential in many countries that a sample of villages be selected in such a way that the distance between the villages in the area is not excessive.

5. Additional operational factors.

In addition to the problem of transportation mentioned above, additional operational factors must be considered in developing the sampling plan. First, the number of sample areas to be enumerated must be small enough to insure adequate supervision of each with available supervisory staff. Secondly, it is

essential that the procedure for preparing estimates of the labor force characteristics of the universe be of sufficient simplicity to be operationally feasible.

Illustration of the Development and Execution of a Sampling Plan

Most countries in conducting a labor force survey have used some form of multistage sampling. Although the specific details of the plans vary and are complex, the following oversimplified explanation of the development of a sampling plan for the fictitious country of Hillandale illustrates the type of procedure which is commonly utilized.

1. Background information.

a. The country of Hillandale is 200,000 square miles in area. It is divided into 10 political districts; each district is subdivided into 25 to 50 administrative areas; and each administrative area comprises 20 to 40 local areas. The total number of local areas is 10,000. The districts vary in geographic size, population, and shape. Likewise, the administrative areas and the local areas vary in size and shape.

b. In preliminary planning of a labor force survey, it was decided:

(1) the survey should cover the entire country of Hillandale.

(2) Based on administrative considerations, the survey operation should be confined to 25 different large areas of approximately 1,000 square miles each.

2. Preliminary decisions in developing sampling plan.

Before developing the details of his sampling plan, the sampling statistician in Hillandale has reached two conclusions:

a. The ultimate sampling unit will be a dwelling unit.

b. A sample of about 5,000 dwelling units is the maximum number which can be surveyed with the funds available.

3. Available information for use in sample selections.

a. In reviewing materials available for use in sample selection, the statistician in Hillandale finds that the previous population census provided detailed information on the distribution of the population by district and local administrative areas. Although the census was taken several years earlier and did not include data on labor force, it is the only source of detailed information available to this statistician.

b. In reviewing the census data, the statistician in Hillandale notes that data were published on the area, number

of dwelling units, and population of each district, as shown in table 1.

In addition, the statistician in Hillendale notes that the data were also published by administrative area. For example, the data for the 26 local administrative areas of District 1 are shown in table 2.

Similarly, data on population and area are available for the local areas which comprise each administrative area, although census data on number of dwelling units were not published for the local areas.

4. Decision on sampling plan.

a. Based on the initial decision to confine the survey operations to 25 large areas of approximately 1,000 square miles each, the sampling statistician must first select 25 areas in which enumeration will be conducted. He notes that theoretically he could divide the country of Hillendale into 200 areas, known as primary sampling units (PSU's), of 1,000 square miles each and select on a probability basis 25 of these 200 areas. However, since the boundaries of each area must be precisely defined, such a theoretical division

Table 1. Area and Population of Hillendale, by District, 19__

District	Area (in square miles)	Number of dwelling units (in thousands)	Population (in thousands)
All districts....	200,000	4,600	25,000
District 1.....	18,000	400	2,100
District 2.....	17,000	800	4,200
District 3.....	24,000	300	1,600
District 4.....	19,000	550	2,900
District 5.....	30,000	600	3,200
District 6.....	10,000	250	1,400
District 7.....	23,000	500	2,600
District 8.....	16,000	600	3,400
District 9.....	22,000	400	2,400
District 10.....	21,000	200	1,200

Table 2. Area and Population of District 1, Hillendale, by Administrative Area, 19__

Administrative areas	Area (in square miles)	Number of dwelling units (in thousands)	Population (in thousands)
All areas.....	<u>18,000</u>	<u>400</u>	<u>2,100</u>
Area A.....	700	12	60
Area B.....	400	9	50
Area C.....	800	30	140
Area D.....	900	19	100
Area E.....	1,400	21	110
Area F.....	300	11	70
Area G.....	800	18	90
Area H.....	600	10	50
Area I.....	100	2	10
Area J.....	500	13	70
Area K.....	1,200	16	80
Area L.....	900	15	80
Area M.....	100	4	20
Area N.....	1,100	13	70
Area O.....	400	17	90
Area P.....	300	12	60
Area Q.....	500	18	100
Area R.....	1,300	28	150
Area S.....	900	14	70
Area T.....	200	12	60
Area U.....	900	26	130
Area V.....	1,100	22	120
Area W.....	400	10	60
Area X.....	900	18	90
Area Y.....	800	18	100
Area Z.....	500	12	70

would be operationally impractical. He therefore chooses to use some political or administrative areas, or some combination of such areas, as his primary sampling units.

b. Based on the available data on land area, the sampling statistician concludes that the districts in Hillandale are so large that he must use some smaller area or a combination of smaller areas for his listing of PSU's from which to select 25 large areas. Since the areas must have precise boundaries, he concludes that he can utilize for such a listing of PSU's the administrative areas or combinations of administrative areas of each district.

c. To minimize travel time, the statistician decides that within the PSU's it would be desirable to concentrate the field enumeration within smaller areas of about 4 to 5 miles square (16 to 25 square miles). Since this is approximately the size of a local area, he decides that within each PSU he will select a sample of local areas.

d. From the available census data, the statistician in Hillandale notes that the number of dwelling units at the time of the census was 4,600,000. However, since the previous census, he knows that new dwelling units have been constructed. Although no official estimates are available, he makes a rough estimate that the current number of dwell-

ing units is about 5,000,000. Consequently, a sample of 5,000 dwelling units would represent about one in every 1,000 households in the country.

e. Based on the above decisions, the statistician in Hillandale concludes that he will utilize a multistage sampling design, whereby he will select (1) 25 large areas in which the enumeration will be conducted, (2) within each large area he will select a sample of local areas, and (3) within these local areas, he will select his sample of dwelling units in such a way that the probability of selecting any dwelling unit will be 1/1000.

f. Before proceeding with the actual sample selection, a further decision which must be reached is the number of local areas to be selected within each PSU. Numerous alternatives are possible. However, on the assumption that about 20 dwelling units should be surveyed in each local area, he concludes that he should select 10 local areas in each PSU to yield a sample of about 5,000 dwelling units (i.e., for the 25 PSU's he will have 250 local areas, and if 20 dwelling units are surveyed in each local area, his total sample will be 5,000 dwelling units).

5. Executing the sampling plan.

a. After reaching his decision on the sampling plan, the

first task of the statistician in Hillandale is to prepare a list of PSU's. He prepares this list by grouping contiguous administrative areas into PSU's so that each PSU will be approximately 1,000 square miles in area, or as close to 1,000

square miles as possible. The results of this grouping for District 1 in Hillandale are shown in table 3. Similarly, the statistician forms similar PSU's from the administrative areas of each of the other 9 districts.

Table 3. Primary Sampling Units Formed in District 1 of Hillandale, 19__

PSU	Administrative areas included	Area (in square miles)	Population (in thousands)
1.....	A,B	1,100	110
2.....	C	800	140
3.....	D	900	100
4.....	E	1,400	110
5.....	F,G	1,100	160
6.....	H,I,J	1,200	130
7.....	K	1,200	80
8.....	L,M	1,000	100
9.....	N	1,100	70
10.....	O,P,Q	1,200	250
11.....	R	1,300	150
12.....	S,T	1,100	130
13.....	U	900	130
14.....	V	1,100	120
15.....	W,X	1,300	150
16.....	Y,Z	1,300	170

c. After PSU's are created for the entire country of Hillandale, the PSU's are grouped into 25 strata to permit a selection of one PSU from each stratum or a total of 25 PSU's. The strata are created so that each stratum will be approximately equal in terms of population. Since the

total population is 25,000,000 the population size of each stratum for Hillandale will be approximately 1,000,000. He creates the 25 strata so that each stratum consists of contiguous areas. Table 4 shows the PSU's included in stratum 1 for Hillandale with each PSU's population (and cumulative totals).

Table 4. Primary Sampling Units Included in Stratum 1, Hillandale, 19__

PSU	Population (in thousands)	Cumulative Total
1....	110	110
2....	140	250
3....	100	350
4....	110	460
5....	160	620
6....	130	750
7....	80	830
8....	100	930
9....	70	1,000

d. To select a PSU from Stratum 1, the statistician consults a table of 4-digit random numbers, and takes the first 4-digit number between 1 and 1,000. If the number is between 0001 and 0110, he will select PSU 1; if it is between 0111 and 0250, he will select PSU 2, etc. In this case, the first such number is 0911; consequently PSU 8 is selected. It should be noted that the probability of selecting PSU 8 is 100/1,000 or 1/10.

Utilizing the same method, one PSU is also selected from each of the remaining 24 strata. When this selection is completed, the statistician in Hillandale has a list of the 25 PSU's in which enumeration will be conducted.

e. After selecting his 25 PSU's the next major step is to select the sample of local areas. He begins by preparing a list of all local areas which comprise each selected PSU. From the list for each PSU, he then selects, with probability proportionate to size, 10 local areas. For example, the list of local areas for PSU 8 is shown in Table 5.

Table 5. Local Areas Included in PSU 8, Hillandale, 19__

Local area	Population (in thousands)	Cumulative total	Select-ed for sample
1.....	4	4	X
2.....	7	11	
3.....	1	12	
4.....	2	14	X
56.....	2	87	
57.....	4	91	
58.....	3	94	X
59.....	4	98	
60.....	2	100	

To select the 10 local areas from PSU 8, the statistician divides his cumulative total of size, 100, by 10. The result is, of course, 10. He then selects from a table of random numbers a number between 01 and 10. If

the number is between 01 and 04, he selects local area 1; if the number is between 05 and 10, he selects local area 2. In this case, the random number is 03, designating local area 1 for inclusion in the sample. To this initial random number he adds the interval of 10 and obtains 13, designating local area 4 for inclusion in the sample.

By repeatedly adding 10 to the previous number used for sample designation, he selects the 10 villages from PSU 8 in which field enumeration will occur.

Utilizing the same method of listing the local areas within each sample PSU and selecting 10 local areas, the statistician in Hillandale obtains his sample of 250 local areas.

f. When the 250 villages are selected, the statistician in Hillandale is now ready to select dwelling units within each of the 250 areas. However, since no listing of the dwelling units in each area is available, such a listing must be prepared by visiting each of the local areas. However, to reduce the cost of listing, the statistician secures maps of each local area and divides each local area into several segments with well-defined boundaries. To the extent that information is available, these segments should be

of approximately equal size in terms of number of households or population. From these segments he selects a sample of segments which will be visited by enumerators and for which the dwelling units will be listed.

g. To prepare instructions to his field staff on the proportion of households to be interviewed in each selected segment of a local area, he computes the proportion which should be selected so that the probability of selecting any one dwelling unit is $1/1,000$.

For example, the probability of selecting PSU 8 in Hillandale was $1/10$. The probability of selecting local area 1 in PSU 8 was $40/100$ or $2/5$. If local area 1 was divided into 8 segments and 2 segments were selected with equal probability, the probability of selecting a given segment was $2/8$ or $1/4$. Consequently, within this given segment, one out of 10 dwelling units must be selected from the list of dwelling units if the probability of selecting any one dwelling unit is to be $1/1,000$, that is: $1/10 \times 2/5 \times 1/4 \times 1/10 = 1/1,000$. The first fraction is the probability of selecting PSU 8. The second fraction is the probability of selecting local area 1 in PSU 8. The third fraction is the probability of selecting the specified segment.

The fourth fraction is the ratio of dwelling units which must be selected in the segment. The final fraction is the overall sampling ratio.

h. After computing the proportion of dwelling units to be surveyed in each selected segment of a local area, the statistician in Hillandale prepares precise instructions to his field staff for listing dwelling units in each segment and selecting a sample of dwelling units

from the list. General instructions for listing dwelling units are presented in chapter VIII of this manual.

Actual Sampling Plans in Use

As stated, the illustration of the sampling plan given in the preceding section is based on a fictitious country. Appendix B of this manual, however, presents a summary of the actual sampling plans used in the United States, the Philippines, and India.

Chapter VI. The Questionnaire and Instructions; the Pilot Survey

The questionnaire, frequently called the schedule, is the document upon which the enumerator records the information collected from households in the survey.

Questions to be asked of respondents in determining their labor force status are printed on the questionnaire. The enumerators are instructed to ask the questions exactly as worded, thus standardizing the questions in an effort to obtain comparable data from all respondents.

The questionnaire merits the most careful consideration of the survey's technical staff. It is a funnel through which flows all the information from its source to its ultimate use. The quality of the final report and the findings of the survey cannot exceed that of the questionnaire.

General Requirements of a Good Questionnaire

The size, format, and contents of a labor force questionnaire will vary from country to country. Nevertheless, the general requirements for any good questionnaire may be outlined as follows:

1. Each question should be worded in simple, concise, unambiguous language; the aim is to insure that each respondent understands

exactly the same thing by each question. Even among highly literate populations, the average level of understanding may be at a sixth-grade level. Where the average education is lower, extreme care must be exercised to use simple vocabulary. It is wise to aim at being understood by the most ignorant member of the population.

2. To the extent possible, questions should be factual, rather than subjective. For example, consider this question: "What do you usually do, work or something else?" The word "usually" introduces an aspect of uncertainty for many people who do not have a usual occupation. A part-time or occasional worker may not know how to answer--whether he usually works, or usually looks for work, or usually does neither, since his activity is changing continuously. If the question is asked "What were you doing last week, working or something else?" the uncertainty is eliminated. A person knows without doubt what he was doing last week. Therefore, precise information about activity last week will be forthcoming.

3. The sequence of the questions should be orderly and logical. The interview will proceed more smoothly if each question leads naturally to the next.

4. The questionnaire should take into account the capacity and

willingness of the respondent to answer correctly. It is obviously a waste of resources to ask people questions they cannot or will not answer.

In the labor force survey, it is most likely that the person interviewed will be either the housewife or some other nonworking member of the household—a teenager or an elderly person. This person probably will not know the earnings of the working members of the household. This fact, more than any other, makes it impractical to gather earnings data at the household, unless there is adequate time to interview each worker individually. Hence, for example, classification of underemployed workers by reference to earnings, even if conceptually acceptable, should not be planned if the time and resources available are limited, as is usually the case. The same objection is valid with regard to questions that respondents don't want to answer, regardless of the reason.

5. Questions should be asked in such a way as to avoid emotional reactions from the respondent.

In some areas, the mere presence of a government investigator is not tolerated: people react violently to strangers asking questions. Although violent reactions are fortunately very unusual, it is quite common for people to be suspicious of questions about their work, because they fear increased taxation. Where laws prohibit child labor or limit work practices in any way, questions about working habits may be answered inaccurately. It is the responsibil-

ity of the designer of the questionnaire to give consideration to the suspicions and prejudices of the people surveyed and to avoid questions which provide a motive for falsifying answers.

6. No question should invite a given answer. The most obvious example of the leading question is "You didn't do any work for pay or profit last week, did you?" Asked in this manner the question invites a negative answer and will often get a different response from the question "Did you do any work for pay or profit last week?"

7. The questionnaire should be brief. While it is reasonable to try to get the maximum possible information from a survey, the advantages of a brief, clear-cut, easy-to-answer questionnaire are great. Each question adds to the cost of the survey—costs in the time required to process the questionnaire at every level from printing the blanks to analysis of the final results. Furthermore, each question above the minimum required to classify the population adds to the likelihood of reducing the quality of replies. Persons who answer a few questions willingly and accurately may be annoyed by a lengthy interrogation and answer carelessly or not at all. This factor is particularly important in a survey which is repeated at intervals.

8. Questions should not be worded in such a way that the respondent considers his prestige involved in the answer. People will

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often upgrade themselves in occupation, level of education, level of income. For example, "Did you graduate from high school?" This question may be interpreted by some respondents as carrying a derogatory connotation if the answer is "No." Hence some will answer "Yes" when the truth is "No." A better way to ask about level of education is to ask, "What was the last grade completed in school?"

9. Only questions which elicit information required to analyze the labor force should be on the questionnaire. The tables appearing in the final report or required for analysis must be prepared in blank before designing the questionnaire or at least simultaneously. Then every question should provide answers which contribute specifically to one of the tables required.

10. The questionnaire should be designed with final tabulation in mind with regard to (a) content of the questions and (b) ease of processing the data. As to the content, the possible answers to each question must be anticipated to consider how the data can be tabulated and presented. As to ease of processing, the tabulation can be greatly facilitated if the layout and sequence of questions on the questionnaire is planned with the collaboration of persons experienced in tabulation.

11. The physical form of the questionnaire should be compatible with maximum utility.

a. The preferable size is compact enough to be handled with ease by the enumerator at the interview and in the various stages of processing; and large enough to provide room for answers to be clear and uncrowded.

b. The paper should be durable enough to withstand handling through the various stages of the survey. It is an advantage to have it stiff enough for filing. The paper should take ink without blotting.

12. The questionnaire should be prepared in the language of the respondent, if different from the official language of the survey. The language problem is acute in some countries, negligible in others. But it is essential to the success of the survey that all respondents understand the same thing by the questions. Obviously, this cannot be insured if the language of the questionnaire and the enumerator is not understood by the respondent. In translating the questionnaire from one language to another, it is a safety device to follow this procedure:

a. Have translator No. 1 translate the questionnaire from language A to language B.

b. Have translator No. 2, without consulting translator No. 1, translate it from language B back to language A.

c. Have a third person compare translator No. 2's version with the original.

13. The questionnaire must have certain identifying information: identification of the survey and the surveying agency, and blank spaces for the identification of the enumerator, the household, and respondents to which each questionnaire relates.

Framing the Questions for the Labor Force Questionnaire

In preparing a questionnaire for a labor force survey, one of the first steps is the framing of specific questions to be asked of respondents. It will be recalled that in earlier steps of planning the survey the precise information to be obtained was defined and listed. (See p. 29-30.) Questions to elicit this precise information must therefore be framed, using the general rules outlined in the previous section. Although it is impossible to provide a complete list of questions which will be applicable for labor force surveys in all countries, a guide to framing questions may be provided by reviewing the specific questions which have been used for labor force measurement in a few countries.

1. Basic questions for determining employment status.

The determination of employment status of the population can be made with a few carefully worded questions. In the United States, employment status for all persons is determined by only eight questions, to be answered with reference to what each person actually did during

the survey week. These are questions 19 through 26 on the U.S. Current Population Survey questionnaire. (See appendix C.)

Question 19. What was this person doing most of last week,
working
keeping house
going to school
or something else?

The enumerator is instructed to ask this question using only one of the three examples, whichever seems most appropriate. For example, for a man the enumerator would ask of the housewife, assuming she is the interviewee, "What was your husband doing most of last week, working or something else?" For a teenage daughter it would be, "...going to school or something else?"

This first question has several important purposes. It serves as an introduction to the employment status questions. It allows each person to be classified according to his main activity before attempting to determine precisely whether he is or is not a member of the labor force. This seems to be an indirect approach; the direct question would be "Did he work during the survey week?" Testing of the direct question showed that large numbers of persons answered "No" if working was not their main activity even though they may have worked at part-time or casual employment. It was found, for example, that if a woman in this first question indicates her principal activity is "keeping house," she is more likely to report any part-time or occasional work accurately in subsequent questions.

The second purpose of this question is to identify immediately most of the full-time workers, who answer that they have been working most of the week.

In addition, this question gives useful information about many persons who are eventually classified as not being in the labor force. It permits them to be classified as keeping house, going to school, or permanently disabled. When cross classified with personal characteristics such as age, sex, and family relationships, it gives valuable data about the adult population not currently in the labor force.

Question 20 reads "Did this person do any work at all last week, not counting work around the house?" This question is not asked of persons who reported in question 19 that they worked; nor of persons who had identified themselves as permanently unable to work because of chronic illness or disability. The question is asked of all persons for whom other responses to question 19 were obtained, such as looking for work, keeping house, going to school, or anything else.

In question 20 the words "not counting work around the house" are included because many housewives or older men are working in the house or garden. These words keep them from confusing household chores with "work" as defined for labor force measurement. This question identifies most of the marginal, part-time, and occasional workers.

Those who answered "working" to question 19 or "yes" to question 20 constitute the workers. The next question is directed to those workers. Question 21 is "How many hours did this person work last week (at all jobs)?" This question is subject to a good deal of response error and therefore users of the survey are warned that the answers should be used with caution, but it provides a rough distinction between full-time and part-time workers. Furthermore, it provides an indication of differences in average work-time of groups of workers, for instance agricultural workers as compared with industrial workers or construction workers.

For those who have not worked, question 22 is asked to find out if they were looking for work. Question 22 is "Was this person looking for work?" This is necessary in the United States where the unemployed person is identified according to the action of looking for work. As discussed earlier, in concept it is assumed that a person is not truly available for work unless he is actively looking for it. On the schedule this question is followed by the parenthetical remark, "include special cases." These special cases refer to the inactive unemployed discussed in chapter II, or persons who would have looked for work except for their own illness or their belief that no work was available in their community.

Persons looking for work, answering "yes" to question 22, are

asked about the duration of their unemployment. Question 23 is "How many weeks has this person been looking for work?" This information is useful in distinguishing between short-term unemployment and longer term, more serious unemployment.

The next question is asked of those persons who were not reported as working, in questions 19 or 20; or as looking for work, in questions 19 or 22. Question 24 is "Even though this person did not work last week, does he have a job or business?" This question completes the identification of persons who neither worked nor sought work in the survey week but had jobs from which they were temporarily absent. People who answer "yes" to question 24 are classified in the labor force. They are asked the additional question 25, "Why was this person absent from work last week?" Those who answer that they were absent because of illness, vacation, bad weather, or labor dispute are classified as employed in the category, "With a job but not at work." Those who answer that they are on temporary layoff or waiting to start a new job are classified "unemployed."

At this point, identification of each person according to labor force status is complete. There are four clear-cut categories, the first three comprising the labor force:

Working.

Includes all who answered "working" to question 19 or "yes" to question 20. First priority is given to working.

Not working, but looking for work.

Includes those who answered anything other than "working" to question 19; "No" to question 20; and "Yes" to question 22. Looking for work takes priority over "with a job but not at work."

With a job but not at work.

Includes those who answered anything other than "working" to question 19; "No" to question 20; "No" to question 22; and "Yes" to question 24. These persons are classified as either employed or unemployed, depending on the answers to question 25.

Not in the labor force.

Includes those who answered anything other than "working" or "looking for work" to question 19; "No" to 20; "No" to question 22; and "No" to question 24.

The classification of unpaid family workers is made with reference to question 21; if an unpaid family worker worked 15 hours or more in the survey week, he is classified as employed; if he worked less than 15 hours he is classified as not in the labor force, or, in the event that he reported looking for work, as unemployed.

Finally for all three groups in the labor force, question 26 provides a description of their job or business. For those who either worked or were absent from jobs in the survey week, the description relates to the job held last week. For those who were unemployed, it relates to the last full-time civilian job. The question about the job or business is in four parts:

Question 26A. For whom did this person work?

26B. What kind of business or industry was this?^{26/}

26C. What kind of work was this person doing?

26D. Was this person an employee of a private company, business, or individual for wages, salary, or commission; a government employee (Federal, State, county, or local); self employed in own business, professional practice, or farm; working without pay in family business or farm; never worked?

The answers to this question provide the information necessary to classify the jobs by occupation, by industry, by class of worker, and to identify the last category "Never worked" which applies only to people who are looking for work and who have never had a full-time job.

^{26/} Business or industry relates to economic activity of the establishment for which the person worked.

These same basic questions are used with only slight modifications in the recurring labor force surveys conducted in Canada, Israel, Japan, the Philippines, and Puerto Rico. Similar questions were also used in periodic labor force surveys in India, Pakistan, and El Salvador.

2. Questions for measuring underemployment.

Because of the multiplicity of definitions of underemployment, there is much less consistency in the questions used for measuring underemployment than in the question for determining employment status.

Continuing with the United States questionnaire, employed persons who worked less than 35 hours in the survey week are asked these additional questions:

21A. Does this person usually work 35 hours or more a week at this job? If "Yes" to question 21A:

21B. What is the reason this person worked less than 35 hours last week? If "No" to 21A:

21C. What is the reason this person usually works less than 35 hours a week?

On the basis of the answers to these questions, part-time workers are classified "Part time for economic reasons" and "Part time for other reasons." (See discussion on p. 9-10.) The former group constitute the part-time underemployed. A

further distinction is made according to answers to 21A. Persons answering "Yes" to this question are those who work regularly at a full-time job but are on a shortened work-week in the survey week. These latter persons are a highly significant group in the United States in the early stages of a business recession when factories and other enterprises react to a business decline by putting many workers on a short work-week in preference to dismissing some altogether. Thus, this count is a sensitive economic indicator and valuable for this purpose. In other countries, it may not be equally valuable.

Like the United States survey, the labor force survey of Puerto Rico asks some supplementary questions on underemployment. These questions have been asked regularly since 1952 of all employed persons at work (persons who worked one or more hours for pay or profit during the reference week and unpaid family workers who worked 15 hours or more).

- (a) In addition to working last week, did this person also look for work last week? Yes or No.
- (b) What was the main reason why this person did not work more hours last week?
- (c) Did this person desire to work more hours last week? Yes or No.

Answers to question (a) yield a direct measure of desiring more work and seeking whatever

additional work opportunities the economy may have to offer. Answers to questions (b) and (c) give indirect measures of such seeking. For example, a person who replies that he 'could not get any more work' is implying seeking, and if he further replies that he wanted more work, he is classified as underemployed. On the other hand, a person who replies, for example, that he 'stayed home to paint his house' is indicating that he made no efforts to obtain more work, and he is classified as fully employed.

The intent of question (b) is to differentiate between those people for whom the economy was unable to supply more work but who were desirous of having more work, and those people who, whether more work had been available or not, did not choose to work more. The purpose of question (c) is to serve as a check on the previous answers. For a person to be considered as underemployed, it is not enough for him to reply that he had not worked more hours because more work was not available; he must also say that he had wanted to work more hours. ^{27/}

Furthermore, persons engaged in agriculture as self-employed or unpaid family workers are asked this question:

^{27/} Jaffe, A. J., op. cit., p. 145-146.

"Does the family consume or sell the major part of the farm's produce?"

This question was tested in early surveys and it was decided that this one question was sufficient to identify the agricultural underemployed. Persons answering that the family consumes the major part of the farm's produce are identified as subsistence or quasi-subsistence farm workers and are classified as invisible underemployed.

In the Philippines in recent surveys, these questions have been asked to measure underemployment:

(1) For persons reported at work during the survey week--

a. How many hours did he work last week?

b. Did he want more hours of work last week?

(2) For persons reported with a job or business but not at work during the survey week--

a. Had he worked last week, how many hours would he have worked in his job or business?

b. Had he worked for _____ hours last week, would he have wanted more hours of work in the same work or other work?

28/ Franche, Perfecto R., "The Concepts and Measurement of Underemployment in the Philippines," The Statistical Reporter (Manila, October 1958). p. 1C.

* * * * *

The purpose of asking questions 1-a and 2-a above was to determine the number of full-time workers, i.e., those working 40 hours or more a week, and the number of part-time workers, i.e., those working less than 40 hours a week, among persons with employment during the survey week either at work or not at work.

Employed part-time workers with answers of "Yes" to questions 1-b or 2-b were considered to be in a state of visible underemployment; while those who answered in the negative were considered to be voluntary part-time workers and were not, therefore, in the underemployed category in accordance with the PSSH /Philippine Statistical Survey of Households/ definition of underemployment. On the other hand, full-time workers whose answers to the same questions were in the affirmative were considered to be in a state of invisible underemployment on the assumption that such full-time workers wanted additional hours of work because their earnings are not adequate or the training and the skills they have acquired are not being fully utilized in their present jobs. Full-time workers who answered the questions in the negative were considered to be fully employed.28/

The Philippine survey of May 1958 also asked questions relating to the past year in order to get a picture of underemployment on an annual basis. Of all persons reported as having worked during the preceding 12 months:

a. Did he do any work for salary or wage in cash or in kind at any time from May 1, 1957, to April 30 this year?

For persons who answered 'No' to the preceding question the following question was asked--

b. Did he want work for salary or wage?

For persons who answered 'Yes' to the first question the following questions were asked--

c. During the said period of one year, in about how many weeks did he work for salary or wage in cash or in kind?

d. Of the ___ weeks, in about how many weeks did he work for at least 40 hours a week for salary or wage in cash or in kind?

e. During the said period of one year, did he have about as much work for salary or wage as he wanted or did he want more? (Answer--'Had enough' or 'Wanted more'.)

The second and last questions above are expected to yield information on the extent of underemployment over an annual period.

²⁹/ Ibid, p. 11.

Answers to the questions, 'Did he want work for salary or wage?' would give an idea of the number of self-employed persons and unpaid family workers who wanted wage or salary work during off seasons or periods of slack in order to have additional income and those who, because of inadequate income or profit derived from the operation of a farm or business, wanted to give up their present occupations in order to shift to wage or salary jobs. Negative answers to the question, 'During the said period of one year, did he have about as much work for salary or wage as he wanted or did he want more?' would show the number of persons who were in need of more work for salary or wage during the past year.²⁹

In the Employment Survey of British Guiana, 1956, it was decided to regard as prima facie underemployed those persons who worked less than 4 days or 30 hours per week.

"If you worked less than 4 days or 30 hours as an employee:

(1) Was more of the same kind of work available?

(2) If 'Yes' to question 1, why did you not work longer?

(3) If 'No' to question 1, did you look for other work?

(4) If 'No' to question 3, why not?"

The reasons for not working

longer were summarized under these headings:

- (1) No more work available
- (2) Worked on family farm
- (3) Sickness or accident
- (4) Prevented by weather conditions
- (5) On holiday
- (6) Other reasons.

Those who answered (1) above, "No more work available," were classified as the bona fide underemployed.

Other questions in the same survey were:

- (1) How much did you earn during the week?

There was no practical way of testing the accuracy of the information given by the respondents and despite the assurances of confidentiality given to them by the enumerators, a large number of persons—14,000 in all—felt themselves unable, for one reason or another, to give particulars of their earnings. Out of this total of 'no record' cases, no fewer than 9,600 were self-employed persons, many of them farmers or shopkeepers who understandably would have had difficulty in reducing their earnings to a weekly basis. The high non-response rate, especially the absence of data for the quasi-totality of the self-

employed, restricts very much the value of the earnings data. At best, they may be regarded as representative of the incomes of the lower levels of wage earners in the Colony.^{30/}

(2) Employment record for 6 months ended June 1956.

<u>Month</u>	<u>Number of days worked</u>	<u>Kind of work done</u>
January		
February		
etc.		

Another indication of the volume of underemployment may be found in the figures, which show the number of days worked by persons in employment during the six months ended 30 June 1956. This is necessarily a rough and ready measurement of underemployment as a poor employment record may equally have been due to unemployment or sickness. The figures show that some 20,000 persons had had only 60 days' work or less in the six months.^{31/}

^{30/} International Labour Office. Report to the Government of British Guiana on Employment, Unemployment and Underemployment in the Colony in 1956. (Geneva, 1957). p. 15.

^{31/} Ibid., p. 31-33.

Designing the Layout of the Questionnaire

The questionnaire for a labor force survey must have at least two parts: (a) the identification items, and (b) the labor force questions.

1. Identification items

Name of survey

Name of surveying agency

Reference to legal authority, if required

Guarantee of confidentiality

Blank spaces for:

Address of household interviewed

Code number, if numerical codes are used

Names of household members

Relationship of each member to head of household

Personal characteristics of each member: sex, age, marital status.

2. The labor force questions (one set of questions for each person in the household who is to be interviewed, i.e., each civilian above minimum age).

Perhaps first consideration in deciding the sequence of questions should be given to the need for a logical and coherent interview. Related questions should be grouped together, each one leading to the next. Questions which may be omitted for certain respondents should be clearly marked. For instance, note the sequence of questions on the questionnaire reproduced in appendix C.

Second consideration in determining the sequence should be given to the ease of processing. Layout of the questions will make a great difference in the time and cost required to code the information and punch cards. When thousands of questionnaires have to be handled, an awkward layout can increase processing time and also the likelihood of processing errors. Thus the persons responsible for processing the data should be consulted at an early stage of designing the questionnaire.

Instructions to Accompany Questionnaire

In the labor force survey, the questionnaire is in the hands of an enumerator. Therefore the instructions are directed to the enumerator, rather than directly to the respondent. The instructions should be detailed and definite and should be used as the basic text in training the enumerators.

The enumerator's instructions should explain:

1. The meaning and importance of the survey.
2. The necessity of obtaining interviews promptly with the specified households.
3. The meaning and importance of each question.
4. The best way of asking questions.
5. The sequence in which questions should be asked.
6. The techniques of interviewing.

To illustrate, an excerpt from the instructions to enumerators of United States labor force survey is reproduced as appendix F.

Pretesting of the Questionnaire

Designing an adequate questionnaire is a difficult and tedious task. To assure that the questions are properly framed to elicit the desired information, the technical staff should plan to have frequent meetings with potential respondents. It is suggested that these meetings be planned in three stages.

1. Informal discussions should be held with a few people--perhaps a dozen or more--from diverse backgrounds representing the various socioeconomic, cultural, or ethnic groups in the population to be surveyed. The experience gained in discussing work practices, methods of looking for work, and various other aspects of labor force participation will be valuable in forming questions in the terminology familiar to the general population. It is suggested that these conversations be held by the technical staff before producing a preliminary draft of the questionnaire.

2. When the preliminary draft is ready, a different small sample of respondents should be interviewed by the technical staff, asking the questions as designed. Alternative ways of asking the questions may be

tested. This test will almost certainly uncover some instances of inadequate questions, incorrect wording, misunderstood phrases, over-technical terminology, as well as questions which either tax the respondent's memory or are offensive to him. It will help to discover whether respondents are willing and able to answer questions asked; whether questions arouse resentment or other emotional reaction. Unexpected deficiencies and ambiguities will almost certainly appear.

On the basis of a careful analysis of the results of this pretest, the questionnaire is reviewed and revised. Instructions to enumerators are completed.

3. A pilot survey is conducted with several purposes. The most important purpose is to make a final test of the questionnaire before the main survey begins. Other purposes are to test the adequacy of instructions to the enumerators, to try out the administrative and supervisory procedures in an actual field situation, and to try out processing and tabulating procedures.

The pilot survey should be conducted under conditions as nearly similar to the conditions of the main survey as possible. A relatively small sample of diverse respondents is chosen on a judgment basis. The experience gained in this small-scale survey will be valuable in

perfecting the final plans for conducting the full-scale survey.

The pilot survey will accomplish other results. It will alert the survey staff to problems of non-response. It will permit an early estimate of the probable rate of re-

fusals. It will indicate the preferred timing of interviews to find the maximum number of respondents at home on the first call. It will provide a basis for more accurate estimates of the time and cost of conducting interviews.

Chapter VII. Recruitment and Training of Personnel

Obviously the size of the survey staff will be determined by the number of households to be interviewed, the resources available for processing the data, the time allowed for the survey, and other unique circumstances in each situation. Therefore the number of persons required will vary from survey to survey. The functions to be performed, however, are similar in all surveys. Therefore the discussion here will deal first with functions in each personnel category.

Recruitment procedures are usually standardized in any government agency. It is important that the staff be recruited on the basis of competence. To the extent possible, within the framework of the standardized recruitment policies of each government, attention should be given to recruiting a staff possessing or capable of acquiring the skills necessary to conduct the survey as efficiently and economically as possible.

Supervisory and Specialized Personnel

1. Functions

The survey director must be responsible for the overall organization and establish clear lines of responsibility and authority. He sets the standard of excellence for

the quality and quantity of the work produced. He bears the ultimate responsibility for the survey.

If possible it is wise to have an assistant director to share in the planning and organizing of the survey from the beginning. The second-in-command should be invested with sufficient authority to make decisions and to carry on the survey in any absence of the director.

The technical staff includes one or more in each of the following categories:

Statisticians

To do preliminary planning. To select the sample and determine estimating procedures. (This function must be performed by a competent statistician who specializes in sample design) To design the questionnaire. To recruit, train, and supervise the enumerators and office personnel.

Cartographer

To determine the territorial divisions, prepare descriptions of dividing lines, prepare maps. (This function may be performed by a statistician.)

Machine tabulation expert, if machine tabulation is used.

To devise coding, punching, and tabulating procedures.

Economist

To analyze the findings of the survey.

2. Recruitment and training of supervisory and specialized personnel

Most countries experience considerable difficulty in obtaining the highly trained personnel necessary for a labor force survey. If the survey is conducted by a permanent statistical agency, that agency will usually provide the higher supervisory personnel from its permanent staff. It is essential, however, that the supervisory and specialized personnel be thoroughly familiar with the practical procedures for establishing and conducting labor force surveys.

Where trained supervisory personnel are not available, it will be necessary to train supervisors who will in turn be responsible for the training and supervision of enumerators. A few key people may be trained outside the country. For example, training in labor statistics is available in the United States under technical assistance programs administered by the Agency for International Development. For further information, inquire at the United States Embassy in any country. But the major training job must be on-the-spot. (For many countries, especially for an initial labor force survey, such training may require

the use of an advisor provided through an international agency, such as the ILO, or through a bilateral technical assistance program such as the US/AID program.) In-service training, well in advance of the survey date, is necessary in order to prepare the supervisory personnel. The questionnaire, instructions to enumerators, and all details of the procedure should be thoroughly covered in supervisory training sessions at the earliest possible moment.

Enumerators

1. Functions

The enumerators are key personnel in the survey because their effectiveness in collecting data will greatly influence the quality of the survey. The functions of the enumerators are discussed in chapter IX.

2. Recruitment

An enumerator must be an educated person, capable of grasping and following rather detailed instructions precisely. He must be able to speak the local language of the respondents to be interviewed. These are basic and necessary qualifications; but in addition, he must have the emotional maturity which enables him to meet people easily and get along well with them. He must have vitality and endurance to work long hours, under possible adverse conditions. He must have a

sense of responsibility and a desire to follow through on assignments. He must inspire confidence and have a persuasive personality.

To find such superior people and recruit them for the survey is an ideal to be aimed for. In practice, it is nearly always difficult to recruit a sufficient number of persons capable of performing the exacting details of the job.

3. Training

The primary objective of enumerator training is to thoroughly familiarize the trainees with the purpose of the survey, the questionnaire, and the instructions for filling out the questionnaire. Formal training courses should be conducted in a dignified, serious manner. Detailed written instructions should be prepared (see chapter VI) and used as a text for the training sessions. Training should cover interview techniques. One particularly useful device is to hold "mock" interviews in the training sessions. This permits enumerators to study techniques and to be prepared for unusual situations which may arise.

Training should cover administrative matters as well. Enumerators need to be informed on all matters relating to the work routine: hours of work, lunch hours, vacation and sick leave, transportation regulations, pay practices, promotion policies, the quality control program, and other pertinent matters.

In the United States, the interviewers, or enumerators are carefully trained and retrained in a continuing program. The major aspects of this training program are described below.

1. Initial training. New interviewers recruited for the survey are given special intensive training the first three months they are on the job. The program includes classroom lectures, discussions, and practice; on-the-job training and observations; and special home-study and review materials.

2. Refresher training. Prior to each monthly enumeration, experienced interviewers are given two to four hours of home study including review exercises and similar materials. At least four times a year the interviewers are convened for day-long group training and review sessions.

3. Observation. On the average of twice a year, each interviewer is accompanied by a supervisor for about one day in the course of the actual survey, in order to determine how well he understands and applies the concepts and procedures. In addition to such corrective action and retraining as may be needed, a rating sheet is prepared in the course of observation which

becomes part of the interviewer's record. Interviewers requiring additional attention are observed more frequently at the option of the regional office.

4. Recheck. On the average of three times a year, a subsample of the work of each interviewer is reinterviewed (through a second interview with the household) by a supervisor, in order to determine whether the correct information was obtained. Where the information differs between the reinterview and the initial interview, the supervisor seeks to determine which answers were correct and (where the original information was incorrect) the reasons for the discrepancies. Errors attributable to the interviewers are brought to their attention and--where the discrepancies exceed certain prescribed limits--special training, observation, and further checking are provided. In addition to its value as a check on particular interviewers, this system provides some data on the quality of the survey in general.

5. Inspection of returns. In addition to these other measures, the completed questionnaires are carefully inspected each month both in regional offices and in Washington. The results of this inspection, togeth-

er with information from the observation and recheck programs, serve as a basis for orienting training materials to the indicated needs of the interviewers. The results of these various checks may also lead to the replacement of interviewers who--in spite of special attention and training--are unable to meet the prescribed standards of quality.^{32/}

Clerical Personnel

1. Functions

The data processing plan for the labor force survey will determine the types and numbers of clerical personnel required. The most usual process is the punch card process requiring coders, card punchers, sorters, and tabulators. The manufacturers of the equipment can supply detailed information as to personnel required, according to the work load and time allowed.

Statistical clerks will be needed to make computations required in the estimating process; file clerks, typists, and stenographers will also be needed.

2. Recruitment

The primary consideration in recruiting clerical workers for the labor force survey is to find persons capable of being trained in specific functions. Of course it is better to find experienced clerks and machine operators; usually this is impossible. Therefore an attempt should be made, through tests if possible, to recruit workers with above

^{32/} U. S. Department of Commerce, Bureau of the Census, op. cit., p. 11.

average intelligence and some aptitude for detailed clerical work.

3. Training

Training of clerks and machine operators relates primarily to the specific functions to be performed by each. Detailed written instructions for each job should be duplicated and used as a guide in the training sessions. Each trainee should keep his own set of instructions for reference as the job proceeds.

It is also useful to outline, in the training session, the entire

operation from beginning to end so that each trainee understands the significance of his particular job. Such an outline helps the trainee to feel a sense of participation in the survey and increases his desire to do his job well.

In a continuing survey, it is essential to have brief training sessions before each enumeration. As the clerical personnel gains experience and continues the learning process, performance on the job improves with consequent **improvement** in the quality of the survey.

Chapter VIII. Listing

Need for Listing

Usually a multistage sample design is used for a labor force survey. This type of design requires selecting a number of small geographical areas to represent all areas. Subsequently, within these areas, a sample of households is selected, and information is gathered from only these selected households. However, there is frequently no available list of households or dwelling units in the specified areas from which a sample of households or dwelling units can be selected. Consequently, when no list is available, the first phase of the field work is to make a list of all dwelling units located in the specified areas. The areas are specified by the sampling statistician who provides an exact geographical description of each.

It is the job of the field agent to write down on prepared forms the addresses of all places where people live or might live in the specified location. The final choice of dwelling units to be included in the survey is made from these listings. In

^{33/} Currently in the United States, the term "housing unit" is used; the official definition is essentially the same as the one provided for dwelling unit in this chapter.

order for the final selection to conform to scientific sampling practice, it is essential that the listings be accurate and complete.

Defining the Dwelling Unit

A dwelling unit is a place where a family (or any group of persons living together or a single person living alone) maintains living quarters. The exact specifications as to what constitutes a dwelling unit must conform to the housing facilities and living arrangements of the population of each country. Since such living arrangements differ in various countries, the definition of dwelling unit must also vary.

Although it is recognized that other countries will require some modification of the definition, the following definition which has been used in the United States ^{33/} is provided as a guide.

In general, a dwelling unit is a group of rooms or a single room, occupied or intended for occupancy as separate living quarters, by a family or other group of persons living together or by a person living alone.

The specific definition of a dwelling unit depends upon whether there is only one, or two, or

more rooms in the living quarters and what facilities they have.

A group of two or more rooms is a dwelling unit if it is occupied or intended for occupancy as separate living quarters by a group of persons living together or a person living alone if it has:

1. separate cooking equipment or
2. separate entrance.

A single room is a dwelling unit if it is occupied or intended for occupancy as separate living quarters and

1. has separate cooking equipment or
2. is the only living quarters in the structure or
3. is a one-room apartment in a regular apartment house.

Some of the various types of dwelling units found in the United States are:

1. A single-family house
2. An apartment in a regular apartment house
3. An apartment in a private home (separate cooking equipment)
4. A trailer or mobile home
5. A houseboat
6. A converted railroad car.

In addition, there are special dwelling places which must also be listed, such as:

1. A rooming house
2. A college dormitory
3. A transient hotel
4. A hospital
5. A monastery
6. A logging camp.

Instructions for Listing

The personnel who do the actual listing must be trained to recognize all dwelling units and to exercise appropriate care in the listing process. The reliability of the survey and the validity of the results are dependent upon the accuracy and completeness of the listing operation. For the purpose of training, the U.S. Bureau of the Census includes a chapter on listing in its Enumerators Reference Manual. The manual discusses the problems involved in listing and gives many practical examples of difficulties that arise in the field. General directions for listing are presented here in condensed form.

1. List all dwelling units in the segment 34/ whether occupied, vacant, or under construction. Watch for separate living quarters in all buildings.

34/ Segment is the term used to identify the small geographical area chosen for the sample.

2. List every "special" dwelling place in the segment.

Structures which house large numbers of residents under some kind of common living arrangements are called "special" dwelling places. Examples of "special" dwelling places are: a hospital, a transient hotel, a rooming house, a monastery, an orphanage, a college dormitory, a summer camp.

3. List every structure whether or not it contains a dwelling unit.

Structures with no dwelling units are listed for one purpose only: to make sure that every dwelling unit in the segment is properly identified. Perhaps this seems contradictory, but structures used for business, industrial, or office purposes may contain living quarters of one or more persons. The presence of such living quarters may change from time to time. In practice, the listing of dwelling units is likely to be more complete if listers are instructed to list every structure in the segment.

Basically, there are two kinds of structures which contain no dwelling units:

a. Structures which are on the same property as a dwelling unit, for example, garages and farm buildings. It is more convenient to list these structures on the same schedule on which the dwelling unit on the property is listed.

b. Independent nondwelling places such as stores, schools, churches, and factories. A separate listing schedule is provided for these structures.

4. Cover every part of the geographical segment (hidden alleys, roads, etc.).

5. Consider a structure which is on the boundary of the segment to be in the segment if its main entrance lies within the segment boundaries.

When listing a dwelling unit the information required is: identification of sample area or segment in which unit is located; description of unit (house or apartment, location in building); street number and name; city or town; and if rural, some designation to aid in location and to show whether farm or nonfarm.

The sampling statistician provides the field personnel with a description of the small areas (or segments as they are called in the United States) selected for inclusion in the sample. Ideally, the description is in the form of a detailed map showing clearly the boundaries of the segment and all the structures, buildings, or houses therein. Under this ideal situation the lister goes to the area, verifies the boundaries of the segment, makes any corrections required, and lists all dwelling units. Corrections are required when new buildings have been constructed or when

old ones have been converted or demolished since the map was made. Corrections are required if the boundary has changed in any way, such as a change in a street name or the direction of an alley or highway.

Usually, the sampling statistician in a developing country works with highway maps or other maps which do not show the structures in the area. In this case, the segment chosen for the sample will be marked on the map in a distinctive way by

the sampling statistician, with boundaries clearly identified. The lister is then usually asked to make a sketch of the sample segment, showing all structures. On the listing forms provided, the lister identifies every structure, both dwelling units and nondwelling units, with a notation as to its location on the sketch.

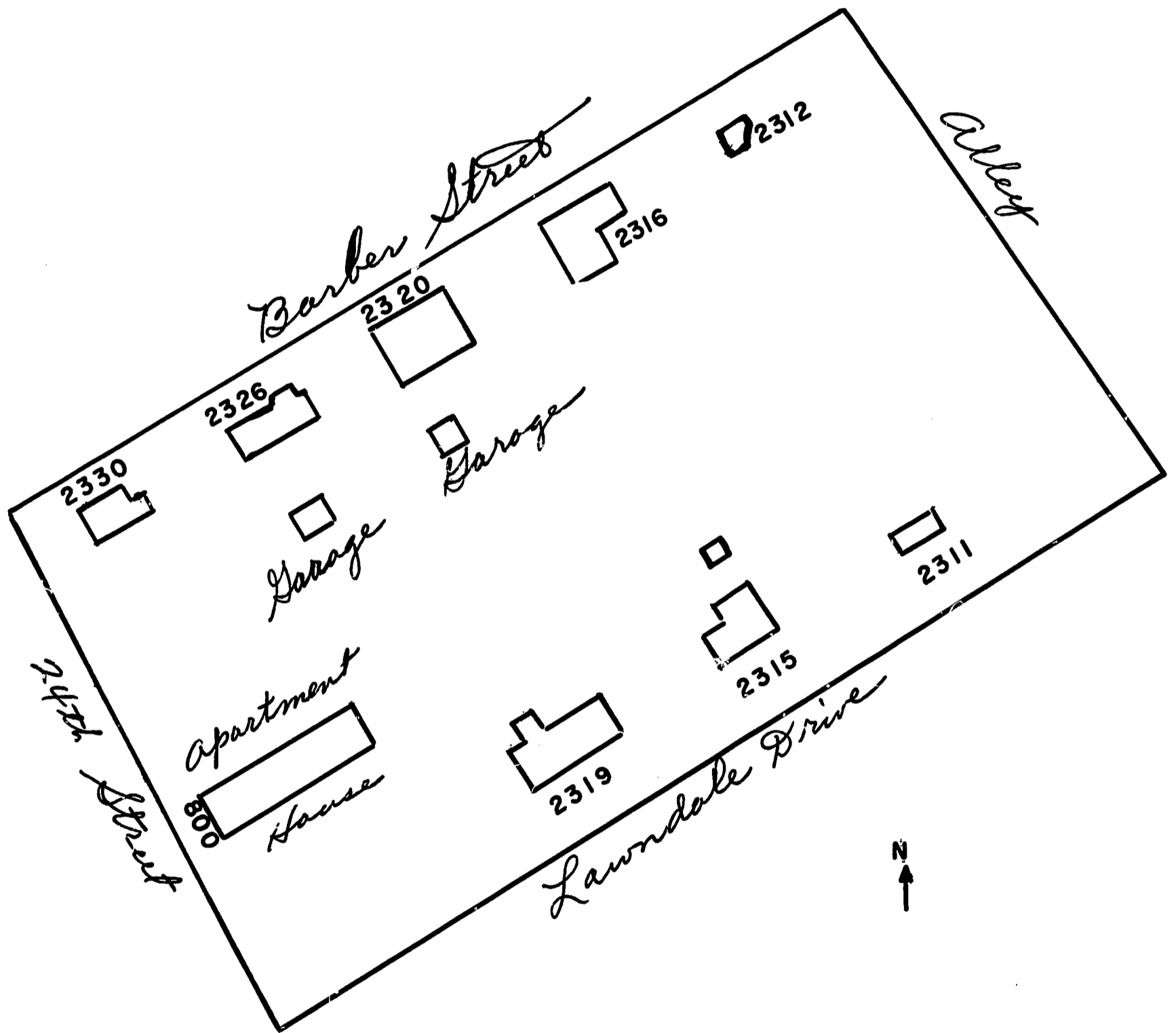
Examples are provided on the following pages.

Sketch of urban segment

Hillandale

Area : 6

Segment: 21



Example of listing of an urban area.

Labor Force Survey
Hillandale

Area : 6
Segment: 21

SEGMENT LIST

Segment Boundaries:

North: Barber St.
West : 24th St

South: Lawndale Dr.
East : 10 ft Alley

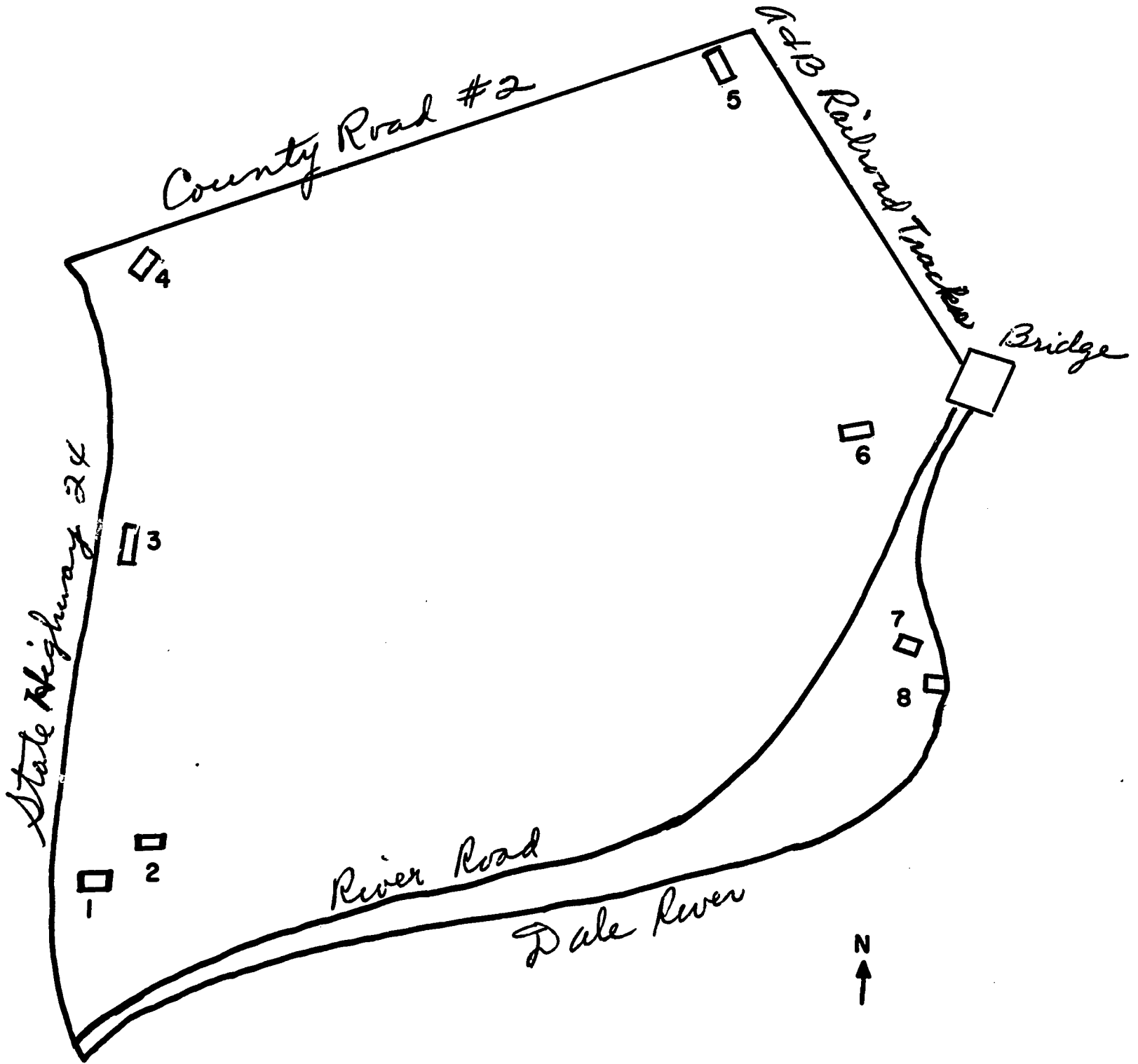
Line No.	Street or road	House No. or other identification	Description of dwelling unit	Structures with no dwelling unit
1	Barber Street	2312	White frame house, 1 story	
2		2316	Green house, white trim, 2 story	
3		2320	Red brick, blue trim, 2 story	
4		res. of 2320	red brick garage with rooms above	
5		2326	white frame 2 story	Garage in rear
6		2330	large stone house, 3 story	
7		800	Apt 1	
8	24 th Street Lawndale Drive	800	2	
9		800	3	
10		800	Janitor's quarters	
11		2319	Stucco, blue trim 2 - story	
12		2315	Stucco, red trim, stone fence, 2 story	Tool shed in rear
13		2311	yellow brick, 1 story, brick patio	

Sketch of rural segment

Hillandale

Area: 8

Segment: 3



* Start here

Example of listing of a rural area: Part 1.

Labor Force Survey Hillandale	Area : 8 Segment: 3
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SEGMENT LIST

Segment Boundaries:

North: County Road #2

South: Dale River

West: State Highway #24

East: A+B Railroad Tracks

Line No.	Street or road	House No. or other identification	Description of dwelling unit	Structures with no dwelling unit
1	State Highway #24	RFD #3 Box 21	Brown, 2 story Gabled roof #1 on sketch	Red barn #2 on sketch
2	County Road #2	In front of electric pole	White frame house 1 story #4 on sketch	
3	River Road	One west of RR bridge	Unpainted shack #6 on sketch	
4	River Road	Near rock formation	Log cabin with stone chimney #7 on sketch	Boat house #8 on sketch
5				

Example of listing of a rural area: Part 2.

Labor Force Survey Hillandale	Area : 8 Segment: 3
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STRUCTURES WITH NO DWELLING UNITS

Segment Boundaries:

North: County Road # 2	South: Dale River
West : State Highway # 24	East : A + B Railroad Tracks

Line No.	Street or Road	Number or identification	Description of structure with no dwelling unit
1	State Highway # 24	Stone entrance to driveway	School: Dale County Elementary School, # 3 on sketch
2	County Road # 2	Near R R Tracks	Grocery Store, Johnson's Store # 5 on sketch

Chapter IX. The Field Enumeration

The collection of labor force data is made by enumerators who visit households selected for the sample and hold interviews with a responsible member of each household. The field work is organized and conducted under the supervision of a series of regional or area offices, the number depending upon the size and complexity of the enumeration.

In this chapter, the functions to be performed will be discussed from the point of view of a field office located in one of the enumeration areas, assuming that the field office reports directly to the central survey headquarters. Everything connected with the enumeration, that is, the recruitment, training, and supervision of the enumerators, is done in the field office. The enumeration is performed in a specific time period, often the calendar week (enumeration week) which follows the reference week. The collected data are sent to the central office for processing. All calculations, analysis, and publication of the data are done in the central office.

Functions of the Field Office

The field office is headed by a director who has ultimate responsibility for all the functions of the office. His staff includes the enumerators, and the necessary stenographic, clerical, and service personnel. In large-scale labor force surveys, the staff may also include additional supervisory personnel. A

summary of the duties of the field office director and his staff is presented below:

1. Recruitment and training of enumerators as described in chapter VII.

2. Final steps of the sampling procedure.

When a sample is drawn, the field director is responsible for carrying out the sampling procedures as planned by the sampling statistician, including the listing operation and the selection of households. Listing is one of the most important steps in the operation of the survey (chapter VIII). It must be done in each small geographical area designated by the sampling statistician before any addresses can be selected for interviewing. From the listings, once completed, the field office director selects the enumeration units for the sample in accordance with sampling instructions.

3. Preparation of control cards for each dwelling unit selected for the sample.

Each dwelling unit designated for the sample bears an identification code which is assigned by the field office. A master listing, or a card file, with all necessary identification of households in the sample, is kept on file in the office. A second set of individual cards is prepared for the use of the enumerator, to be taken out of the office.

4. Assignment of the schedules to enumerators.

A system should be devised to keep a record of the schedule numbers assigned to each enumerator as well as a record of the completed schedules turned in. The system should guarantee that every enumeration unit selected for the sample is assigned and that none is overlooked. By the end of the enumeration period, every dwelling unit selected for the sample enumeration must be accounted for, with either a completed schedule or an explanation of reason for not obtaining an interview.

5. Preparation of the schedules.

A supply of blank questionnaires (schedules) will be obtained from the central office. A schedule must be prepared for each enumeration unit by transcribing to the schedule the necessary identifying items from the control card. The enumerator at the time of the first interview will fill in the field control card and the schedules.

6. Preparation of other material assigned to enumerator.

a. Identification card.

In many countries, the enumerator is provided with an identification card which he shows when he approaches a household to secure information. The card should have a photograph of the enumerator and his signature.

b. Letter of introduction.

It is good public relations, when dealing with literate populations, to send each household selected for the sample a letter which explains briefly the purpose and plan of operation of the survey and requests cooperation. The letter may be given to the respondent by the enumerator on his first call at the household.

c. Maps.

The enumerator should have a map or sketch showing the location of each unit he is to visit.

d. Copy of an official publication of the surveying agency.

If there has been an earlier survey, the enumerator can use the survey's final report in explaining the survey to new respondents. If not, another publication of the agency can be used to show, in general, the type of publication that will be forthcoming as a result of the present survey.

e. Appointment cards.

When dealing with literate populations, the enumerator should have a supply of cards to leave at the house when he finds no one at home. The card requests an appointment at a later time and tells how to communicate with the enumerator to arrange the appointment.

7. Editing of schedules.

After the enumeration, each schedule is checked for omissions, inconsistencies, illegible entries, and apparent errors. It is desirable to have the first editing at this time; the enumerator may recall the situation, making a second interview unnecessary. If not, it is easier to revisit the household now than later. If entries are found to be incomplete, inaccurate, inconsistent, or filled out contrary to instructions in any way, the schedule should be returned to the enumerator for correction or verification. (See chapter X.)

8. Transmission of schedules completed and edited to central office.

The work should be planned and executed so that the schedules can be sent on time according to plan.

9. Transmission of records on households not interviewed.

Every effort should be made to keep noninterviews to a minimum by calling back at households when required. But in the event that an interview is not held within the designated time, the record submitted to the central office should explain the reason for the noninterview, and should describe efforts made to get the interview. If a respondent refuses to cooperate after the enumerator has made all reasonable effort to gain cooperation, the supervisor should visit the household to verify the circumstances, explain the survey in its full detail, and attempt to gain the cooperation of the household. If the supervisor fails also,

the schedule is transmitted to the central office marked "Refused information."

10. Economic situation report.

A report on the economic situation in the area surveyed, pointing out the particular aspects affecting employment or unemployment, should be prepared and submitted to the central office. Such reports from local areas in the survey are invaluable in the analysis and interpretation of the survey results.

The Interview

Prior to the conduct of his first interview, the enumerator has been thoroughly trained and is familiar with every line of the questionnaire or schedule in which he will record the information collected at the interview. He knows the criteria by which to determine for whom to collect data. Upon receiving his assignment--that is the addresses of the dwelling units he is to call upon--he works out the most efficient itinerary.

Finally, he approaches the house (or apartment or other dwelling unit) and knocks on the door. He courteously greets the person who answers the door and introduces himself briefly, showing his identification card if he has been provided one. If he is speaking to a child or a servant he asks for the head of the household or the lady of the house. The enumerator must conduct his interview with a responsible member of the household who has sufficient knowledge of the family and its workers to answer correctly for each one, and who has their consent to give the information requested.

The enumerator explains briefly the purpose of the survey and indicates that he wishes to ask a few questions. It is usually found that the majority of respondents accept the brief explanation and answer the questions willingly, but the enumerator should be prepared to answer questions about the survey if asked. He may find some respondents who are reluctant to give information or who refuse to be interviewed. He should try to persuade such respondents of the importance of the survey; he may refer to the legal authority for the survey, although ordinarily this will not be necessary. He should assure the respondent that the information will be confidential and that only total figures, not names, will be published.

In asking the questions on the subject of the survey, great care must be exercised to see that the questions are asked in a uniform manner of all respondents: i.e., that the questions are asked always in the same order and with exactly the same words.

Throughout the interview, the enumerator strives to keep harmonious relations with the respondent while at the same time trying to get accurate and complete answers. He closes the interview on a friendly note to pave the way for possible future calls. Interview techniques for various kinds of surveys have been described at considerable length in many books and articles. The bibliography at the end of this manual gives a number of such references.

Special Problems Encountered in Enumeration

1. Listing errors.

Undoubtedly the listing operation will be found to have some errors. Since the accuracy of the listing has an important bearing on the technical excellence of the survey, all such errors should be corrected and called to the attention of the supervisor. If a dwelling unit selected for the sample is found to be two dwelling units, rather than one, both should be enumerated. Theoretically, this will compensate for dwelling units missed in the listing process.

2. Call-backs.

When an interview is not obtained on the first call at an occupied dwelling unit, the enumerator should leave at the home the small appointment card provided by the field office. The card should have the enumerator's office or home address and telephone number in order that the respondent can communicate with the enumerator to arrange a future meeting. Call-backs increase the time required and the cost of the survey, but they cannot be avoided.

3. Refusal to cooperate.

In order to keep the refusal rate to a minimum, every effort should be made to persuade respondents to reply. Supervisory attention is warranted in trying to gain the cooperation of those who refuse.

4. Interviewing wrong household.

If an enumerator happens to interview a wrong household, the correct household should be interviewed if the error is discovered in time. Substitution of one household for another is not permissible since the substitution would introduce an unknown bias into the survey.

Administrative Aspects of the Field Enumeration

1. Payment to enumerators.

Enumerators may be either full-time or part-time workers, depending upon the administrative set-up of the survey. They may be paid then as full-time workers; or if part-time, they may be paid on a piecework basis or an hourly basis. Usually survey directors prefer the hourly basis since there is danger that payment on a piecework basis will lead to hurried and careless work. Each enumerator reports hours worked and field expenditures to the office on a special payroll form provided.

The rate of payment should be high enough to attract and hold competent people. In view of the expense of training new enumerators, it is wise to pay a sufficient wage to keep labor turnover low and morale high.

2. Transportation of enumerators.

Provision must be made for enumerators to move from one household to another with a minimum of

lost time. In the event that the households are close enough together for the enumerator to walk, or if public transportation is available, there is no problem. If possible, arrangements should be made for the enumerators to travel free of charge on the public transportation system. But when the surveyed area does not have good public transportation, and when the units to be interviewed are widely scattered, transportation becomes an administrative problem. Perhaps the surveying agency may find it necessary to rent or purchase bicycles, jeeps, or other vehicles.

3. Plans for measuring performance.

Proper supervision of the enumeration requires some device for measuring the performance of each individual enumerator. A careful record should be kept of the work assigned and completed by each enumerator and his level of error as found by editors and verifiers. Standards of performance should be established so that each enumerator knows what is expected and required of him. The standard provides an estimate in advance of the amount of time required to complete a given assignment accurately and at a reasonable working pace. The standard includes time for travel and allows for the expected number of callbacks (revisits to an address). The time actually required to complete each assignment is compared with the standard, thus providing a measure of the performance of the enumerator.

When an enumerator consistently falls short of the performance standard, he should be given special help by the supervisor to try to bring his performance up to standard. Those who are unable, after repeated attempts, to do the required amount of work, should either be transferred to another type of work or dismissed. It is essential that the field work be efficiently carried out in order to meet the deadlines for completing the survey.

4. Control of progress of work.

In a closely timed survey, the field enumeration must be completed in a relatively short period of time. The supervisory staff has the function of seeing that the

field work starts on time, continues on schedule, and is completed by the end of the enumeration period. The enumerators must be trained and ready for action; assignments must be distributed; all supplies and equipment must be at hand. At the end of each day, the amount of completed work must be noted. If delays are caused by administrative or operational defects, corrective action should be taken immediately. If one area lags behind while another forges ahead, perhaps the distribution of work load can be adjusted to bring the slow one up to schedule. It may be necessary to schedule extra hours of work, or to correct deficiencies in the organization of the field work.

Chapter X. Processing the Data

Prior to the time when the completed schedules come in from the various field offices, certain procedures should be established in the central office for processing the data. The processing procedures may range from the simplest techniques involving numerous clerks extracting information with pencil and paper to the most complex involving the use of high speed electronic data processing equipment. Regardless of the procedure which is determined as feasible in each country, there are certain functions which must be performed.

Functions

1. Control.

Some system must be devised to keep accurate account of the schedules received from the field. For each area in the survey the control office must know at all times:

a. Number of schedules to be collected (determined by sampling procedure).

b. Number received to date.

Schedules are usually sent in from the field office in batches of 50 or more. Each batch is registered upon arrival, and each schedule within each batch bears a control number. Upon receiving the final batch, the control clerk checks to see if all batches have arrived,

i.e., if the number received corresponds to the number expected. Great care should be exercised to protect the individual schedules from loss or damage.

2. Editing.

In essence, editing a schedule consists of careful inspection to detect any errors and omissions, inconsistencies, and/or incompleteness in the data. It also involves a check on whether data are reasonable, uniform, and ready for tabulation.

Each schedule should be edited twice, once in the field office where it is relatively easy to reach the respondent, if necessary; and once in the central office when the schedules are being prepared for tabulation.

Instructions to editors should be duplicated, used as training guides, and kept for reference while the editing is done. The instructions to editors include a thorough review of instructions to enumerators and coders. In effect, the editor performs a coordinating function between the enumeration and the processing. He is instructed to apply a questioning eye and some common sense judgments to the schedule in order to facilitate the flow of data.

Editors should make all editing entries in a distinctive color (pencil or ink) to avoid confusion between the editor's entries and original entries made by the enumerator. The editor should never erase an original entry. Corrections should be made by drawing a light line through the original entry so that it can still be read, and placing the correction above. The editor should initial and date his work.

The editors check the schedule for consistency by examining the answers in a predetermined order. When two answers are contradictory, it is often possible to determine which is correct by internal consistency. For example, the ages of children should be consistent with the ages of parents. It would be inconsistent if an individual were shown as "Not in the labor force" in one place yet also reported hours of work; or if the wife of the head of the household were incorrectly shown as male. If it is not possible to correct inconsistent entries by examination of the schedule, both answers should be discarded and classified as "unknown."

The editor must make certain that entries on all schedules are uniform. If the enumerators adhered rigidly to their instructions, such uniformity would be assured. But it often happens that different enumerators understand instructions differently and certain entries may require a minor change to conform to

the requirements of processing. For instance, there should always be a clear distinction between an answer of "zero" and an answer of "No report."

The editor must assess the completeness of the schedule; he can often fill in an entry to make it complete by making certain judgments. These judgments should adhere to the standards established for the survey. But since incomplete schedules may have to be discarded and since the effect of rejection of schedules upon the sample and ultimate findings of the survey is crucial, constant effort should be made to avoid rejecting any schedule and thereby losing all the effort that has gone into it prior to this stage.

Modern data-processing equipment makes it possible to do a part of the editing mechanically. That is, at one stage in the processing, machines can be set to check entries for consistency, uniformity, and completeness. The machines eject cards which do not conform to predetermined standards, and an editor then examines the incorrect schedules.

3. Coding.

Coding is the assignment of numbers, letters, or other symbols to the answers on the questionnaire. The purpose of coding is to classify the answers of all questions into meaningful categories and thus facilitate the summary of the data. Coded data can be punched on IBM cards so

that tabulations can be done by machine. In the event that machines are not available, coding makes hand tabulation easier.

The coding scheme must allow for all possible answers to each question. In some cases this is relatively simple and clear cut. For instance, the labor force questionnaire asks for each person's marital status.

Possible answers	Code
Married, spouse present.	0
Married, spouse absent..	1
Widowed.....	2
Divorced.....	3
Never married.....	4

Other questions are somewhat more complex and may conceivably have a variety of answers. Sometimes it is necessary to test the question with a number of respondents, determine the principal response categories and assign a code to each, then have a code for Other or Miscellaneous. For example:^{35/}

Question: What was this person doing most of last week?

Answers:	Code
Working.....	0
Looking for work.....	1
With a job but not at work.....	2
Keeping house.....	3
Going to school.....	4
Unable to work.....	5
Other.....	6

Question: Why was this person absent from work last week?

Answers:	Code
Own illness.....	0
On vacation.....	1
Bad weather.....	2
Labor dispute.....	3
Temporary layoff (less than 30 days).....	4
New job to begin within 30 days.....	5
Other.....	6

Question: Age last birthday?

Note: If a 2-digit code is used, the actual age, say 21, 40, or 65 can be entered in two columns. It may be more efficient to determine in advance which age groups are significant and code them with a 1-digit code. For example:

Answers:	Code
14.....	0
15-19.....	1
20-24.....	2
25-34.....	3
35-44.....	4
45-54.....	5
55-64.....	6
65 and over.....	7

In a labor force survey, the industry and occupation of each member

^{35/} The reader is referred to appendix C where the precoded schedule currently used in the United States is reproduced.

of the labor force are asked; the replies are usually classified by major industry group and by major occupational group rather than in greater detail. Coding into major groups of industries and occupations requires both training and care; but coding into detailed industry and occupational classification is an intricate coding job. Most statisticians consider that job information gathered from the households is not accurate enough to justify detailed classification. It is recommended that a major group classification be used which is consistent and comparable with these two classification systems developed by international statistical bodies:

Industry: The International Standard Industrial Classification of all Economic Activity, United Nations, Statistical Office, Series M, No. 3, Rev. 1.

Occupation: The International Standard Classification of Occupations. The International Labour Office.

With regard to codes, there are a few general principles to observe:

1. Generally speaking, it is advisable to retain more detail in the coding system than one expects to publish in the final tables. It is easier to combine groups in later analysis if that becomes necessary than to split a group. However, it is awkward and extravagant to have a

too detailed coding system. Furthermore, every coding step adds the possibility of error.

2. Coding clerks should be carefully instructed to assure uniform treatment on all schedules. The coding instructions should be as detailed as necessary to provide a definite code for all foreseeable answers. The instructions should be duplicated, used as a training manual, then kept constantly available to the coding clerks.

3. The coding operation should be made as routine as possible, by reducing the number of decisions to be made by the coding clerks. Questionable replies, difficult-to-classify answers should be referred to a central supervisor who attempts to record all decisions and keep all coding consistent.

4. The coding should be verified by a different person in order to detect coding errors. Records should be kept of the error level of each clerk. When a clerk has established a low-error record, his work may be only spot checked thereafter. Retraining should be given to those who have a high-error record.

Tabulation

In the usual processing system, coded information is punched on cards and verified; the cards are

sorted by machine into meaningful categories determined by the statistician; sorted cards are counted by machine; and finally there emerge a series of tabulations which constitute the findings of the survey. The tabulations reveal how many people in the sample have the various characteristics under study.

From this information, relating to the sample only, will be derived estimates relating to the whole popu-

lation. Hence the tabulations must be designed and executed in accordance with the sample design and the estimating procedure.

Generally speaking, the first tabulations are in more detail than the tables which later appear in the published report. The data may be grouped, averaged, rounded, summarized, and presented in any way which appears to render the findings the most usable.

Chapter XI. Preparing and Evaluating the Labor Force Estimates

Data collected in the field enumeration are used, after processing, to estimate the number from the total population in each of the various labor force categories. Obviously, the method used to compute the estimates depends upon the sampling plan used. The exact estimating procedure must be worked out, as part of the sample design, by a competent statistician.

Certain basic principles about the estimating procedure can be discussed here by the use of simplified examples.

Adjustment for Households not Interviewed

Error is introduced into the estimates by the fact that some occupied households chosen for the sample cannot be interviewed during the brief enumeration period, usually because of vacations or some other absence from the home. Every reasonable effort should be made to keep this number to a minimum, but the problem cannot be eliminated entirely. For instance, in the United States, the noninterview rate is between 3 and 5 percent.

Strictly speaking, when even one household in the sample fails to be interviewed, the rigorous conditions of probability sampling have not been met. In the real world where it is impossible to attain perfect response, something has to be done to adjust for noninterviewed

households. To keep the error to a minimum, the adjustment can be made with reference to the stratification of the sample.

The sample design will have provided, for example, that the sample shall have the same proportion as the universe in the representation from each of the several geographical divisions of the country. Usually the number of households not interviewed is different in different areas; in order to keep these proportions in the proper relation, a substitution may be made for the households not interviewed. In the United States, each noninterview household is replaced in the sample by duplicating a different household that is already in the sample. The household to be duplicated is chosen at random from the same area.^{36/} To illustrate, if a given household is not interviewed because the family is on vacation, a random choice is made of another household in the sample area. For each person 14 and over in that household two cards are punched. The household is in the sample twice, once for itself and once as a substitute for the missing household.

Hansen, Hurwitz, and Madow^{37/} comment on this procedure as follows:

^{36/} The household substituted must be from the same color-residence group also.

^{37/} Hansen, Hurwitz, & Madow-op. cit., Volume 1, p. 569.

This mechanical procedure of imputing information for noninterview household is a poor substitute for the information about the household itself. However, this procedure is carried through as one of the steps in the streamlined operations needed to speed results to consumers of data from the Current Population Survey, and leads to satisfactory results so long as the noninterview rate is kept low.

Chronologically, this adjustment is made prior to the tabulating of the punch cards (discussed in chapter X).

Estimating by "Blow-up"

The simplest method of making estimates from a sample is the "blow-up." If the probability of selecting each dwelling unit in the sample is equal (i.e., a uniform overall sampling ratio has been utilized), the estimate can be made by multiplying each sample value^{38/} by the reciprocal of the sampling ratio. In multistage sampling, where areas are selected with probability proportionate to size and the sampling ratio for selecting dwelling units within

^{38/} By sample value is meant the number of persons in each labor force category in the sample: for instance

	Sample values:
Total population 14	
years and over-----	1,850
Total labor force-----	1,000
Employed-----	900
Unemployed-----	100

selected areas is determined so that a uniform overall sampling ratio is used, this method of estimation is satisfactory provided that the measures of size used in selecting areas are reliable. For example, if the sample constitutes 1/1,500 of the dwelling units of the universe, and if 1,000 people in the sample households were in the labor force, the estimate for the total labor force would be 1,500 x 1,000=1,500,000 (this estimate is one of a set of estimates made from the sample, others in the set being estimates of employment, unemployment, etc.).

If the sampling ratio varies in different areas, each area must be "blown-up" separately. For instance:

Area I. Sampling ratio=1/1,200.
 Persons in labor force in sample for Area I=800.
 Estimate for Area I=1,200 x 800=960,000.

Area II. Sampling ratio=1/1,600.
 Persons in labor force in sample for Area II=500.
 Estimate for Area II=1,600 x 500=800,000.

Estimate for Areas I and II=960,000 + 800,000=1,760,000.

Ratio Estimates

The accuracy of the estimate can be improved by computing a "ratio" estimate if a reliable estimate of the total population is available from an independent source. In its simplest form, a ratio estimate is as follows:

The sample:

2,000 persons aged 14 and over
1,200 persons in the labor
force

Independent population esti-
mate of the universe: 2,000,000

Computation:

$$\frac{1,200}{2,000} \times 2,000,000 = 1,200,000$$

In other words, it is assumed that the total population has the same ratio of labor force participation as the sample.

A more accurate estimate can be computed if the independent population estimate is available by age and sex groups. For example:

The sample:

300 males age 20-29
250 males age 20-29 in the
labor force

Independent population estimate:
300,000 males age 20-29.

Computation:

$$\frac{250}{300} \times 300,000 = 250,000$$

If the estimate for each age-sex group is computed separately, then added together, the resulting estimate of each variable is likely to be superior to an estimate derived for the total population at once.

Within each labor force category, the characteristics of individuals in the sample with regard to marital status, industry group, occupational category, education, and other characteristics, are imputed to the total population, deriving estimates of many sub-categories within each labor force category.

Evaluating the Adequacy and Accuracy of the Estimates

The estimating procedures discussed in the previous section result in estimates of the number of people in the labor force at a given time; and the number of people in each category: the employed, the unemployed, cross-classified by age, sex, geographic distribution, etc. Can the statistician have confidence in his own estimates? Can he know with any degree of certainty whether the estimates are reliable enough to be used in making policy decisions? There are available certain techniques for evaluating the adequacy and accuracy of the survey results.

Error can be defined here to mean the difference between the survey's estimate of any given variable and the unknown "true value" of that variable. No survey is error free. Statisticians usually refer to two kinds of error: sampling error and nonsampling error. This dichotomy is based on one fundamental difference; namely, that sampling error can be computed from the sample itself when the conditions of modern

sampling practice are fulfilled, and nonsampling errors cannot be so computed.

1. Sampling error.

Error which is due to the fact that the survey is based on a sample rather than a complete count of the population is known in statistical terminology as sampling variability. Modern sampling theory provides a means of estimating sampling variability from the results of the sample itself, provided that the probability of being in the sample is known for each unit of the population. The device used for measuring sampling variability is called the standard error. Computation of the standard error^{39/} gives the statistician important information which helps him to evaluate the survey results. The meaning of the standard error can be explained by an illustration.

In a given week of September 1963, according to the U.S. labor force survey^{40/} there were 1,223,000 females (14 and over) employed in agriculture in the United States. In appendix table A (page 4-E) it is

^{39/} The formula for computing the standard error is available in standard statistical textbooks; for example, see Hansen, Hurwitz, and Madow, op. cit.

^{40/} U. S. Department of Labor, Bureau of Labor Statistics. Employment and Earnings, Washington, D.C. Vol. 10 No. 5 November 1963, p. 5.

stated that the standard error of that estimate is 75,000. Translated into laymen's terms this means:

a. It is probable (2 chances out of 3) that this particular sample has yielded an estimate of women employed in agriculture which is within 75,000 of the actual (unknown) number of women in agriculture (the true value): in other words, that the true value is between 1,148,000 (which is 1,223,000 - 75,000) and 1,298,000 (which is 1,223,000 + 75,000).

b. It is even more likely (19 chances out of 20) that this particular sample has yielded an estimate of women employed in agriculture which is within 150,000 (twice the standard error) of the actual (unknown) true value: in other words, that the true value is between 1,073,000 (1,223,000 - 150,000) and 1,373,000 (1,223,000 + 150,000).

Similarly for each estimate, the standard error can be computed. In any survey, the statistician can compute the standard error if he has the following items of information:

- a. The method of drawing the sample.
- b. The size of the universe.
- c. The size of the sample.
- d. The probability of each unit in the universe being in the sample.
- e. The extent to which the measured item varies from its average within the universe.

The statistician uses this information as a basis for judgment as to whether or not a given sample yields data of sufficient precision for the uses to which the data will be put. Fortunately, he can make this computation (or an approximation) before actually conducting the survey if he has approximate information on variability from some other source. He can compute the standard error for different size samples and thus can make a judgment as to what size sample will produce the required precision. Naturally, the greater the precision desired, the more costly will be the survey. These factors can be weighed in deciding on the sample design.

After the survey has been completed, the statistician can compute the standard error of the different estimates more precisely. He can then state the limits of possible error in each estimate. It is good statistical practice to publish this information along with the estimates so that users of the data are aware of the degree of reliability. It should be added that it is not necessary to compute the standard errors for all the estimates in a report, since there may be estimates of many variables. It is ordinarily sufficient to publish the standard error of a few of the most important estimates.

2. Nonsampling error.

Errors arising from sources other than sampling cannot be estimated in the same technical way as

the sampling error. By nonsampling error is meant all the errors that may be committed in the process of conducting the survey: response errors, errors in coverage, errors in classification, errors in processing, publication errors, and any other errors that could occur.

Sources of error are so numerous and so complex that every step of the survey requires meticulous attention on a continuous basis. But meticulous care is expensive. It costs more to do each step with maximum care. Therefore, one of the basic responsibilities of the survey director and the statistician is to make a judgment as to how much attention to reducing error is justified at each step.

Granted that the resources available must be considered, what means are available to reduce nonsampling errors?

Usually a program to minimize errors is known as a Quality Control Program. A quality control program may consist of the following:

1. Maintaining the quality of the enumerator's work.
 - a. Intensive initial training of enumerators, including classroom lectures, discussion, and practice; on-the-job training and observation; special home-study materials.
 - b. Refresher training, where appropriate in a repetitive survey, at intervals, including training sessions and home study.

c. Observation, in which a supervisor accompanies the enumerator when he conducts a few interviews in order to determine how well he understands and applies concepts and procedures. The supervisor recommends corrective action or retraining as may be needed.

d. Reinterview,^{41/} in which a supervisor conducts a second interview with a few households interviewed by each enumerator in order to determine whether the correct information was obtained. Where the information differs between the initial interview and the reinterview, the supervisor seeks to determine which answers were correct and the reasons for the discrepancies. Errors attributable to the enumerator are brought to his attention; special training and observation may be required.

e. Careful scrutiny of some completed questionnaires of each enumerator will help uncover weaknesses

in the interview and will serve as a basis for orienting training materials to the indicated needs of the interviewer.

f. Reassignment of enumerators whose work does not meet quality standards.

2. Maintaining the quality of processing.

a. Intensive initial training on all aspects of coding, punching, and tabulating the data; or whatever processing is done.

b. Verification of the work of each individual, either in entirety or partially.

c. Frequent retraining as required.

d. Identification of individuals whose work is of high quality with appropriate rewards for high quality work.

e. Reassignment or removal of individuals whose work does not measure up to quality standards.

^{41/} See U. S. Department of Commerce, Bureau of the Census. The Current Population Survey Reinterview Program, Some Notes and Discussion. Technical Paper No. 6 (U. S. Government Printing Office, Washington, D. C., 1963), 87 pp.

In the final analysis, the evaluation of the effect of nonsampling errors is a judgment. Experience in conducting surveys is the best teacher. The ideal of an error-free survey has never been attained and probably never will be.

Chapter XII. Preparation and Publication of Report

The months of work on the labor force survey culminate finally in a published report comprising statistical tables on the labor force and its characteristics, plus an analysis of the findings. The survey is terminated only when the report is circulated among those for whom the survey was intended.

The Presentation of Statistical Tables

The main body of the final report consists of tables presenting, in the most effective format possible, estimates of the labor force and its component parts, cross-classified by sex, age, geographic location and other groupings. The tables in the final report conform largely to the table shells prepared early in the planning stage. It is to be expected, however, that some changes will be made in the table shells on the basis of experience gained in conducting the survey.

In determining how much detail should be published, it is necessary to exclude detailed breakdowns which are not reliable in fine detail. The sample is designed to produce reliable estimates for a certain level; the reliability decreases as finer breakdowns are made. For instance, a survey designed to produce estimates for a country as a whole can not and should not be used to produce estimates for each province represented in the sample.

Analysis of the Data

The final report also includes an analytical interpretation of the findings of the survey by a competent analyst. The report presents the facts, calls attention to their pertinence to the general economic or political situation, and interprets their meaning with regard to major problems of the day. The analysis explains any unexpected findings or any unusual change from previously known facts about the labor force and explains reasons for such changes. It relates the data to events such as the establishment of new enterprises, either public or private; unusual weather conditions; and large-scale or extended strikes.

The analysis may examine labor force participation rates, or the incidence of unemployment and underemployment for different ethnic groups or age-sex groups in the population. It may bring in historical materials which are pertinent to the current situation. For example, it is often useful to compare current levels of unemployment with the level existing at a previous time, assuming of course comparability of measurement.

Many other analytical aspects are possible and will occur to the analyst when he examines the data. In writing his analysis, the requirements of all good writing should be kept in mind: namely, a logical sequence of topics; clear and easily

understood exposition of the ideas. In general, it is wiser for the analyst to avoid recommending policies, but merely to provide and interpret the facts. It is essential to the reputation of the statistical agency to present the findings in a non-political manner with as complete objectivity as possible.

Technical Notes

The survey plan should include publication not only of the findings of the survey, but also of a description of the technical aspects of the survey. Frequently technical notes are included as appendices of the final report. In some cases the technical notes form a separate publication. In either case, many users of the survey results will want to know in some detail the procedures followed in producing the survey.

Hence it is suggested that a report be prepared, explaining the following technical aspects:

- a. Concepts and definitions used in measuring the labor force.
- b. Universe and coverage of the survey.
- c. The sample design.
- d. Method of collection of data, including a copy of the questionnaire.
- e. Method of estimation.
- f. Evaluation of the accuracy and reliability of the data. An estimate of sampling error for each major estimate.

The Press Release

In most cases, the public as represented by the press and other news media will be clamoring for the results of the survey. It is often feasible and desirable to issue a press release giving major findings of the study a few days prior to the appearance of the detailed report. The first press release is usually in rather brief summary form giving the major estimates. It presents a brief summary of labor force developments since previous information was issued regarding the labor force. The press release often becomes the summary page of the detailed report which is issued later.

If interest of the press is sufficient, it may be best to call a press conference to release the data. The press conference permits the survey economist to explain in some detail the findings and methods of the survey to the reporters who will write accounts for the press. By answering the reporters' questions and clearing up any misunderstandings, the economist can often improve the reporting of the survey results to the general public.

Some Problems in Publishing the Report

1. Close time schedule.

The urgency of labor force information and the necessity or desire, to publish it quickly impose a rather stringent time-pressure upon the survey staff. In the United

States, the basic machine tabulations are received by the analysts only 1 workday before the press release is issued and only 4 days before the final report appears. All phases of the work have been planned to mesh with a rigid publication schedule to permit the self-imposed deadline to be met.

2. Complexities of labor force behavior.

The general public, including newspaper editors and radio newscasters, rarely have any conception of how dynamic the labor force of a developing country can be. It is difficult to explain the complexities of labor force behavior in a brief press release. Often, persons misinterpret or repudiate the findings of the survey if the findings do not conform to some preconceived notions. Hence, great care is required in presenting the data with appropriate and sufficient analysis and explanations.

3. Sampling variability.

It is frequently impossible to state with certainty what changes have occurred in a certain time period, because of the fact that the estimates are derived from a sample and are therefore subject to sampling variability. It may be that estimates of employment or unemployment for two successive time periods are not significantly different from each other in a statistical sense.

In writing about the change, it is necessary to say that no significant change has occurred. Yet the apparent change may be politically or economically significant, and may receive undue attention from the press.

4. Objectivity.

There may at times be pressures from within the government to withhold the findings of the labor force survey from the general public for political reasons. The statistician's integrity and that of his agency are threatened in such a situation. The statistical agency, in order to maintain the respect and confidence of the public, must steadfastly refuse to alter or withhold the truth as shown by the survey.

5. Printing errors.

Careful proofreading is a requirement of a good report which is often overlooked in the last-minute rush to meet a publication deadline. Before the report is sent for final printing, the proofs or final copy should be checked and double checked. Every column and row of figures should be added to be sure no misprints have occurred. Every sentence should be read and re-read to guard against omitted or misspelled words.

6. Printing bottlenecks.

It frequently happens that a long delay in publication of a report is due to a bottleneck at the

printing stage. Inadequate printing facilities in an area mean that each printing job has to wait its turn. If the government operates its own printing shop every effort should be made to assign a high priority to the labor force report in order to get it printed promptly. In the

event that the printing process threatens to delay the report unduly, consideration should be given to using an alternative method of reproduction. It is better to issue a mimeographed bulletin on time than a handsome printed bulletin that is out-of-date.

Appendix

Appendix A. A Listing of Labor Force Surveys in Developing Countries

The Presidency of Antigua: Leeward Islands

In July 1950, a labor force sample survey was conducted in Antigua, under the supervision of Simon Rottenberg. The preliminary report was published by the Labor Relations Institute of the University of Puerto Rico, in 1952, in Unemployment in Antigua by Simon Rottenberg and Nora Siffleet. The final report, which contains additional tables and the questionnaire, was published by the Labour Department of Antigua, in Report on Unemployment in the Presidency of Antigua, Leeward Islands by the same authors.

The definition of labor force in the Antiguan survey differs from the definition in the United States Current Population Survey (see p. 5) as follows:

1. Classifies as unemployed, i.e., "looking for work," all persons who are willing and able to work although they are not actively seeking it.

2. Does not indicate whether or not persons in institutions are included.

Barbados

In 1955, G. E. Cumper carried out a labor force sample survey in Barbados. In 1956, a report of this survey was submitted to the government of Barbados. The substance of the report was published by G. E. Cumper in "Employment in Barbados" in the June 1959 issue of Social and Economic Studies.

Four sample surveys were carried out in February, April, September, and November 1955. The first two measured employment and unemployment in "crop time," and the latter two during "hard time." The April, September, and November sur-

veys used subsamples. The survey population included all persons aged 15 years and over.

The population was divided into three categories: employed, unemployed, and others not in the labor force. Distinction was made between full and part-time employment, and among regular, casual, and seasonal employment. Unemployed persons are those without a job and seeking work, willing to work, or available for work. The unemployed category includes those who are not willing to take work at the current rate in their usual occupation, but who would be available at a higher rate

of pay. Thus, the definition of unemployment in the Barbados survey differs from the definition in the United States Current Population Survey in that seeking work is not required.

Regarding underemployment, Cumper suggests using hours worked and

earnings as standards of measurement. Persons working part time (less than 40 hours a week) and persons earning less than \$10 a week (the amount earned by an unskilled worker in a full week at standard rate in Barbados) would, according to Cumper, be classified as underemployed.

Brazil

A labor force sample survey was conducted in 1961 in the city of Sao Paulo by the State Department of Statistics. A report of the survey was published in Forca de Trabalho no Municipio de Sao Paulo by the Department of Statistics of the State of Sao Paulo.

The reference period was the week November 19 to November 25. The enumeration period was the week November 27 to December 2. The definition of labor force was very similar to the definition in the United States Current Population Survey, except that all unpaid family workers were included if they worked in nondomestic enterprises.

British Guiana

In 1956, a labor force survey was carried out in British Guiana by Edward McGale under an agreement between the International Labour Office and the Government of British Guiana. Information on the survey was published by the ILO in Report to the Government of British Guiana on Employment, Unemployment, and Underemployment in the Colony in 1956. (Geneva, 1957).

The survey was conducted in two rounds: the first in mid-July 1956, during the seasonal slack of the sugar industry, which is a key industry in British Guiana; and the sec-

ond at the end of September 1956, at the peak of the sugar cane harvest. The sample was drawn from the entire population, except that one-tenth of the population was excluded because of the difficulty of access to them and lack of communication and transportation. The reference period was the week preceding the date of the surveys.

The definition of labor force in the British Guiana Survey differed from the definition in the United States Current Population Survey as follows:

1. The noninstitutional population excluded persons residing in hotels and boarding houses.

2. All unpaid family workers, without a specified minimum number of hours worked per week, were classified as employed.

3. Persons capable of and available for work were classified as unemployed if they wanted work during the reference week.

Salary and wage workers who worked less than 30 hours or 4 days a week were classified as underemployed. This criterion was based on

the fact that the average number of days worked in 1953 in the sugar industry was 4.1 weekly, with the working day estimated at 7.5 hours. To eliminate those persons who did not want to work longer than 30 hours a week, even if more work were available for them, respondents were asked to give their reasons for not working longer. Since the self-employed largely determine their own working hours, an earnings standard of \$15 weekly (the minimum rate for daily-rated manual workers in government employment) was adopted for males and \$10 for females. Self-employed workers earning amounts below this standard were considered as underemployed.

Burns

There were two labor force sample surveys in Rangoon in the early 1950's. The first, in January 1950, was called the Rangoon Sample Survey and was published in a report of the same name. The second, in 1953, Labour Force Sample Survey No. 2, was conducted by John Clement Koop, Statistical Officer in the Directorate of Labour. A report was published in 1956 by the Directorate of Labour entitled, Sample Survey of Labour Force in Rangoon. A Study in Methods.

In the second survey, the reference period was the month from March 21 to April 20, 1953. "Full-employment" for the month was then arbitrarily defined as work of at least 18 days of at least 5 working hours each. "Underemployment" was then anything less than this. The enu-

meration data was from April 20 to May 25, 1953.

The definition of labor force in the Labour Force Sample Survey No. 2 of Rangoon differs from the definition in the United States Current Population Survey as follows:

1. Includes children age 11 and over.
2. Excludes unpaid family workers.
3. Excludes persons following religious vocations except those remunerated for teaching or medical work.
4. Classifies as unemployed persons without work if they are willing to work.

Ceylon

A labor force sample survey on a household basis, called the Employment, Unemployment, and Underemployment Sample Survey (EUUSS), was carried out in Ceylon, covering the period February 1959-March 1960. The survey was sponsored by the Department of Labor and conducted in collaboration with the Department of Census and Statistics under the guidance of an International Labour Office (ILO) expert.

The survey population covered all persons 12 years and over, and under 12 if they were engaged in economic activity. The survey was made with a view to collecting as detailed and objective information as possible, so that the data could be tabulated readily in alternative ways to suit alternative approaches, but without preliminary interpretation. In determination of labor force and employment status, two concepts were utilized: the current "usual status approach" takes into consideration a person's pattern of activity for some past period of time and the expectation of the continuation of that activity in the future. The reference period was kept open. It was believed that this approach was best suited to a developing economy where much work is done on a seasonal or occasional basis. The "labor force approach" refers to the current activity of a person during a rather short refer-

ence period, irrespective of usual activity. This concept is useful in a developing economy to measure unemployment and underemployment due to seasonal fluctuations. In addition, an attempt was made to have the sample of households representative of the cycle of seasons. The sample villages and blocks were therefore arrayed and spread over the period of 1 calendar year. Information was collected on hours of work per reference day and reference week and days of work per reference month. In each case, the reference period was the preceding unit of time, i.e., preceding day, last week, last month.

Information was also collected according to main activities and secondary activities on a current "usual status" basis, so that persons with even minimum attachment to the labor force could be identified.

Persons were classified as unemployed if they were either: (a) without work but willing and available for work, or (b) without any substantive work or duties though able to work or take duties whole time.

Source: "A Survey of Employment, Unemployment and Underemployment in Ceylon," in International Labour Review, March 1963, pp. 247-257.

Chile

The Institute of Economics of the University of Chile in Santiago (Instituto de Economía de la Universidad de Chile) conducts a series of labor force surveys in the cities of Chile. Reports entitled Employment and Unemployment (Ocupación y Desocupación) are issued quarterly, in March, June, October, and December. The number of cities covered varies from survey to survey, but all reports include Santiago and Concepción.

The definitions used in the survey differ from those used in the United States as follows:

1. The "employed" category includes persons on temporary absence from a job with instructions to return to work within 30 days and persons who expect to start a new job within 30 days.

2. Unpaid family workers are classified as employed without a required number of hours worked per week.

Cuba

A labor force sample survey was begun in May 1956 in Cuba. Beginning in January 1957, the surveys were carried out monthly through May 1959. Information and results may be found in Resultados de la Encuesta Sobre Empleo, Sub-Empleo, y Desempleo en Cuba (Mayo de 1956 a Abril de 1957) published by the Coordinating Committee of the Investigation of Employment, Underemployment, and Unemployment, and in a series of monthly technical reports from January 1957 through May 1959, entitled Empleo y Desempleo en la Fuerza Trabajadora published by the Department of Econometrics of the National Council of Economics.

The definition of labor force used in the Cuban surveys is very similar to the definition of the U.S. Current Population Survey. It differs, however, as follows:

1. Includes in the noninstitutional population military personnel living in households.

2. Excludes rentiers.

3. Classifies as employed all unpaid family workers without a specified minimum number of hours worked.

4. Classifies as unemployed those who are not looking for work because they expect to return to a job from which they had been laid off. (No time period specified.)

In the survey of March 1959, underemployed persons were identified as those who worked less than 30 hours a week for pay or profit, plus all unpaid family workers.

Egypt

A labor force sample survey on a nationwide basis was conducted for the first time in Egypt in November 1957. The first 5 rounds of the survey were conducted at 3-month to 4-month intervals between November 1957 and January 1959, the 6th to 9th rounds at 2-month intervals between October 1959 and April 1960, and the 10th to 13th rounds at monthly intervals between May 1960 and August 1960.

The definition of labor force differs from the U.S. Current Population Survey definition as follows:

1. Excludes all persons age 65 and over.
2. Includes children age 6 and over.
3. Classifies as employed unpaid workers in enterprises not operated by the family.
4. Classifies as employed unpaid workers with no specified minimum number of hours worked.
5. Classifies as unemployed persons who did not work on the day of reference.

"Manpower" is defined as the portion of the population whose energy can be used in economic activity. "Manpower" is divided into "Labor Force" and "Not in the Labor Force." Persons who are permanently disabled because of prolonged sickness or physically disabled, and old people (i. e., age 65 and over) are excluded from "Manpower," and thus from its subcategory, "Not in the Labor Force."

The Egyptian labor force survey used three periods of reference: month, week, and day. In each round, the reference week was that ending on a Friday and in most cases, containing the 15th of the month. The reference day was the Tuesday of the reference week.

Nomads in desert areas were excluded from sampling coverage.

India

The Republic of India conducts a labor force sample survey as part of the National Sample Survey. Since the first round began in October 1950, the survey has been repeated at unequal intervals. Since the ninth round, May-November 1955, collection of statistics relating to employment and unemployment has

been a regular feature. Results are published in the National Sample Survey Reports some time after the survey.

The eleventh and twelfth rounds, published in Report No. 52, covered a continuous period from August 1956 to August 1957. Emphasis in these

rounds was given to Employment and Unemployment. The definition of labor force in these two rounds differs from the U. S. Current Population Survey definition as follows:

1. There is no minimum age limit.
2. Excludes from the labor force persons with a job or enterprise at a future date, if not seeking work and not available during the reference period.
3. Excluded rentiers and beggars.

4. Classifies as unemployed persons who do not have a job and who are not seeking work, but are available for work during the reference period.

Two periods of reference were used--a day (the day preceding the day of inquiry) and a week (the 7 days immediately preceding the day of inquiry). On this basis, a person was classified as employed if he had some gainful employment during the reference day or reference week. A person was classified as unemployed if he was without gainful employment and was either seeking work or available for work in the reference period.

Republic of Indonesia

In February and March of 1957, a Labor Force Sample Survey was conducted in Sukabumi Municipal and Regency areas, and was published in a Report of the same name, by the Manpower Directorate, Ministry of Labor of the Republic of Indonesia. Two concepts were used in the classification:

1. Gainful worker: classification based on functions performed by the household members interviewed during the year prior to the day of the survey (the current occupation).

2. Labor Force: classification according to the economic activities of the household members in a

fixed period of 1 week before the day of the survey (i.e., the reference period).

The Sukabumi Survey definition of labor force also differs from the U. S. Current Population Survey definition in that persons age 12 and over are included.

In July and August of 1957, a Labor Force Sample Survey was conducted in Bandung City and was published in a Report of the same name in May 1958.

The definition of labor force in the Bandung Survey differs from the definition in the U. S. Current Population Survey as follows:

1. Includes all working children age 12 and over.

2. Excludes all persons age 65 and over.

3. Classifies as unemployed those persons who report never having been employed or never having had a job or looked for a job for pay or profit.

The reference period is 1 week before the day of the survey.

A labor force sample survey conducted by the Indonesian Government in the fall of 1958 was published in the Report on Labour Force Sample Survey in Java and Madura in 1961. Enumeration lasted from September 8, 1958, until about 2 months later.

For purposes of the survey, the urban areas were separated from the rural areas and two separate questionnaires used.

Rural

The period of reference for the rural area was 1 year prior to the date of the survey. The definition of labor force differs from the definition of United States Current Population Survey as follows:

1. Includes children age 12 and over.

2. Classifies as unemployed persons who want work for the first time, if they are willing to work although they are not actively seeking work.

Urban

The period of reference for the urban areas is one week preceding the date of the survey. The concept of labor force coincides with the Java and Madura Survey's concept of persons engaged in gainful economic activity. The definition of labor force differs from the definition in the United States Current Population Survey as follows:

1. Includes persons age 12 and over.

2. Classifies persons on temporary layoff as employed, with a job but not at work. (In the United States, such persons are classified as unemployed.)

Visibly underemployed persons are those who:

- a. Worked less than 30 hours per week for "economic" reasons, and
- b. Wanted to work longer hours, and
- c. Were seeking additional work.

Israel

The Central Bureau of Statistics in Israel began conducting Labor Force Surveys in 1954. During the years 1954-56, a survey was conducted annually. In 1957, two surveys were made and beginning with 1958, these were increased to four surveys a year. The reason given for the institution of the quarterly survey is that it makes possible calculation of the annual average level of employment, and provides some indication of the seasonality during the year. In 1958 and 1959, the surveys were carried out in different seasons of the year; winter (February), spring (May), summer (August), and autumn (November). The following publications of the labor force surveys are available: Labor Force Survey (June 1954), and those of the

same title for November 1955, June 1956, two in 1957, and Labor Force Surveys 1958. The Labor Force in Israel, by Avner Hovne published in 1961 by the Falk Project for Economic Research in Israel, also contains information on the surveys.

The definition of labor force used in the Israeli Labor Force Survey is very similar to that of the United States Current Population Survey. It differs, however, as follows:

1. Excludes Bedouins.
2. Includes inmates in institutions.
3. Classifies all persons on Kibbutzim as employed.

Japan

The Labor Force Survey of Japan, which is conducted monthly was begun in September 1946. It can be found in the Monthly Report on the Labor Force Survey, the Annual Report of the Labor Force Survey, and the Labor Force Survey of Japan, published intermittently. The Labor Force Special Survey is designed to complement the monthly survey, es-

pecially with data on underemployment. This survey has been carried out on a semiannual basis since December 1949. It is published in the Report on the Special Survey of the Labor Force Survey. Japan has also conducted an Employment Status Survey triannually since 1956 for the purpose of clarifying the employment

status of the population and to obtain additional information on underemployment. The monthly survey obtains information on the employment status of the population in a survey week whereas the semiannual and triannual surveys also obtain information on usual status.

The Japanese definition of labor force as applied in the monthly survey differs from the definition in the United States Current Population Survey as follows:

1. Survey includes the institutional population.
2. Classifies as employed unpaid family workers irrespective of number of hours worked during reference week.
3. Includes all persons age 15 and over.

The reference period is the week ending on the last day of the month (in December, the 20th to the 26th).

Underemployment is defined in Japanese surveys as follows:

1. All persons who desire additional work.
2. Full-time workers who desire to change their jobs.
3. Workers in jobs where wages are extremely low, such as domestic servants, shop assistants, as well as unpaid workers.
4. Persons earning less than the total allowance and benefits drawn by unemployed persons in receipt of relief.

Malaya

A labor force sample survey called Unemployment Survey was carried out in Malaya in January 1959. The survey population was all males between the ages of 16 and 60, inclusive. For the analysis, those economically inactive were excluded.

Source: Statistics Development Section, ECAFE Secretariat, First Annual Report on Sample Surveys in the ECAFE Region, p. 272. (Communication dated June 30, 1959, from the Economic Adviser, Prime Minister's Department.)

Pakistan

Two labor force sample surveys were carried out in 1955 and 1959 in Pakistan as part of Manpower Surveys. The results of the first survey were published in 1958 in Report of the ILO on the Manpower Survey in Pakistan. The later survey was published

in 1962 in Report on 1959 Manpower Survey in Pakistan, Carried Out Under Labour Market Information Program. The 1959 survey was made with a view to maintaining comparability with the 1955 results.

In 1955, "employment status" was subdivided into (1) working section of the labor force, (2) nonworking section of the labor force, and (3) not in the labor force. The "working section of the labor force" is equivalent to the employed category of the United States Current Population Survey, except that it excludes the U. S. group "With a job but not at work." The "nonworking section of the labor force" includes the categories of unemployed, and persons with jobs but not at work.

The definition of labor force in the 1959 survey differs from the definition in the U. S. Current Population Survey as follows:

1. Excludes from employment all persons usually working for less than 15 hours a week.

2. Includes children under 12 if they are working 15 hours or more a week.

3. Classifies as employed persons at work during the major portion of the reference week. (The 1955 survey classified as employed persons who worked on at least 4 days during the reference.)

Persons working less than 31 hours during the reference week were considered underemployed if they were looking for additional work. Data for the two wings of Pakistan, East and West, are given separately.

Source: Government of Pakistan, Ministry of Health, Labour, and Social Welfare, Department of Manpower and Employment, Report on 1959 Manpower Survey in Pakistan, 1962, pp. 10-11 and 34-35.

Philippines

A labor force survey is part of the Philippine Statistical Survey of Households which was begun in May 1956. Results and information are published by the Bureau of the Census and Statistics and the National Economic Council in the Philippine Statistical Survey of Households Bulletin. Series Nos. 1, 3, 5, 7, and 8 cover the labor force aspect of the surveys. Series No. 8, published in August 1962, covers the October 1960 survey (the 10th survey) and contains comparative data from the October 1959 survey.

All information relates to the survey week which is the calendar week (Sunday to Saturday) preceding the visit of the interviewer. The survey week is not the same for all respondents because not all of them are interviewed in the same week.

The definition of labor force in the Philippine Statistical Survey of Households differs from the definition of the U. S. Current Population Survey as follows:

1. Includes all working children age 10 and over.

2. The noninstitutional population, and therefore the total labor force, excludes persons on ship, all persons in the hospitals, persons in army barracks and hotels.

3. Includes members of the Armed Forces who at the time of the interview were living with their families in households.

4. Classifies unpaid family workers as employed without a specified minimum number of hours worked.

5. Classifies as employed, persons on layoff who are scheduled to return within 30 days and persons scheduled to begin a new job within 30 days.

6. Gives priority to "with a job but not at work" (classified as

employed) over "looking for work" (unemployed).

Employed persons at work or not at work reported as wanting additional work are considered as underemployed--visibly underemployed if they are part-time workers (under 40 hours per week) or invisibly underemployed if they are full-time workers.

The first survey, conducted in May 1956, was experimental and the results are not comparable with the later surveys. The questionnaire design was changed following the May 1956 survey to:

1. Exclude from the employed category women doing only odd jobs around the house, and

2. Exclude from the unemployed category women primarily engaged in housekeeping who do not have a sincere desire to work.

Puerto Rico

Puerto Rico has conducted a labor force sample survey since 1946. Currently it is conducted monthly. Results are published in the series, Employment and Unemployment in Puerto Rico, with additional information published in Full Employment and Underemployment in Puerto Rico.

The Puerto Rican Survey is very similar to the U. S. Current Population Survey. The definition of labor force differs, however, from the United States definition as follows:

1. Classifies as employed, persons on layoff with instructions to return to work within 30 days.

2. Classifies as employed, persons waiting to report to a new job at a stipulated future date.

In dealing with underemployment, the Puerto Rican Survey places emphasis upon subjective criteria, i.e., desire of the respondent for more work. The following three questions are put to all employed persons:

1. In addition to working, did you also look for work?

2. Why didn't you work more hours last week?

3. Did you want to work more hours last week?

Thus, the following persons are classified as underemployed:

1. Persons working less than 35 hours a week for a salary or wage who wanted to work more hours.

2. Subsistence farmers, regardless of hours worked or desire for working more hours.

3. Self-employed persons, irrespective of the number of hours worked, who wanted to work more hours.

In January 1961, 97,000 out of 565,000 employed persons were listed as underemployed according to Full Employment and Underemployment in Puerto Rico, January 1959 to January 1961, Special Report No. 27 on the Labor Force.

The Ryukyu Islands

Labor force sample surveys were begun in the Ryukyu Islands in December 1951. In 1952, a survey was conducted, using a reference week of the first through the seventh of each of the six months, July through December. In 1953, a labor force survey was carried out on the same week (first through seventh) for each month of the year. The results of these surveys were published by the U.S. Civil Administration in Civil Affairs Activities in the Ryukyu Islands, Vol. I, No. 3.

The technical notes accompanying the survey report state that the employment status concepts used follow closely those of the Japanese Monthly Labor Force Survey with some modifications to meet conditions in the Ryukyu Islands. The labor force definition of the Ryukyu Islands Sur-

vey differed from the definition of the United States Current Population Survey in that all unpaid family workers (except those in agricultural employment) were included and were classified as employed without a required minimum number of hours worked per week.

The data collected related to the noninstitutional population age 14 years and over. The reference period was 1 week, the first 7 days of the month. Immediately before the beginning of the reference week the enumerators distributed time record sheets on which, each day of the survey week, the respondents recorded the number of hours worked on that day. The enumerator transcribed this information to the questionnaire at the time of the personal interview.

Taiwan

During the latter part of 1962, a pilot survey of the labor force was conducted in Taiwan, preparatory to a full-scale survey to be conducted quarterly in 1963. Three publications have been issued by the Department of Social Affairs, of the Taiwan Provincial Government:

1. "A Report on the Labor Force Pilot Survey of Taiwan," April 1963.
2. "Report on the Research of the Establishment of Labor Force Survey System in Taiwan," June 1963.
3. "Sampling Design of Labor Force Survey in Taiwan," June 1963.

Trinidad and Tobago

A series of labor force sample surveys has been carried out at irregular intervals in Trinidad and Tobago. The first surveys were for November of the years 1955, 1956, and 1957 and April of 1957. Reports of these surveys have been published by the Central Statistical Office in the year following the year of the survey, in the series, The Size and Structure of the Labour Force. The Central Statistical Office states that these surveys have some inaccuracies and recommends that the figures be used with caution. It advises that the results of the 1957 Labour Force Sample Survey are too inaccurate to include in statistical publications. In addition, these surveys cannot always be compared with each other. Another labor force survey was made in April 1959.

Results were published in July 1959 in Report on the Manpower Situation in Trinidad and Tobago. No. 2.

One of the main reasons for the incomparability of the various survey results is the change in definitions. For example, in the 1956 survey, only persons who did not have jobs and who were seeking work were classified as unemployed. In the April 1959 survey, persons without jobs who wanted work, who sought work, or were available were classified as unemployed.

In the April 1959 survey, persons were considered as underemployed if they worked a short week (less than 33 hours), or if they had a job but were not at work and normally worked a short week.

Viet Nam

The Institut National de la Statistique conducted a series of demographic surveys during the period June 1958 to January 1959. These were pilot surveys, since no census had been taken since 1931. The first of these surveys was carried out in Saigon during June and July 1958. Other surveys were conducted in Hue in August, in the suburbs of Saigon in November, in Cantha during December 1958, in Nhatrang during December 1958 and January 1959, and in Dalat at the end of January 1959.

The Saigon survey covered all social classes of the population, without distinction, residing within

the official limits of the Prefecture of Saigon. Interviewers used two types of questionnaires, one type for the household and the other for the individual. The individual questionnaire dealt with demographic aspects. Persons over 14 years of age were asked about their economic activities. The reference period was the 2 weeks preceding the date of enumeration. Persons working less than 12 days during the 2 weeks were asked for reasons for not working the full time.

The results of the survey have been presented in 16 tables. The other surveys were carried out in a similar manner.

APPENDIX B. SAMPLING DESIGN CASE STUDIES

United States: The sampling design/

The Current Population Survey sample is spread over 330 sample areas comprising 638 counties and independent cities with coverage in every State and the District of Columbia. A total of 42,000 dwelling units and other living quarters are designated for the sample at any time, and completed interviews are obtained each month from about 35,000 households containing over 80,000 persons 14 years old and over. Of the remaining sample households, about 1,500 are those from which information should be collected but is not because the occupants are not found at home after repeated calls, are temporarily absent, or are unavailable for other reasons. The other 5,500 designated units represent those found to be vacant, occupied by persons with residences elsewhere, demolished units or those converted to nonresidential use, and the like.

* * * * *

Selection of sample areas.
The entire area of the United States consisting of 3,103 counties and independent cities was

divided into 1,891 primary sampling units. With some minor exceptions, a primary sampling unit (PSU) consists of a county or a number of contiguous counties. Each standard metropolitan area (SMA) constituted a separate PSU. In combining counties to form PSU's each PSU was defined so as to be as heterogeneous as possible. Greater heterogeneity could be accomplished by including more counties. However, another important consideration was to have the PSU sufficiently compact in area so that a small sample spread throughout it could be efficiently canvassed without undue travel cost. A typical primary sampling unit, for example, included both urban and rural residents of both high and low economic levels and provided, to the extent feasible, diverse occupations and industries.

The PSU's were then grouped into 330 strata. Among these

1/ U. S. Department of Commerce, Bureau of the Census. Concepts and Methods Used in the Current Employment and Unemployment Statistics Prepared by the Bureau of the Census. Current Population Reports, Series P-23, No. 5. May 9, 1958.

PSU's, 88 of the largest standard metropolitan areas (including all over 300,000 inhabitants) and certain other areas were strata by themselves. In general, however, a stratum consisted of a set of PSU's as much alike as possible in various characteristics such as geographic region, population density, rate of growth in the 1940-1950 decade, percentage nonwhite, principal industry, type of agriculture, and so on. Except for the 88 SMA's mentioned above and the 4 other areas, each of which is a complete stratum, the strata were established so that their sizes in terms of 1950 population were approximately equal. Where a PSU was a stratum by itself, it automatically fell in the sample. From each of the other strata, one PSU was selected in a random manner for inclusion in the sample, the selection having been made in such a manner that the probability of the selection of any one unit was proportionate to its 1950 population. For example, within a stratum the chance that a PSU with a population of 50,000 would be selected was twice that for a unit with a population of 25,000.

The resulting 330 areas are those in which the survey is being conducted.

Selection of sample households. For each stratum an overall sampling ratio of about 1 in 1,380 is used at the present time (1958). The sampling ratio used in each particular sample area (sample PSU) depends on the proportion that the sample area population, at the time of the 1950 Census, was of the stratum population. Thus, in a sample area which was one-tenth of the stratum, the within-PSU sampling ratio which results is 1 in 138, achieving the desired ratio of 1 in 1,380 for the stratum.

Within each of the 330 PSU's, area sampling methods are used in the selection of specific households. In each PSU, the number of households to be enumerated each month is determined by the application of the within-PSU sampling ratio rather than through the assignment of a fixed quota. This procedure makes it possible for the sample to reflect any shifts in population. For example, if on the basis of the 1950 Census a sample ratio of 1 in every 138 is used in a sample area, the number of households found in the sample will be larger than that obtained by a fixed quota in areas where the number of households has increased since the census. In areas where the number of households has declined,

the number of sample households will be smaller. In this way the sample properly reflects the changing distribution of the population and avoids the distortion which would result from the application of fixed quotas of households, or persons, based on the population at an earlier date.

In the application of area sampling methods, several stages of sampling were used within each selected PSU. First, a sample of administrative units used for the 1950 Censuses of Population and Housing (enumeration districts) was selected, with the probability of selection of any one of these proportionate to its 1950 population. These selected enumeration districts were then subdivided into segments, that is, small land areas with well-defined boundaries having in general an expected 'size' of about six dwelling units or other living quarters. Where roads, streams, and other terrain features that could be used to subdivide an enumeration district were insufficient, some of the resultant segments were several times the desired average 'size' of six households. For each subdivided enumeration district, one segment was designated for the sample, with the probability of selection proportionate to the estimated 'size'

of the segment. For the Nation as a whole, approximately 6,000 segments are in the sample in any given month. Where available advance information indicated that a selected segment contained about six households, all units within the segment boundaries were to be included in the sample. In cases where the advance information indicated a segment "size" of several times six units, a field listing was to be made of all living quarters in the segment and a systematic sample drawn so as to achieve the equivalent of a segment which is canvassed completely.

In subdividing enumeration districts into segments and in determining in advance the approximate 'size' of each segment, use was made of various materials. In the larger urban places, information concerning the number of units in each block was obtained from Block Statistics bulletins published from results of the 1950 Censuses of Population and Housing for 209 of the cities of 50,000 inhabitants or more. In conjunction with these bulletins, considerable use was made of large-scale Sanborn maps, which are available commercially, are relatively up to date for most medium-size and large urban centers, and show the general outline of each structure within

blocks. Where such maps were not available, the location and number of dwelling units in small geographic areas bounded by roads, streams, etc., were obtained either from maps used by interviewers in the 1950 Censuses of Population and Housing or from special field visits. Enumeration districts in urban centers--where mapping materials were generally more precise--were more readily subdivided into compact segments (averaging six units) than were those in rural areas; but were of this size also. Some variation in actual segment size arose also where the mapping materials, although sufficiently detailed, were out of date because of substantial new construction or because they contained errors.

Note: The sample described here was modified in 1962 to take advantage of the resources and information made available by the 1960 Decennial Census, but no major change in the sample design was made. The number of primary sampling units was increased from 330 to 357 as a result of the revision but the total number

2/ Philippine Statistical Survey of Households Bulletin. Vol. 1, No. 1 (Manila, May 1956).

of interviewed households remained approximately the same: 35,000 households per month. For a more detailed discussion of the sample design and revision see,

1. U. S. Department of Commerce, Bureau of the Census, The Current Population Survey. A Report on Methodology. Technical Paper No. 7 (1963), 91 pp.

2. President's Committee to Appraise Employment and Unemployment Statistics, Measuring Employment and Unemployment (1962) Appendix D. An Examination of the Sampling Procedures Employed in the Current Population Survey. Appendix E. Revision of the Current Population Survey Sample, 1961-63.

Philippines: The Sampling Design. 2/

The survey was aimed originally at reaching a representative cross-section of the Philippine households numbering 6,500 scattered over 300 barrios [neighborhoods], 150 poblaciones [villages], and 58 provincial capitals and cities. These households were selected through scientific sampling methods. The method used in the national survey is called multi-stage sampling. In this method, a number

of representative municipalities from an updated list of municipalities in the country were selected at random. From each of the selected municipalities, two barrios were chosen at random and the poblaciones were taken with certainty. All the households within the selected poblaciones and barrios were listed and a random sample of these households was selected for interview. In the case of provincial capitals and chartered cities, the households in the selected precincts were listed

and a random sample was selected for interview.

Regional Subdivision

For purposes of the survey, the Philippines was divided into 10 regional divisions taking into consideration such facts as economic activities, climate, crops grown, dialects spoken, ethnic origin, and others. The regional divisions of the country as agreed upon by the inter-agency committee are as follows:

Sampling Procedure for Rural Areas

Type of sampling	Stratification	Selection of municipalities	Selection of poblaciones and households
<p>1. Three stage sampling:</p> <p>a. First stage: Municipalities</p> <p>b. Second stage: Barrios and poblaciones</p> <p>c. Third stage: Households</p> <p>2. Number of households selected:</p> <p>a. Barrios: 3,000</p> <p>b. Poblaciones: 1,500</p>	<p>1. Municipalities were arranged into 10 regions.</p> <p>2. Municipalities were stratified according to their densities of population in ascending order.</p> <p>3. Strata were formed by counting of their approximate specified population starting from the municipality with the lowest density.</p> <p>4. The strata were adjusted so that their population are approximately equal and in no case was a municipality divided.</p> <p>5. 30 strata were formed.</p>	<p>1. Five municipalities were randomly selected with probability proportional to size of population and with replacement in each stratum.</p> <p>2. Lahiri's method was used.</p> <p>3. 150 municipalities were selected from all the 30 strata.</p>	<p>1. Two barrios and the poblacion of selected municipality were selected for complete listing of households.</p> <p>2. 150 sample poblaciones and 300 sample barrios were selected from 150 sample municipalities.</p> <p>3. Sample barrios were selected with equal probability and without replacement.</p> <p>4. Poblaciones of selected municipalities were automatically made sample poblaciones.</p> <p>5. All households in each selected barrio or poblacion were completely listed.</p> <p>6. The number of sample households to be enumerated was determined by the product of a specified proportion and the total number of households in the selected barrios or poblaciones.</p> <p>7. Sample households were selected systematically.</p>

Rural Areas

The rural areas in the Philippines were classified in two sectors, the barrios representing the true rural conditions, and the poblaciones representing

the intermediate conditions of the rural and urban areas. All the barrios and poblaciones were grouped into their respective municipalities while the municipalities were arranged into regions.

Sampling Procedure for Urban Areas

Type of sampling	Stratification	Selection of precincts	Selection of households
<p>1. Two stage sampling:</p> <p>a. First stage: precincts</p> <p>b. Second stage: households</p> <p>2. Number of households selected</p> <p>a. Chartered cities and provincial capitals-- 1,200</p> <p>b. Metropolitan Manila-- 800</p>	<p>1. The chartered cities and provincial capitals were grouped into ten regions after the three big cities, namely, Cebu, Iloilo, and Davao were separated.</p> <p>2. These were stratified according to degree of urbanization; i.e. percentage of urban precincts in the descending order.</p> <p>3. Strata were formed by counting off their approximate specified number of precincts, starting from the highly urbanized city or provincial capital.</p> <p>4. The strata were adjusted so that the number of precincts in each strata is approximately equal and in no case was a city or provincial capital divided.</p> <p>5. 30 strata were formed in cities and provincial capitals including the three big cities; 32 in Metropolitan Manila.</p>	<p>1. Five precincts were selected at random from each stratum with equal probability and with replacement.</p> <p>2. 150 precincts were selected from all chartered cities and provincial capitals; 160 precincts in Manila.</p>	<p>1. All the households in selected cities and provincial capitals were listed.</p> <p>2. The number of sample households to be enumerated was determined by the product of specified proportion and the total number of households in selected precincts.</p> <p>3. Systematic selection of households to be enumerated was made.</p>

Urban Areas

The urban areas in the Philippines were classified into two sectors: the chartered cities including provincial capitals,

and Metropolitan Manila. Metropolitan Manila includes the four congressional districts of Manila and its suburbs; namely, Quezon City, Pasay City, Calocan, Makata, San Juan, Paranaque, and Mandaluyong.

India: The Sampling Design ^{3/}

The whole of the Indian Union, including Jammu and Kashmir, but excluding Sikkim and the Andaman and Nicobar Islands, were brought under the geographical coverage of the survey.

The rural areas of India were divided into nearly 300 strata, one district or a group of contiguous districts forming a single stratum. In the rural areas, villages were chosen as the first stage sample units. The total number of sample villages to be surveyed were allocated to the different strata in proportion to their respective populations, with necessary adjustments to make the number of sample villages in each stratum a multiple of four. The allocated sample villages in each stratum were selected with probability proportional to population (Census 1951) and with replacement. In all, 1624 sample villages were selected. Ten

households were selected from each sample village by the method of systematic sampling from the list of households prepared by the investigator at the village.

The urban areas of India covering 3018 towns were divided into 94 strata. One set of strata was formed by the individual cities with a population of 3 lakhs and above and each of the capital towns of part A and part B States excluding Shillong. The other set comprised of the remaining urban areas in each of the States. Some departure from this rule was made in the case of greater Calcutta (excluding Calcutta city and Mourah town) and greater Bombay (excluding Bombay city). Greater Calcutta was further subdivided into 7 strata while greater Bombay formed a single stratum. In the urban areas, the census blocks provided the first stage sample units. The total number of sample blocks to be surveyed were allocated in two stages. First they were allocated to different States in proportion to the non-agricultural population of respective States. The State quota was further allocated to the strata in proportion to the

^{3/} Quoted from: The Cabinet Secretariat The National Sample Survey, Number 16, Report on Employment and Unemployment Ninth Round: Preliminary, May-November 1955 (New Delhi, April 1959), p. 2.

non-agricultural population of the strata, with adjustments wherever necessary, to make the number of sample blocks in each stratum a multiple of four. Altogether 2108 sample blocks were selected.

All the households in a sample block were classified into two types; those with at least one unemployed person in each of these constituted type 1 households and those with no unemployed person constituted type 2 households. A sample of 10 from type 1 households and a sample of 6 from type 2 households were drawn by the method of systematic sampling from the list of

households prepared by the investigator at the sample block.

Like other surveys conducted by the NSS, the total sample of villages and blocks was divided into four independent sub-samples, each capable of furnishing a valid estimate. The first two sub-samples, by and large, extended over the first three months and the remaining two over the next three months of the period of enquiry. Of the selected sample villages covered by the first two sub-samples, five villages were found to be uninhabited during the investigation.

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Appendix C

Form Approved: Budget Form No. 44-21202-13

2. CONTROL NUMBER		3. INTERVIEWER CHECK ITEM		FORM CPS-1 (2-8-63)		U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS			
3. SAMPLE A		Only CPS-1 for household <input type="checkbox"/> (Fill all applicable items on this page) First CPS-1 of construction & M.M. <input type="checkbox"/> Second CPS-1 of construction & M.M. <input type="checkbox"/> (Transcribe from 2 through 26 from first CPS-1) Third, fourth, etc. CPS-1 <input type="checkbox"/>		CURRENT POPULATION SURVEY				MARCH 1963	
4a. (Transcribe from Control Card Item No. 11, or 12).....		A B C D E		6. PIN NO.	7. SERIAL NO.	8. HOUSEHOLD NO.	9. HOUSEHOLD NO.		
4b. If no entry in 4a, enter average from C.C. Item No.		<input type="checkbox"/> None or none <input type="checkbox"/> <input type="checkbox"/> Less than 10 items <input type="checkbox"/>		0 0 0 0	0 0 0 0	0 0 0	0 0 0 0		
5. TYPE OF LIVING QUARTERS		HOUSING UNIT <input checked="" type="checkbox"/> OTHER UNIT <input type="checkbox"/> House, apartment, etc. <input type="checkbox"/> Quarters not in use in housing or boarding house <input type="checkbox"/> Not in conventional hotel, motel, etc. <input type="checkbox"/> Not yet put in permanent hotel, motel, etc. <input type="checkbox"/> Not in permanent, in transient hotel, motel, etc. <input type="checkbox"/> Year site or trailer site <input type="checkbox"/> Not in rooming house <input type="checkbox"/> Other not in (Specify below) <input type="checkbox"/> Trailer, permanent <input type="checkbox"/> Trailer, mobile <input type="checkbox"/> Not yet specified above (Specify at right) <input type="checkbox"/>		1 0 0 0	1 0 0 0	1 0 0	1 0 0 0		
				2 0 0 0	2 0 0 0	2 0 0	2 0 0 0		
				3 0 0 0	3 0 0 0	3 0 0	3 0 0 0		
				4 0 0 0	4 0 0 0	4 0 0	4 0 0 0		
				5 0 0 0	5 0 0 0	5 0 0	5 0 0 0		
				6 0 0 0	6 0 0 0	6 0 0	6 0 0 0		
				7 0 0 0	7 0 0 0	7 0 0	7 0 0 0		
				8 0 0 0	8 0 0 0	8 0 0	8 0 0 0		
				9 0 0 0	9 0 0 0	9 0 0	9 0 0 0		
				FILL FOR SPECIAL BILLING PLACE					
				11. NAME OF PLACE		12. TYPE OF PLACE CODE			
				13. SAMPLE UNIT NO.		14. DESCRIPTION OF SAMPLE UNIT (Room No., Bed No., etc.)			
17. INTERVIEWER DATA		17. HOUSEHOLD INTERVIEW (Mark one reason in Item 17a or 17b. If Item 17a marked, fill Item 17c. If Item 17b marked, fill Item 17d, as applicable.)							
17a. INTERVIEWER CODE A B C D E F G H J K 0 0 0 0 0 0 0 0 0 0 0 0 1 2 3 4 5 6 7 8 9 10 11 0 0 0 0 0 0 0 0 0 0 0 0		17b. TYPE A Block construction under way (not yet of final form) REASON No one home <input type="checkbox"/> Temporarily absent <input type="checkbox"/> Refused <input type="checkbox"/> Other (Specify below) <input type="checkbox"/>		17c. TYPE B OR C Vacant - regular <input type="checkbox"/> Vacant - storage of household furniture <input type="checkbox"/> Temp. occ. by persons with MBE <input type="checkbox"/> Under way to be demolished <input type="checkbox"/> Under construction, not ready <input type="checkbox"/> Occ. by Armed Forces members or persons under 14 <input type="checkbox"/> Hospital test site or trailer site <input type="checkbox"/> Special permit, construction not started <input type="checkbox"/> Demolished <input type="checkbox"/> House or trailer moved <input type="checkbox"/> Structure exposed <input type="checkbox"/> Converted to permanent business or storage <input type="checkbox"/> Stripped <input type="checkbox"/> Confined <input type="checkbox"/> Other living quarters <input type="checkbox"/> Other (Specify below) <input type="checkbox"/>		17d. SEASONAL STATUS Year-round <input type="checkbox"/> (FIVE 17e) Migratory workers <input type="checkbox"/> (FIVE 17e and 17f below) Seasonal <input type="checkbox"/> (FIVE 17e and 17f below) 17e. In this unit usually occupied: Summer only <input type="checkbox"/> Winter only <input type="checkbox"/> Other (Specify below) <input type="checkbox"/> 17f. CONDITION OF UNIT Sound <input type="checkbox"/> Deteriorating <input type="checkbox"/> Disappointed <input type="checkbox"/>			
17c. DATE COMPLETED		17d. METHOD OF INTERVIEW Personal <input type="checkbox"/> <input checked="" type="checkbox"/> (FIVE 17) Telephone <input type="checkbox"/> Mail interview <input type="checkbox"/>		17e. RACE OF HEAD White <input type="checkbox"/> Negro <input type="checkbox"/> Other <input type="checkbox"/>					
17e. Enter name of State in which this unit is located.									
FILL FOR EACH HOUSEHOLD MEMBER 0-13 YEARS OF AGE									
27. LINE NO.		28. RELATIONSHIP TO HEAD OF HOUSEHOLD (Control Card Item 28)		29. AGE LAST BIRTHDAY (Mark one check only)		30. RACE			
0 0 0		Child <input type="checkbox"/>		8 0 7 0		White <input type="checkbox"/>			
1 0 0		Other relative <input type="checkbox"/>		1 0 8 0		Negro <input type="checkbox"/>			
2 0 0		Nonrelative - in same household <input type="checkbox"/>		2 0 9 0		Other <input type="checkbox"/>			
3 0 0		Nonrelative - not in household <input type="checkbox"/>		3 0 10 0		31. SEX			
4 0 0		Other relative <input type="checkbox"/>		4 0 11 0		Male <input type="checkbox"/>			
5 0 0		Nonrelative - in household <input type="checkbox"/>		5 0 12 0		Female <input type="checkbox"/>			
6 0 0		Nonrelative - not in household <input type="checkbox"/>		6 0 13 0		32. Was ... living? ("No" in Item 34)			
7 0 0		Child <input type="checkbox"/>				In this house on March 1, a year ago? <input type="checkbox"/>			
8 0 0		Other relative <input type="checkbox"/>				In this same county on March 1, a year ago? <input type="checkbox"/>			
9 0 0		Nonrelative - in household <input type="checkbox"/>				What State (or foreign country) was ... living in on March 1, a year ago? <input type="checkbox"/>			
		Nonrelative - not in household <input type="checkbox"/>							
		Child <input type="checkbox"/>							
		Other relative <input type="checkbox"/>							
		Nonrelative - in household <input type="checkbox"/>							
		Nonrelative - not in household <input type="checkbox"/>							
		Child <input type="checkbox"/>							
		Other relative <input type="checkbox"/>							
		Nonrelative - in household <input type="checkbox"/>							
		Nonrelative - not in household <input type="checkbox"/>							
		Child <input type="checkbox"/>							
		Other relative <input type="checkbox"/>							
		Nonrelative - in household <input type="checkbox"/>							
		Nonrelative - not in household <input type="checkbox"/>							
		Child <input type="checkbox"/>							
		Other relative <input type="checkbox"/>							
		Nonrelative - in household <input type="checkbox"/>							
		Nonrelative - not in household <input type="checkbox"/>							



18. LINE NO. THIS PERSON <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> Other (Specify).....DT	20. Did ... do any work at all LAST WEEK (not counting work around the house?) Yes <input type="radio"/> No (Skip to 22) <input type="radio"/>	22. Yes ... looking for work? (include special cases) Yes <input type="radio"/> No (Ask 24) <input type="radio"/>	24. Even though ... did not work LAST WEEK, does he have a job or business? Yes <input type="radio"/> No (Omit 25-26) <input checked="" type="radio"/>
19. What was ... doing most of LAST WEEK - (working, keeping house, going to school, or something else?) <input checked="" type="radio"/> Working (Skip to 21) WK <input type="radio"/> Looking for work ... LK <input type="radio"/> With a job but not at work ... J <input type="radio"/> Keeping house H <input type="radio"/> Going to school S <input type="radio"/> Unable to work U (Omit 20-26) <input type="radio"/> Other (Specify).....DT	21. How many hours did ... work last week (or all jobs)? 8 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> <i>If 1-36 hours in 21, fill 21A - B - C.</i> <i>If 35 or more hours in 21, skip to 26 and enter job worked at last week.</i>	23. How many weeks has ... been looking for work? 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> <i>If entry in 23, ask 23A and go to 26.</i>	25. Why was ... absent from work last week? Own illness <input type="radio"/> On vacation <input type="radio"/> Bad weather <input type="radio"/> Labor dispute <input type="radio"/> Temporary layoff (Less than 30 days) <input type="radio"/> New job to begin within 30 days <input type="radio"/> Other (Specify) <input type="radio"/> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> How many weeks ago was ... laid off? Record answer in item 23 and go to 23A. </div> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> How many weeks ago did ... start looking for a job? Record answer in item 23 and go to 23A. </div> <i>If entry in 25, fill 25A and go to 26.</i>
IF WORKED LESS THAN 35 HOURS LAST WEEK (1-36 in item 21) 21A. Does ... usually work 35 hours or more a week of this job? Yes <input type="radio"/> No <input type="radio"/>		26. DESCRIPTION OF JOB OR BUSINESS A. For whom did ... work? _____ (Name of company, business, organization, or other employer) B. What kind of business or industry is this? _____ (For example: TV and radio mg., retail shoe store, State Labor Dept., farm.) C. What kind of work was ... doing? _____ (For example: civil engineer, stock clerk, typist, farmer, etc.) D. Was this person- An employee of PRIVATE company, business, or individual for wages, salary, or commission P <input type="radio"/> A GOVERNMENT employee (Federal, State, county, or local) G <input type="radio"/> Self-employed in OWN business, professional practice, or farm O <input type="radio"/> Working WITHOUT PAY in family business or farm WP <input type="radio"/> NEVER WORKED NEV <input type="radio"/>	
21B. Why is the reason ... worked less than 35 hours LAST WEEK? Mark one circle below Slack work <input type="radio"/> Material shortages <input type="radio"/> Plant or machine repairs <input type="radio"/> New job started during week <input type="radio"/> Job terminated during week <input type="radio"/> Could find only part-time work <input type="radio"/>		21C. What is the reason ... USUALLY works less than 35 hours a week? Mark one circle below Holiday (legal or religious) <input type="radio"/> Labor dispute <input type="radio"/> Bad weather <input type="radio"/> Own illness <input type="radio"/> On vacation <input type="radio"/> Too busy with housework, school, etc. <input type="radio"/> Did not want full-time work <input type="radio"/> Full-time work week under 35 hours <input type="radio"/> Other reason (Specify) <input type="radio"/>	
FOR OFFICE USE ONLY IND. <input checked="" type="checkbox"/> OCC. 0 <input type="radio"/> 1 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> A O G O H O U O B O H O P O V O C O J O Q O W O D O K O R O X O E O L O S O Y O F O M O T O Z O			
FILL FOR ALL HOUSEHOLD MEMBERS 16 YEARS OLD AND OVER -- INCLUDING THOSE IN ARMED FORCES			
27. LINE NUMBER 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/>	27a. POPULATION STATUS Civilian 14+ <input type="radio"/> Armed Forces Member (A.F. in Control Card Item 23.) <input type="radio"/>	28. RELATIONSHIP TO HEAD OF HOUSEHOLD (Control Card Item 15) (Enter relationship and mark one circle below) Head <input type="radio"/> Wife of Head <input type="radio"/> Child <input type="radio"/> Other rel. <input type="radio"/> Nonrel. - no own rel. in h'hd <input type="radio"/> Nonrel. - own rel. in h'hd <input type="radio"/>	29. AGE 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/>
34. Was ... living in this house on March 1, a year ago? No <input type="radio"/> (Ask Item 35) Yes <input type="radio"/> (Skip to Item 37)		35. Was ... living in this same county on March 1, a year ago? No <input type="radio"/> (Ask Item 36) Yes <input type="radio"/> (Skip to Item 37)	
36. What State (or foreign country) was ... living in on March 1, a year ago? (Enter State or foreign country and mark circle below) This State <input type="radio"/> Different State <input type="radio"/> Abroad <input type="radio"/>		37. INTERVIEWER CHECK ITEM Is this a male 18-64 years old? Yes <input type="radio"/> (Ask Item 39) No <input type="radio"/> (Skip to 41 if not in Rot. 4 or 8)	
38. In March a year ago, did ... have a job (or business)? Yes <input type="radio"/> (Skip to Item 40) No <input type="radio"/> (Ask Item 39)		39. Was ... looking for work or on layoff from a job a year ago? Yes - looking or on layoff ... <input type="radio"/> No - in school or college <input type="radio"/> No - Other <input type="radio"/> (Specify below)	
40. INTERVIEWER REMINDER No in 34 <input type="radio"/> (Fill Form CPS-337 at end of interview. Go to 41 if not in Rot. 4 or 8) Yes in 34 ... <input type="radio"/> (Go to 41 if not in Rot. 4 or 8)		41. INCOME IN THE YEAR 1962 (Ask for all persons 14 years of age and over except in rotations 4 and 8. Write actual amount in space provided in Items 41-44 and mark appropriate circles. Mark \$10,000 + circle if \$10,000 or more.) LAST YEAR (1962) HOW MUCH DID ... EARN: 41. In wages or salary? \$ _____ \$10,000+ # <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> None 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/>	
42. By working in his own business or professional practice - partnership? \$ _____ \$10,000+ # <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> None 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> Lost money 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/>		43. By working on his own farm? \$ _____ \$10,000+ # <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> None 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> Lost money 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/>	
44. INCOME OTHER THAN EARNINGS - (Ask each of items 44a, b, c, and d; add up amounts in those items and record below) \$ _____ \$10,000+ # <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> None 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> Lost money 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/>		44a. Social Security, veterans' payments, or other government or private pensions? Yes ... <input type="radio"/> How \$ _____ No ... <input type="radio"/>	
44b. Dividends, interest on savings accounts or bonds, or income from annuities, estates or trusts? Yes ... <input type="radio"/> How \$ _____ No ... <input type="radio"/>		44c. Net income from rental of property or from boarders or lodgers? Yes ... <input type="radio"/> How \$ _____ No ... <input type="radio"/>	
44d. Anything else - unemployment or sickness benefits, public assistance, regular contributions from relatives (living in this h'hd, alimony, etc.)? Yes ... <input type="radio"/> How \$ _____ No ... <input type="radio"/>			

18. LINE NO. THIS PERSON

19. What was ... doing most of LAST WEEK -
 (working, keeping house, going to school, or something else?)
 Working (Skip to 21) WK
 Looking for work ... LK
 With a job but not at work ... J
 Keeping house ... H
 Going to school ... S
 Unable to work ... U (Omit 20 - 25)
 Other (Specify) ... OT

20. Did ... do any work at all LAST WEEK not counting work around the house?
 Yes No (Skip to 22)

21. How many hours did ... work last week (or all jobs)?
 0 1 2 3 4 5 6 7 8 9

If 1 - 34 hours in 21, fill in 21A - B. C.
If 35 or more hours in 21, skip to 26 and enter job held last week.

22. Was ... looking for work? (Include special cases)
 Yes No (Ask 24)

23. How many weeks has ... been looking for work?
 0 1 2 3 4 5 6 7 8 9

If entry in 22, and 23A and go to 26.

24. Even though ... did not work LAST WEEK, does he have a job or business?
 Yes No (Omit 25 - 26)

25. Why was ... absent from work last week?
 Own illness
 On vacation
 Bad weather
 Labor dispute
 Temporary layoff (Less than 30 days)
 New job to begin within 30 days
 Other (Specify) ...

How many weeks ago was ... laid off? Record answer in item 28 and go to 23A.
How many weeks ago did ... start looking for a job? Record answer in item 28 and go to 23A.

23A. Was ... looking for full- or part-time work?
 Full Part

Go to 26 and enter last full-time civilian job.

23B. Is ... getting wages or salary for any of the time off last week?
 Yes No Self-employed

Go to item 26 and enter job held last week.

Make no mark in this margin

21A. Does ... usually work 35 hours or more a week at this job?
 Yes No

21B. What is the reason ... usually works less than 35 hours LAST WEEK?
 Mark one circle below

Slack work
 Material shortages
 Plant or machine repairs
 New job started during week
 Job terminated during week
 Could find only part-time work

21C. What is the reason ... USUALLY works less than 35 hours a week?
 Holiday (legal or religious)
 Labor dispute
 Bad weather
 Own illness
 On vacation
 Too busy with housework, school, etc.
 Did not want full-time work
 Full-time work under 35 hours
 Other reason (Specify)

If entry in 21B or C, go to 26 and enter job worked at last week.

26. DESCRIPTION OF JOB OR BUSINESS

A. For whom did ... work?
 (Name of company, business, organization, or other employer)

B. What kind of business or industry is this?
 (For example: TV and radio mfg., retail shoe store, State Labor Dept., farm.)

C. What kind of work was ... doing?
 (For example: civil engineer, stock clerk, typist, farmer, etc.)

D. Was this person-
 An employee of PRIVATE company, business, or individual for wages, salary, or commission ... P
 A GOVERNMENT employee (Federal, State, county, or local) ... G
 Self-employed in OWN business, professional practice, or farm ... O
 Working WITHOUT PAY in family business or farm ... WP
 NEVER WORKED ... NEV

FOR OFFICE USE ONLY

IND.	OCC.
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

A O G O N O U O
 B C H O P O V O
 C O J O Q O W O
 D O K O R O X O
 E O L O S O Y O
 F O M O T O Z O

Make no mark in this margin

FILL FOR ALL HOUSEHOLD MEMBERS 16 YEARS OLD AND OVER - INCLUDING THOSE IN ARMED FORCES

27. LINE NUMBER
 0 1 2 3 4 5 6 7 8 9

27a. POPULATION STATUS
 Civilian
 Armed Forces Member (A.F. in Central Card Item 22.)

28. RELATIONSHIP TO HEAD OF HOUSEHOLD
 (Enter relationship and mark one circle below)

29. AGE
 0 1 2 3 4 5 6 7 8 9

30. MARITAL STATUS
 Married spouse present
 Married spouse absent in Armed Forces
 Married spouse absent - other reason
 Widowed
 Divorced
 Separated
 Never married

31. RACE
 White
 Negro
 Other

32. SEX AND VETERAN STATUS
 Male
 Veteran
 Non-veteran
 Female

33. WHEN DID ... FIRST GET MARRIED?
 (Mark month, decade, and year)
 Decade: 0 1 2 3 4 5 6 7 8 9
 Year: 0 1 2 3 4 5 6 7 8 9

34. Was ... living in this house on March 1, a year ago?
 No (Ask Item 35)
 Yes (Skip to Item 37)

35. Was ... living in this same county on March 1, a year ago?
 No (Ask Item 36)
 Yes (Skip to Item 37)

36. What State (or foreign country) was ... living in on March 1, a year ago?
 This State ...
 Different State ...
 Abroad ...

37. INTERVIEWER CHECK ITEM
 Is this a male 16-64 years old?
 Yes (Ask Item 38)
 No (Skip to 41 if not in Rot. 4 or 5)

38. In March a year ago, did ... have a job (or business)?
 Yes (Skip to Item 40)
 No (Ask Item 39)

39. Was ... looking for work or on layoff from a job a year ago?
 Yes - looking or on layoff ...
 No - in school or college ...
 No - Other ... (Specify below)

40. INTERVIEWER REMINDER
 No in 34 ...
 Yes in 34 ... (Go to 41 if not in Rot. 4 or 5)

INCOME IN THE YEAR 1962 (Ask for all persons 14 years of age and over except in rotations 4 and 5. Write actual amount in space provided in items 41 - 44 and mark appropriate circles. Mark \$10,000 + circle if \$10,000 or more.)

41. LAST YEAR (1962) HOW MUCH DID ... EARN:
 41. In wages or salary?
 42. By working in his own business or professional practice or partnership?
 43. By working on his own farm?

44. INCOME OTHER THAN EARNINGS - (Ask each of items 44a, b, c, and d; add up amounts in these items and record below)

44a. Social Security, veteran's payments, or other government or private pensions?
 44b. Dividends, interest on savings accounts or bonds, or income from annuities, stocks or trusts?
 44c. Net income from rental of property or from landlords or lodgers?
 44d. Anything else - unemployment or sick leave benefits, public assistance, royal contributions from relatives living in this household, alimony, etc.?

Appendix D. Table Shells: United States

Table 1. Employment status of the noninstitutional population, by sex, month and year

(Persons 14 years of age and over)

	Total noninstitutional population	Total labor force including Armed Forces		Civilian labor force
		Number	Percent of noninstitutional population	Total

Total.....

Male.....

Female.....

Civilian labor force					Not in labor force
Employed			Unemployed		
Total	Agricultural	Nonagricultural industries	Number	Percent of labor force	

Total.....

Male.....

Female.....

Table 2. Employment status of the civilian noninstitutional population,
by marital status and sex

(Persons 14 years of age and over)

Sex and employment status	Month and year			
	Married, spouse present	Married, spouse absent	Widowed or divorced	Single
MALE				
Total.....				
Labor force.....				
Not in labor force.....				
Labor force.....				
Employed.....				
Agriculture.....				
Nonagricultural industries..				
Unemployed.....				
FEMALE				
Total.....				
Labor force.....				
Not in labor force.....				
Labor force.....				
Employed.....				
Agriculture.....				
Nonagricultural industries..				
Unemployed.....				

Table 3. Employment status of the noninstitutional population, by age and sex, month and year

(Persons 14 years of age and over)

Age and sex	Total labor force including Armed Forces		Civilian labor force					
	Number	Percent of non-institutional population	Employed			Unemployed		
			Number	Percent of non-institutional population	Agriculture	Nonagricultural industries	Number	Percent of labor force
Total.....								
Male.....								
14 to 17 years....								
14 and 15 years.								
16 and 17 years.								
18 to 24 years....								
18 and 19 years.								
20 to 24 years..								
25 to 34 years....								
25 to 29 years..								
30 to 34 years..								
35 to 44 years....								
35 to 39 years..								
40 to 44 years..								
45 to 54 years....								
45 to 49 years..								
50 to 54 years..								
55 to 64 years....								
55 to 59 years..								
60 to 64 years..								
65 years and over.								
65 to 69 years..								
70 years and over.....								

Table 3. Employment status of the noninstitutional population, by age and sex, month and year--Continued

(Persons 14 years of age and over)

Not in the labor force					Age and sex
Total	Keeping house	In school	Unable to work	Other	

Total.

Male.

- 14 to 17 years.
- 14 and 15 years.
- 16 and 17 years.
- 18 to 24 years.
- 18 and 19 years.
- 20 to 24 years.
- 25 to 34 years.
- 25 to 29 years.
- 30 to 34 years.
- 35 to 44 years.
- 35 to 39 years.
- 40 to 44 years.
- 45 to 54 years.
- 45 to 49 years.
- 50 to 54 years.
- 55 to 64 years.
- 55 to 59 years.
- 60 to 64 years.
- 65 years and over.
- 65 to 69 years.
- 70 years and over.

Table 3. Employment status of the noninstitutional population, by age and sex, month and year--Continued

(Persons 14 years of age and over)

Age and sex	Total labor force including Armed Forces		Civilian labor force					Unemployed	
	Number	Percent of non-institutional population	Employed			Number	Percent of labor force		
			Number	Percent of non-institutional population	Agriculture			Nonagricultural industries	
Female.....									
14 to 17 years....									
14 and 15 years.									
16 and 17 years.									
18 to 24 years....									
18 and 19 years.									
20 to 24 years..									
25 to 34 years....									
25 to 29 years..									
30 to 34 years..									
35 to 44 years....									
35 to 39 years..									
40 to 44 years..									
45 to 54 years....									
45 to 49 years..									
50 to 54 years..									
55 to 64 years....									
55 to 59 years..									
60 to 64 years..									
65 years and over.									
65 to 69 years..									
70 years and over.....									

Table 3. Employment status of the noninstitutional population, by age and sex, month and year--Continued

(Persons 14 years of age and over)

Not in the labor force					Age and sex
Total	Keeping house	In school	Unable to work	Other	

Female.

- 14 to 17 years.
- 14 and 15 years.
- 16 and 17 years.
- 18 to 24 years.
- 18 and 19 years.
- 20 to 24 years.
- 25 to 34 years.
- 25 to 29 years.
- 30 to 34 years.
- 35 to 44 years.
- 35 to 39 years.
- 40 to 44 years.
- 45 to 54 years.
- 45 to 49 years.
- 50 to 54 years.
- 55 to 64 years.
- 55 to 59 years.
- 60 to 64 years.
- 65 years and over.
- 65 to 69 years.
- 70 years and over.

Table 4. Employment status of the civilian noninstitutional population by color and sex

Color and employment status	Month and year		
	Total	Male	Female
WHITE			
Total.....			
Labor force.....			
Percent of population.....			
Employed.....			
Agriculture.....			
Nonagricultural industries.....			
Unemployed.....			
Percent of labor force.....			
Not in labor force.....			
NONWHITE			
Total.....			
Labor force.....			
Percent of population.....			
Employed.....			
Agriculture.....			
Nonagricultural industries.....			
Unemployed.....			
Percent of labor force.....			
Not in labor force.....			

Table 5. Employment status of the civilian noninstitutional population, total and urban, by region

(Percent distribution of persons 14 years of age and over)

Region	Month and Year				
	Percent of population in labor force	Labor force			Unemployed
		Total	Employed		
	Agriculture		Nonagricultural industries		
Total.....					
Northeast.....					
North Central.....					
South.....					
West.....					
Urban.....					
Northeast.....					
North Central.....					
South.....					
West.....					

Table 6. Employed persons, by type of industry, class of worker, and sex
(Persons 14 years of age and over)

Type of industry and class of worker	Month and Year		
	Total	Male	Female
Total.....			
Agriculture.....			
Wage and salary workers.....			
Self-employed workers.....			
Unpaid family workers.....			
Nonagricultural industries.....			
Wage and salary workers.....			
In private households.....			
Government workers.....			
Other wage and salary workers.....			
Self-employed workers.....			
Unpaid family workers.....			

Table 7. Employed persons with a job but not at work, by reason for not working
(Persons 14 years of age and over)

Reason for not working	Total	Month and Year	
		Total	Nonagricultural industries
			Wage and salary workers
		Number	Percent paid
Total.....			
Bad weather.....			
Industrial dispute.....			
Vacation.....			
Illness.....			
All other.....			

Table 3. Major occupation group of employed persons, by color and sex

(Percent distribution of persons 14 years of age and over)

Major occupation group	Month and Year					
	White			Nonwhite		
	Total	Male	Female	Total	Male	Female
Total (thousands).....						
Percent.....						
Professional, technical, and kindred workers.....						
Farmers and farm managers.....						
Managers, officials, and proprie- tors, except farm.....						
Clerical and kindred workers.....						
Sales workers.....						
Craftsmen, foremen, and kindred workers.....						
Operatives and kindred workers....						
Private household workers.....						
Service workers, except private household.....						
Farm laborers and foremen.....						
Laborers, except farm and mine....						

Table 9. Occupation group of employed persons, by sex

(Persons 14 years of age and over)

Occupation group	Month and Year					
	Total	Male	Female	Percent distribution		
				Total	Male	Female
Total.....						
Professional, technical, and kindred workers.....						
Medical and other health workers.						
Teachers, except college.....						
Other professional, technical, and kindred workers.....						
Farmers and farm managers.....						
Managers, officials, and proprietors, except farm.....						
Salaried workers.....						
Self-employed workers in retail trade.....						
Self-employed workers except retail trade.....						
Clerical and kindred workers.....						
Stenographers, typists, and secretaries.....						
Other clerical and kindred workers.....						
Sales workers.....						
Retail trade.....						
Other sales workers.....						
Craftsmen, foremen, and kindred workers.....						
Carpenters.....						
Construction craftsmen, except carpenters.....						
Mechanics and repairmen.....						
Metal craftsmen, except mechanics.....						
Other craftsmen and kindred workers.....						
Foremen, not elsewhere classified						

Table 9. Occupation group of employed persons, by sex--Continued

(Persons 14 years of age and over)

Occupation group	Month and Year					
	Total	Male	Female	Percent distribution		
				Total	Male	Female
Operatives and kindred workers.....						
Drivers and deliverymen.....						
Other operatives and kindred workers:						
Durable goods manufacturing...						
Nondurable goods manufacturing						
Other industries.....						
Private household workers.....						
Service workers, except private household.....						
Protective service workers.....						
Waiters, cooks, and bartenders....						
Other service workers.....						
Farm laborers and foremen.....						
Paid workers.....						
Unpaid family workers.....						
Laborers, except farm and mine.....						
Construction.....						
Manufacturing.....						
Other industries.....						

Table 10. Unemployed persons, by duration of unemployment
 (Persons 14 years of age and over)

Duration of unemployment	Month and Year	
	Number	Percent
Total.....		
Less than 5 weeks.....		
Less than 1 week.....		
1 week.....		
2 weeks.....		
3 weeks.....		
4 weeks.....		
5 to 14 weeks.....		
5 to 6 weeks.....		
7 to 10 weeks.....		
11 to 14 weeks.....		
15 weeks and over.....		
15 to 26 weeks.....		
27 weeks and over.....		
Average duration.....		

Table 11. Employed persons, by type of industry, by full-time or part-time status, and reason for part time, month and year

(Persons 14 years of age and over)

Hours worked, usual status, and reason working part time	Agriculture	Nonagricultural industries
Total.....		
With a job but not at work.....		
At work.....		
41 hours and over.....		
35 to 40 hours.....		
1 to 34 hours.....		
Usually work full time on present job:		
Part time for economic reasons....		
Slack work.....		
Material shortages or repairs...		
New job started.....		
Job terminated.....		
Average hours.....		
Part time for other reasons.....		
Own illness.....		
Vacation.....		
Bad weather.....		
Holiday.....		
All other.....		
Usually work part time on present job:		
For economic reasons.....		
Average hours.....		
For other reasons.....		
Average hours for total at work.....		

Table 12. Unemployed persons, by major occupation group and industry group

(Persons 14 years of age and over)

Occupation and industry	Month and Year	
	Percent distribution	Unemployment rate

MAJOR OCCUPATION GROUP

Total.....
Professional, technical, and kindred workers..
Farmers and farm managers.....
Managers, officials, and proprietors, except farm.....
Clerical and kindred workers.....
Sales workers.....
Craftsmen, foremen, and kindred workers.....
Operatives and kindred workers.....
Private household workers.....
Service workers, except private household.....
Farm laborers and foremen.....
Laborers, except farm and mine.....
No previous work experience.....

INDUSTRY GROUP

Total.....
Experienced wage and salary workers.....
Agriculture.....
Nonagricultural industries.....
Mining, forestry, and fisheries.....
Construction.....
Manufacturing.....
Durable goods.....
Primary metal industries.....
Fabricated metal products.....
Machinery.....
Electrical equipment.....
Transportation equipment.....
Motor vehicles and equipment.....
All other transportation equipment....
Other durable goods industries.....

Table 12. Unemployed persons, by major occupation group and industry group--Continued

(Persons 14 years of age and over)

Occupation and industry	Month and Year	
	Percent distribution	Unemployment rate
INDUSTRY GROUP--Continued		
Nondurable goods.....		
Food and kindred products.....		
Textile-mill products.....		
Apparel and other finished textile products.....		
Other nondurable goods industries.....		
Transportation and public utilities.....		
Railroads and railway express.....		
Other transportation.....		
Communication and other public utilities..		
Wholesale and retail trade.....		
Finance, insurance, and real estate.....		
Service industries.....		
Professional services.....		
All other service industries.....		
Public administration.....		

Table 13. Persons unemployed 15 weeks and over, by selected characteristics

(Persons 14 years of age and over)

Characteristics	Month and Year	
	Percent distribution	Percent of unemployed in each group

AGE AND SEX

Total.....	
Male:	
14 years and over.....	
14 to 17 years.....	
18 and 19 years.....	
20 to 24 years.....	
25 to 34 years.....	
35 to 44 years.....	
45 to 64 years.....	
65 years and over.....	
Female:	
14 years and over	
14 to 19 years.....	
20 to 24 years.....	
25 to 34 years.....	
35 to 44 years.....	
45 years and over.....	

MARITAL STATUS AND SEX

Total.....	
Male:	
Married, wife present.....	
Single.....	
Other.....	
Female:	
Married, husband present.....	
Single.....	
Other.....	

Table 13. Persons unemployed 15 weeks and over, by selected characteristics--Continued

(Persons 14 years of age and over)

Characteristics	Month and Year	
	Percent distribution	Percent of unemployed in each group
MAJOR OCCUPATION GROUP		
Total.....		
Professional, technical, and kindred workers...		
Farmers and farm managers.....		
Managers, officials, and proprietors, except farm.....		
Clerical and kindred workers.....		
Sales workers.....		
Craftsmen, foremen, and kindred workers.....		
Operatives and kindred workers.....		
Private household workers.....		
Service workers, except private household.....		
Farm laborers and foremen.....		
Laborers, except farm and mine.....		
No previous work experience.....		
INDUSTRY GROUP		
Total.....		
Experienced wage and salary workers.....		
Agriculture.....		
Nonagricultural industries.....		
Mining, forestry, and fisheries.....		
Construction.....		
Manufacturing.....		
Durable goods.....		
Nondurable goods.....		
Transportation and public utilities.....		
Wholesale and retail trade.....		
Service and finance, insurance, and real estate.....		
Public administration.....		

Table 14. Persons at work, hours worked, type of industry, and class of worker, Month and Year

(Percent distribution of persons 14 years of age and over)

Hours worked	Total	Agriculture			
		Total	Wage and salary workers	Self-employed workers	Unpaid family workers
Total at work (thousands).....					
Percent.....					
1 to 34 hours.....					
1 to 14 hours.....					
15 to 21 hours.....					
22 to 29 hours.....					
30 to 34 hours.....					
35 to 40 hours.....					
35 to 39 hours.....					
40 hours.....					
41 hours and over.....					
41 to 47 hours.....					
48 hours.....					
49 hours and over....					
49 to 54 hours.....					
55 to 59 hours.....					
60 to 69 hours.....					
70 hours and over..					
Average hours.....					

Table 14. Persons at work, hours worked, type of industry, and class of worker, Month and Year--Continued

(Percent distribution of persons 14 years of age and over)

Nonagricultural industries						Hours worked
Wage and salary workers				Self-employed workers	Unpaid family workers	
Total	Private households	Government	Other			
						Total at work (Thousands). Percent.
						1 to 34 hours.
						1 to 14 hours.
						15 to 21 hours.
						22 to 29 hours.
						30 to 34 hours.
						35 to 40 hours.
						35 to 39 hours.
						40 hours.
						41 hours and over.
						41 to 47 hours.
						48 hours.
						49 hours and over.
						49 to 54 hours.
						55 to 59 hours.
						60 to 69 hours.
						70 hours and over.
						Average hours.

Table 15. Wage and salary workers, by full-time or part-time status and major industry group, Month and Year

Major industry group	Total at work	1 to 34 hours			
		Usually work full time on present job		Usually work part time on present job	
		Part time for economic reasons	Part time for other reasons	Part time for economic reasons	Part time for other reasons
Agriculture.....					
Nonagricultural industries.....					
Construction.....					
Manufacturing.....					
Durable goods.....					
Nondurable goods.....					
Transportation and public utilities.....					
Wholesale and retail trade.....					
Finance, insurance, and real estate.....					
Service industries.....					
Education services.....					
Other professional services..					
All other service industries..					
All other industries.....					

Table 15. Wage and salary workers, by full-time or part-time status and major industry group, March and Year=Continued

		(Percent distribution of persons 14 years of age and over)				Major industry group
35 to 44 hours	40 hours	Total	41 hours and over	48 hours and over		
39	40	47	44	48	Agriculture,	
					Nonagricultural industries,	
					Construction,	
					Manufacturing,	
					Durable goods,	
					Non-durable goods,	
					Transportation and public	
					utilities,	
					Wholesale and retail trade,	
					Finance, insurance, and real	
					estate,	
					Service industries,	
					Education services,	
					Other professional services,	
					All other service industries,	
					All other industries.	

Table 16. Persons at work, by full-time or part-time status and major occupation group, Month and Year

Major occupation group	Total at work	1 to 34 hours		
		Usually work full time on present job		Usually work part time on present job
		Part time for economic reasons	Part time for other reasons	For other reasons
Total.....	<u>100.0</u>			
Professional, technical, and kindred workers.....	100.0			
Farmers and farm managers.....	100.0			
Managers, officials, and proprietors, except farm.....	100.0			
Clerical and kindred workers.....	100.0			
Sales workers.....	100.0			
Craftsmen, foremen, and kindred workers.....	100.0			
Operatives and kindred workers.....	100.0			
Private household workers.....	100.0			
Service workers, except private household.....	100.0			
Farm laborers except foremen.....	100.0			
Laborers, except farm and mine.....	100.0			

Table 16. Persons at work, by full-time or part-time status and major occupation group,
 Month and Year--Continued

(Percent distribution of persons 14 years of age and over)					Major occupation group
35 to 39 hours	40 hours	41 hours and over		Aver- age hours	
		Total	47 hours 41 to 48 hours 49 hours and over		

Total.

Professional, technical, and kindred workers.
 Farmers and farm managers.
 Managers, officials, and proprietors, except farm.
 Clerical and kindred workers.
 Sales workers.
 Craftsmen, foremen, and kindred workers.
 Operatives and kindred workers.
 Private household workers.
 Service workers, except private household.
 Farm laborers except foremen.
 Laborers, except farm and mine.

Table 17. Persons at work in nonagricultural industries, by full-time and part-time status and selected characteristics, Month and Year

Characteristics	(Percent distribution of persons 14 years of age and over)							Average hours	
	Total at work Number (Thousands)	1 to 34 hours		Usually work part time on present job		35 to 40 hours	41 hours and over		
		Total	Part time for economic reasons	Part time for other reasons	For economic reasons				For other reasons
AGE AND SEX									
Total.....									
Male.....									
14 to 17 years.....									
18 to 24 years.....									
25 to 34 years.....									
35 to 44 years.....									
45 to 64 years.....									
65 years and over.....									
Female.....									
14 to 17 years.....									
18 to 24 years.....									
25 to 34 years.....									
35 to 44 years.....									
45 to 64 years.....									
65 years and over.....									

AGE AND SEX

Total.....

Male.....

14 to 17 years.....

18 to 24 years.....

25 to 34 years.....

35 to 44 years.....

45 to 64 years.....

65 years and over.....

Female.....

14 to 17 years.....

18 to 24 years.....

25 to 34 years.....

35 to 44 years.....

45 to 64 years.....

65 years and over.....

Table 17. Persons at work in nonagricultural industries, by full-time and part-time status and selected characteristics, Month end Year--Continued

Characteristics	Total at work Number Per- (Thou- cent sands)	1 to 34 hours				35 to 40 hours	41 hours	aver- age hours
		Usually work full time on present job		Usually work part time on present job				
		Part time for economic reasons	Part time for other reasons	For economic reasons	For other reasons			
Total								

MARITAL STATUS AND SEX

Male: Single.....
 Married, wife present.....
 Other.....

Female: Single.....
 Married, husband present.....
 Other.....

COLOR AND SEX

White.....
 Male.....
 Female.....

Nonwhite.....
 Male.....
 Female.....

APPENDIX E

Resolutions of the Eighth International Conference of Labour Statisticians (Geneva, 23 November-3 December 1954)

I

Resolution Concerning Statistics of the Labour Force, Employment and Unemployment

The Eighth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the International Labour Office, and having met from 23 November to 3 December 1954, to consider, among other subjects, methods of implementation of the Resolution of the Sixth International Conference of Labour Statisticians concerning statistics of employment, unemployment and the labour force and a review of definitions,

Recalling Resolution No. V of the Sixth Conference concerning the further consideration of international standards for statistics of employment, unemployment and the labour force,

Recognising the usefulness of such standards in the provision of technical assistance to countries with less well developed statistics, and in the provision of guidance to all countries in efforts to obtain international comparability,

Adopts this third day of December 1954 the following resolu-

tion in substitution for Resolution I of the Sixth Conference:

General Objectives

1. Every country should aim to develop a comprehensive system of statistics of the labour force, employment and unemployment, in order to provide an adequate statistical basis for the analysis of economic and social problems of the labour force, of employment and unemployment, and, in particular, for the formulation and application of policies designed to promote economic development.

2. These statistics should be developed in accordance with the specific needs of each country in the light of its social and economic structure and, in so far as possible, in accordance with international standards in order to promote comparability among countries.

3. All member countries should make every effort to supply statistics to the International Labour Office on the basis of these standards.

Definitions

Definition of Labour Force

4. The Civilian labour force consists of all civilians who fulfill the requirements for

inclusion among the employed or the unemployed, as defined in paragraphs 6 and 7 below.

5. The total labour force is the sum of the civilian labour force and the armed forces.

Definition of Employment

6. (1) Persons in employment consist of all persons above a specified age in the following categories:

(a) at work; persons who performed some work for pay or profit during a specified brief period, either one week or one day;

(b) with a job but not at work; persons who, having already worked in their present job, were temporarily absent during the specified period because of illness or injury, industrial dispute, vacation or other leave of absence, absence without leave, or temporary disorganisation of work due to such reasons as bad weather or mechanical breakdown.

(2) Employers and workers on own account should be included among the employed and may be classified as 'at work' or 'not at work' on the same basis as other employed persons.

(3) Unpaid family workers currently assisting in the operation of a business or farm are considered as employed if

they worked for at least one-third of the normal working time during the specified period.

(4) The following categories of persons are not considered as employed:

(a) workers who during the specified period were on temporary or indefinitely off without pay;

(b) persons without jobs or business or farms who had arranged to start a new job or business or farm at a date subsequent to the period of reference;

(c) unpaid members of the family who worked for less than one-third of the normal working time during the specified period in a family business or farm.

Definition of Unemployment

7. (1) Persons in unemployment consist of all persons above a specified age who, on the specified day or for a specified week, were in the following categories:

(a) workers available for employment whose contract of employment had been terminated or temporarily suspended and who were without a job and seeking work for pay or profit;

(b) persons who were available for work (except for minor illness) during the specified period and were seeking

work for pay or profit, who were never previously employed or whose most recent status was other than that of employee (i.e., former employers, etc.), or who had been in retirement;

(c) persons without a job and currently available for work who had made arrangements to start a new job at a date subsequent to the specified period;

(d) persons on temporary or indefinite lay-off without pay.

(2) The following categories of persons are not considered to be unemployed:

(a) persons intending to establish their own business or farm, but who had not yet arranged to do so, who were not seeking work for pay or profit;

(b) former unpaid family workers not at work and not seeking work for pay or profit.

Classifications

8. Persons in the labour force should be classified in occupational groups which are convertible into the International Standard Classification of Occupations as adopted by the Seventh International Conference of Labour Statisticians. When a more detailed classification has been adopted by a future International Conference of Labour Statisticians it should be used as the revised standard for the classification of persons in the labour force.

9. Classification of persons in the labour force, the employed and the unemployed (the latter on the basis of their last activity) according to branch of economic activity should adhere to or be convertible into the International Standard Industrial Classification of All Economic Activities.

10. Persons in the labour force, the employed and the unemployed (the latter on the basis of their last activity) when classified by status (as employer, employee, etc.), should be distributed among the following groups, pending the possible modification of these groups by the United Nations or specialized agencies on the basis of the results of the 1950 censuses:

(1) employees;

(2) employers;

(3) persons who work on their own account without employees;

(4) unpaid family workers.

11. (1) The classification used in presenting statistics of unemployment according to duration should permit data to be derived for the following intervals: less than one week, one week or more but less than one month, one month or more but less than three months, three months or more but less than six months, six months or more.

(2) For the purpose of statistics on duration of unemployment, duration means the period from the commencement of the current unemployment status up to the date of the count.

Scope and nature of statistics

12. The statistics of the labour force, employment, and unemployment developed by each country should cover:

(1) all branches of economic activity;

(2) all persons, employed and unemployed;

(3) all status groups (employers, employees, etc.)

13. Such statistics should provide:

(1) Comprehensive basic data in the fullest possible detail at convenient intervals (hereafter referred to as "benchmark data"), and

(2) Series, not necessarily in the same detail, to show current changes.

Benchmark Data

14. A population census should be taken at least every ten years and should provide detailed statistics of employment, unemployment and the labour

force, including data for each sex, classified by:

(1) status (as employer, employee, etc.);

(2) branch of economic activity;

(3) occupational group;

(4) age group;

(5) marital status;

(6) region.

15. Censuses of establishments engaged in agriculture, mining and manufacturing, and, if practicable, in other divisions of economic activity, should be taken in every country at least every ten years and should provide detailed basic statistics of employment including data for each sex, classified by:

(1) status (as employer, employee, etc.);

(2) branch of economic activity;

(3) region;

(4) size of establishment (according to number employed);

(5) form of ownership of establishment (private, public, cooperative, etc.).

Labour Force Data

16. Every country should prepare estimates of the civilian labour force classified by sex and age at least once a year.

Employment Data

17. The principal series relied upon to show current changes in employment should yield at least the following information:

(1) Once each year, the number of employed persons of each sex, classified by:

- (a) age;
- (b) status (as employer, employee, etc.);
- (c) employment in agriculture and non-agricultural industries,

(2) Once each quarter, the number of employees (wage earners and salaried employees) in non-agricultural industries with separate data for each industry in which as much as 5 per cent of the country's total employment is found.

(3) Separate series should be made available periodically for:

- (a) persons included among the employed in a specified period who were not at work, classified by cause of absence from work,

(b) employed persons classified according to the number of hours worked per week.

(4) Where seasonal changes in agricultural employment are substantial, estimates of agricultural employment, based on special studies, should be made more frequently than once a year in order to measure the seasonal movement.

(5) Any country which has not established a series on the general level of employment should lay the foundations for such a series by commencing to collect data relating to persons of each sex employed in establishments, beginning with manufacturing industry and extending the collection to other branches of economic activity as resources and facilities become available.

Unemployment Data

18. Series showing the total numbers unemployed, analysed by sex, should be prepared at least quarterly.

19. The data used as a basis of unemployment statistics should be analysed at least twice a year to show the numbers of unemployed persons of each sex according to:

- (1) branch of economic activity in which last employed;

- (2) occupational group;
- (3) region;
- (4) age group;
- (5) duration of unemployment.

20. The number of unemployed persons classified by age and sex, as well as by duration of unemployment, should be provided, periodically at least, for those regions in which unemployment is particularly severe.

21. The data used as a basis of unemployment statistics should be analysed at least once a year to show the numbers of unemployed persons of each sex who:

- (1) were temporarily laid-off (laid-off with instructions to return to work within 30 days);
- (2) had found paid employment but had not yet started to work;
- (3) were on indefinite lay-off or had no job attachment.

22. Statistics on unemployment do not have the same significance in industrially less developed countries as in other countries, and should not have the same priority in the national statistical programme; however, a country wishing to start collecting data on this question

might commence with data relating to the principal urban centres, collected by means of labour force sample surveys as part of more general sample surveys.

Publication

23. (1) Statistics of employment, unemployment and the labour force should be issued promptly and made widely available. Final or provisional key totals in current series should be released for publication with the least possible delay and wherever practicable, within one month of the date to which they refer.

(2) Every publication of statistical data relating to employment, unemployment of the labour force, whether recurring or single-time, should clearly indicate the nature of the data and make reference to any detailed technical descriptions available.

VI

Resolution Concerning Measurement of Underemployment

The Eighth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the International Labour Office, and having met from 23 November to 3 December, 1954,

Recalling Resolution No. IX adopted by the Sixth International Conference of Labour Statisticians, concerning statistics of multiple employment, underemployment and inadequate employment, with special reference to agriculture,

Recognising that the measurement of underemployment and of irregular employment both in agricultural and in non-agricultural occupations deserves careful study and that standardised definitions should be adopted so far as possible.

Considering that the experience and knowledge presently available are insufficient for formulation of international standards in these fields,

Requests the Governing Body of the International Labour Office to instruct the Office to study the problems raised by the measurement of underemployment and of irregular employment with a view to presenting proposals to the Ninth International Conference of Labour Statisticians and meanwhile to including tentative findings in a manual.

X

Resolutions Concerning Further Development of Standards and Methods in the field of Labour Force, Employment and Unemployment Statistics

The Eighth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the International Labour Office, and having met from 23 November to 3 December 1954;

Considering that there is definite need for development of means of implementing the objectives described in Resolution I on employment and unemployment statistics adopted by this Conference,

Requests the Governing Body of the International Labour Office to instruct the Office:

(a) to prepare one or more manuals for guidance in the gathering and reporting of statistics of the labour force, employment and unemployment, and to pay particular attention to the elaboration of methods for the establishment of statistics relating to partial unemployment and to statistics relating to unemployed persons who are not registered in employment exchanges;

(b) to undertake a regular programme of intensive on-the-spot surveys in all countries which signify an interest in having such surveys made, with a view either to obtaining their experience in this field, or to giving assistance in interpreting or putting into practice the provisions of the manuals.

Resolutions of the Ninth International Conference of Labour Statisticians,
Geneva, 24 April to 3 May 1957

III

Resolution concerning the Measure-
ment of Underemployment

The Ninth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the International Labour Office, and having met from 24 April to 3 May 1957,

Recalling the resolution (No. 13) adopted by the Sixth International Conference of Labour Statisticians concerning statistics of multiple employment, underemployment and inadequate employment, with special reference to agriculture,

Recalling in addition the resolution (No. VI) adopted by the Eighth International Conference of Labour Statisticians concerning the measurement of underemployment and irregular employment,

Having considered the Report of the International Labour Office on the measurement of underemployment,

Noting the great usefulness of statistical information concerning the various aspects of

underemployment in all countries, particularly in economically less well developed countries, and in countries faced with special social and economic problems such as those raised by important migratory movements within or between countries or by marked seasonal irregularity of employment, especially in agriculture,

Recognising the necessity of developing methods for the measurement of underemployment, starting by the study of the most apparent manifestations of this phenomenon, for use in national statistical systems and, in so far as possible, for making international comparisons,

Adopts this third day of May 1957 the following resolution:

General Objectives

1. The general objectives of the system of labour force, employment and unemployment statistics set forth in resolution I of the Eighth International Conference of Labour Statisticians should be interpreted to include the development of adequate statistics on underemployment, in order to provide an

adequate basis for the analysis of social and economic problems of the labour force, of employment and of unemployment, and in particular to promote economic development and to solve the problems raised by migratory movements within or between countries and by marked seasonal irregularity of employment, especially in agriculture.

Scope of the Resolution

2. Underemployment exists when persons in employment who are not working full time would be able and willing to do more work than they are actually performing, or when the income or productivity of persons in employment would be raised if they worked under improved conditions of production or transferred to another occupation, account being taken of their occupational skills. Underemployment appears in various forms, some of which can be measured with reasonable accuracy by means of statistical inquiries. The following major categories of underemployment may be distinguished:

visible underemployment, which involves shorter than normal periods of work and which is characteristic of persons involuntarily working part time;

invisible underemployment, which is characteristic of persons whose working time is not abnormally reduced

but whose earnings are abnormally low or whose jobs do not permit full use of their capacities or skills (sometimes called disguised underemployment), or who are employed in establishments or economic units whose productivity is abnormally low (sometimes called potential underemployment).

Underemployment, according to this definition, excludes persons who are unemployed or who are not in the labour force but who are willing to take employment though they do not seek it.

3. In view of the limited experience which has been accumulated in the various countries in the measurement of invisible underemployment, it appears desirable as a beginning to establish international standards for measuring visible underemployment.

Definitions

4. Visible underemployment refers to persons who are in employment of less than normal duration and who are seeking or would accept additional work.

5. The normal duration of work to be used as a basis of comparison in identifying persons in employment of less than normal duration may be the duration of work laid down by law or in collective agreements or the

duration of work which may be otherwise determined by the country concerned as representative of normal employment, in the occupation, branch of economic activity or region concerned.

6. For purposes of measuring employment of less than normal duration, the definition of employment used should be consistent with that of paragraph 6 of resolution I adopted by the Eighth International Conference of Labour Statisticians.

7. The period covered by statistics of persons in employment of less than normal duration should be of sufficient length to cover all aspects of the phenomenon. For persons engaged in activities of a seasonal character, especially in agriculture, measurement over a period of a year is particularly desirable in order to indicate variations in the extent of employment of less than normal duration throughout the year and also in order to facilitate distinction between seasonal, chronic and occasional visible underemployment.

8. For certain purposes, visible underemployment may be measured by the amount of working time lost or by the value of supplementary labour which might be contributed by the persons concerned.

Classifications

9. For purposes of classifying the persons in visible underemployment, as defined in paragraph 4 above, all persons in employment of less than normal duration should be classified first according to whether they are or are not willing to accept additional work, and further classified according to economic activity, sex and duration of labour.

10. Depending on the length of the reference period, persons in employment could, if appropriate, be classified in one of the following categories:

(a) according to hours of work per week: less than 15, 15 to 34, 35 to 39, 40 to 47, 48 or more;

(b) according to days of work per week: less than 2, 2 to 4, 5 or more;

(c) according to days of work per month: less than 7, 7 to 12, 13 to 18, 19 or more;

(d) according to weeks of work per year: less than 13, 13 to 26, 27 to 39, 40 to 49, 50 or more;

(e) according to months of work per year: less than 3, 3 to 5, 6 to 9, 10 and 11, 12.

Publication

11. Statistics of persons in employment of less than normal duration should be published

as soon as possible and should be widely circulated. Key totals, either provisional or final, in current series should be published with the least possible delay. Every publication of statistical data relating to persons in employment of less than normal duration, whether recurrent or single time, should clearly indicate the nature of the data and make reference to any detailed technical descriptions available. In particular, the definition of a day, a week or a month of work used in the classification according to duration of work should be stated.

Measurement of Invisible Underemployment and of Other Forms of Under-utilisation of Manpower

12. It is recommended, particularly in the less well developed countries, that methods of inquiry be developed to analyse disguised and potential underemployment. In such inquiries it may be particularly appropriate to devote attention to disguised underemployment because of its extent and its greater susceptibility to measurement in some of these countries.

13. For the purpose of analysing under-utilisation of manpower, some countries may take into account, at the same time as they consider underemployed

persons, unemployed persons and persons not classified in the labour force but who would enter the labour force under certain conditions.

14. It would be desirable for countries undertaking such studies to provide the International Labour Office with information on the definitions and techniques used, the results obtained and the application made of the results to the solution of economic and other problems.

Resolution concerning Studies to be Undertaken for the Measurement of Underemployment

IV

The Ninth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the International Labour Office, and having met from 24 April to 3 May 1957,

Noting the importance of the problem of underemployment in the elaboration of social and economic plans and programmes in a great number of countries,

Noting at the same time the great difficulty of measuring some of the most important aspects of underemployment,

Requests the Governing Body of the International Labour Office to instruct the Office:

(a) to prepare a revised edition of Report IV on the 'Measurement of Underemployment,' taking into consideration the suggestions made by the Conference and the techniques and results of recent surveys, and to publish it in its final form as a guide in future work in this field;

(b) to assist in the most appropriate way such countries as may desire to carry out studies or to undertake inquiries on underemployment, taking more particularly into account the needs of the economically less well developed countries;

(c) to promote the exchange of information on techniques and results of studies of underemployment among the countries concerned;

(d) to inform the next International Conference of Labour Statisticians on the progress made by the Office and by the various countries with a view to placing this subject on the agenda of a subsequent International Conference of Labour Statisticians, account being taken of the need for developing new criteria for the techniques of measurement of underemployment and its relationship to unemployment and employment.

APPENDIX F. EXCERPT FROM ENUMERATOR'S MANUAL--
U. S. BUREAU OF THE CENSUS

General instructions for asking the questions.

Data must be collected in a uniform manner for all respondents. Thus, all the people in a sample must be asked the same questions in exactly the same way. People's answers are strongly influenced by the wording of a question. Obviously, if a question is differently worded for different respondents, it will not yield comparable results.

The enumerator plays two roles in the interview:

a. That of a technician who applies standard techniques to each interview, and

b. That of the human being who builds up a permissive and warm relationship with each respondent.

1. Ask questions exactly as worded.

As it is essential that exactly the same questions be asked of each person interviewed, you should make no changes in the phrasing of the questions. Not only are deliberate word changes to be avoided, but you must be on guard against unconscious word changes. For example, in constantly repeating the

questions during interviewing, you may unwittingly leave out part of the question, or change some words. Or, you may ask the question just as worded, but in an effort to be conversational, add a few words at the end of the question.

Take for example, the question, "Even though you did not work last week, do you have a job or business?" Now, consider the following variations of this wording:

a. Even though you didn't work last week, do you have a job? (Latter part of question completely omitted.)

b. Asking of a housewife, "You don't have a job or business, do you?" (Question completely changed and rigged for a negative answer.)

The respondent's answer depends on what question is asked of him. Thus a change of wording can very easily change the response obtained.

2. Ask the questions in the prescribed order.

The question sequence is carefully worked out to give continuity. As was explained to you in initial training, this is

a sifting out process--we are trying to sort the population into three major groups of people:

- a. Those who worked last week.
- b. Those looking for work.
- c. Those with jobs or businesses who were temporarily absent from work all last week.

The question order must be standardized from respondent to respondent if the results are to be comparable.

3. Ask every applicable question on the schedule.

In answering a particular question, a respondent may occasionally give answers which can also be applied to a question to be asked later. In this case, you may wonder whether you should skip the questions which apparently have already been answered. In general, the answer to this question is "No."

It is your responsibility to make certain that the respondent is fully exposed to each applicable question on the schedule. Do the following:

- a. Write down the initial answer for the particular question when respondent gives it, and
- b. Ask the partially answered question when you get to

it, but preface it with some remark which will show the respondent you haven't forgotten what he said earlier and haven't rejected his earlier answer. Such a remark might be: "You already told me you worked as a hand press operator last week, but what kind of business or industry did you work in?"

4. If the question is not understood or is misinterpreted.

Schedule designers have carefully worded and tested each question to ensure that it is understandable to the maximum number of respondents. Therefore, you will have no difficulty in the great majority of cases. From time to time, however, the respondent may not understand a question or may misinterpret it. In such instances, use the following procedure:

- a. First repeat the question as it is written and give the respondent another chance to answer it on that basis. If you think the respondent merely needs time to think it over, do not press him for an immediate answer.

- b. If you still do not get a response in terms of the wording and meaning of the question, reword the question slightly. This will happen rarely and should be done only as a last resort.

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