

PREFACE

The objective of this Working Paper is to discuss in detail what questions to ask on each of the nine economic topics included in the revised *UN Principles and Recommendations for Population and Housing Censuses* (ST/ESA/STAT/SER. M/67/Rev.), referred to as WR below. Following a discussion of a first draft by a meeting of experts in May 1998 this text was prepared to serve as part 2 of an UN/ILO publication: *Guide for the collection of economic characteristics*. Part III of *Handbook of population and housing censuses*. Studies in Methods. Series F, No. 54. It is being issued in this form because the publication of that document has been delayed. The text of part 3 has also been issued as a STAT Working Paper. Comments, questions and suggestions concerning the contents of this Working Paper may be addressed to: Bureau of Statistics; International Labour Office, CH-1211 GENEVE 22. Fax: + 41 22 799 6957. E-mail: stat@ilo.org

1. INTRODUCTION

Following a presentation of the scope and definition of the economically active population the discussion continues with the nine recommended 'economic' topics grouped as follows:

- c Current Economic Activity Status (i.e. 'employment' and 'unemployment' during a 'short' reference period);
- c Descriptive Characteristics for the Main Job (i.e. 'status in employment', 'occupation' and 'place of work');
- c Descriptive Characteristics of the Establishment (i.e. 'industry', 'institutional sector' and 'informal sector');
- c Person Totals (i.e. 'time worked' and 'income');
- c Usual Economic Activity Status (i.e. 'employment' and 'unemployment' during a 'long' reference period).

Examples of complete sets of 'economic' questions are given at the end.

The discussion of each topic has been given a heading which includes a reference to the relevant paragraphs of the revised UN recommendations (indicated by WR plus the paragraph numbers).

Following an introduction each discussion is divided into the following sections:-

A: Measurement and Related Issues

B: Example Questions

C: Pre-tests

D: Data Processing Issues.

(At the end of the section on the economically active population there is a discussion about the target population for the remaining topics.)

Examples and experiences from different countries will be discussed wherever possible and relevant. The aim has been to select questions that are good illustrations of particular points. Possible problems with the example questions are explained. The overall aim in each section is to give a thorough review of the issues which need discussion as the census planners draw up the questions thought most suitable for the situation in their country.

A general point which should be made at this stage is that the value of a population census is that it can give complete national data as well as data for quite small areas for major economic topics (e.g. number of carpenters or nurses in a town or a local government area). However, it should be recognised that it cannot be used to obtain conceptually precise estimates for some of the more difficult to measure topics (e.g. underemployment, employment in the informal sector, abusive child labour practices, or many of the National Accounts concepts and distinctions). A Population Census can and should give very useful indicators of policy interest, but attempts to provide data with high levels of conceptual precision can have very negative effects on the overall quality of the basic census results. Such conceptually precise estimates are often not really required for small areas or groups, and they should be obtained through specialised surveys

1.1 Common issues relevant for all topics and questions

Before starting on the actual topics and questions, it is appropriate to briefly review a few issues which relate to the complete block of economic questions:

- c **Age limits on the Economic Questions:** The same age limit should be applied throughout the complete block of questions related to the economic characteristics. Thus one of the first considerations is to determine which age limit(s) to apply for excluding persons from these questions. It is usual to specify at least a lower age limit, below which answers are not required for these questions. In many countries it is known that the questions will not be relevant for almost all persons below a certain age as they are either going to school full time or are of pre-school age. (Current school attendance is usually recorded elsewhere on the census questionnaire.) In many countries this limit has been taken as 15 or 10 Years. However, there has been considerable interest in the extent and type of work activities of children at even younger ages in recent years. In many countries, there has also been a reduction in school attendance because of the effects of inadequate education funding. Both these factors have resulted in a need for knowledge about the activities of persons less than 15 years (or 10) in some regions of the World. Certainly the choice of a lower age limit for economic activity questions does need a thorough review before any census. A lower age limit for the economic questions will impose some extra burden on respondents and on the data processing, but could provide valuable, currently unknown information.

In some countries the consideration of this lower age limit is confused with the minimum legal age for paid employment. Such considerations should be avoided as there in principle should be no connection between the minimum age for these census questions and the legal age for paid work. 'Economic activity' questions aim to record any type of economic activity including part time work and unpaid work in small family businesses or farms. In most countries some school-age children engage in part-time, paid or unpaid employment, for example part-time work after school or during school holidays. In rural areas children often help in agriculture at all ages whether going to school or not. These activities are not usually covered by any minimum age legislation. In a population census, the aim should be to record the whole range of economic activities and to set a high lower age limit for such questions could lead to the loss of valuable information. In countries where child labour has become a sensitive issue, the overall effect on the quality of the census results obtained when using a low age limit should be taken into account and evaluated by the pre-census testing programme.

In some countries an upper age limit is also used, e.g. 65 Years. This procedure is even more likely to lead to the loss of valuable information. In almost every country some people work either full or part time well beyond any legal or conventional retirement age. This is particularly so in rural societies but is not uncommon in urban areas, even if older persons often work fewer hours than when they were younger. Many Governments are now considering the need to encourage some form of work at higher ages as active older people

are often healthier than before. In almost all countries the population is living longer giving a greater number and range of economic activities which may be missed if an upper age limit is imposed for such questions. Note that during tabulations and analysis, upper and lower age limits can be specified for particular purposes e.g. to generate tables comparable with previous censuses.

- c **Position and Sequence of the economic questions:** The position of questions within a questionnaire and on the page should reflect their importance. Usually the later a question is on a questionnaire and the lower it is on a page (for multi-page questionnaires) the less well it will be answered. In many cases unfavourable positions for some of the economic questions cannot be avoided, but if staff are at least aware of a possible effect of an unfavourable position they can try to counteract it by other means when designing the questionnaire (e.g. by using colour, bolding etc.)

The usual sequence of census questions generally does not favour the economic questions, as often there is a progressive exclusion of younger ages: First all members of a household will be asked the basic demographic questions; then very young children are excluded before the educational questions, while children still attending school are excluded before the questions related to training and economic activities. (Often fertility questions, for women only, are also inserted before the economic questions.) This sequence is to a certain extent logical but does tend to de-emphasise the economic questions. With long questionnaires, respondents lose interest as the questionnaire continues. The earlier the economic questions in the overall sequence, generally the better the results for these questions. These same principles apply also to the sequence within the economic question block, which will be discussed in detail in the next sections.

- c **Skips in the Census Questionnaire:** The general rule should be to minimise the skipping of questions. The most common skips are because of age as mentioned in the previous point. It is difficult to avoid skips for the economic questions but every effort should be made to make them as simple as possible.
- c **Questionnaire Wording:** Simplicity is always the key to good questions. Do not use long or complex words. Certainly do not confuse the terms for concepts with the words to be used in the questions. Such words as 'economically active', 'own account', 'self employed' or 'contributing family worker' should definitely be avoided in questions or response categories given to respondents as they are very unlikely to know what these are intended to mean in this context. (Possibly these terms can be used for response categories for interviewers if the interviewers are to be well trained in their meaning.) These warnings particularly apply when the questions are to be translated to other languages in the field by the enumerators. These translations should be carefully checked during pre-testing and during the training of enumerators. Often some surprising translations have resulted from seemingly relatively simple economic questions or pre-coded categories.

Always keep question sentences short. If necessary use a second part to the question or a second question. Definitely avoid the use of 'or' in questions. Such questions usually then assume that the interviewer will ask another question to find out which part of the 'or' a 'yes' answer applies to. If follow-up questions are implied for interviewers it is best to put them on the questionnaire to ensure they are asked and asked uniformly. Particularly also avoid negative formulations, such as "*You did not do any of these activities in the last seven days. What did you do?*" or "*What did you do when not working?*". They can be confusing.

- c **Explanatory notes on Questionnaires:** Some explanatory notes are almost always necessary for the economic questions but they should be kept to the minimum. Only very important points should be put on questionnaires, otherwise they will clutter the questionnaire and the interviewer will either ignore them or become confused. It should be made clear whether notes on questionnaires are notes to the interviewer or intended as a prompt to the respondent. Both can be quite effective. The use of differing type styles or sizes for notes to distinguish them from prompts is often effective.

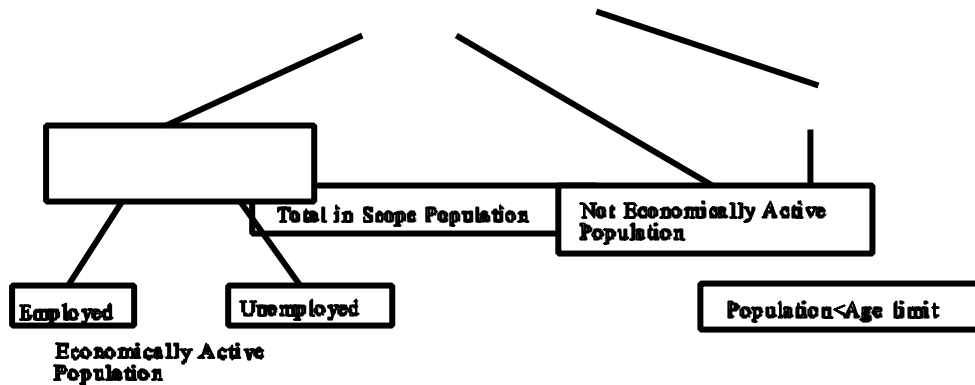
2. SCOPE AND DEFINITION OF THE ECONOMICALLY ACTIVE POPULATION (see WR, paragraphs 2.168 - 2.176)

2.2 Introduction

The objective of this section is to clarify the conceptual issues relating to the identification of the "Economically Active Population" (EAP). After ensuring that the full target population for the census and their basic demographic characteristics have been covered the single most important issue and problem regarding the economic questions in any population census is the identification of those who are economically active and those who are not. The 'Economically Active population' consists of the 'employed' plus the 'unemployed'. Statistics on the size and composition of these two groups are important for almost all economic and social policies and planning by private businesses as well as by government agencies. One major economic variable produced from this information is the participation rate in economic activity. It is equal to the EAP in a population cell (e.g. age/sex group) divided by the total population in the cell, and expressed as a percentage. Obviously, if not all those who are economically active are recorded as such, then misleadingly low participation rates will be estimated. In addition there will be no information on the characteristics of those missed: In many countries the groups missed in past censuses contained a high proportion of women, thus leading to an underestimation of the role of women in the economic activity of the country, and to an underestimation of the impact which new activities might have on the welfare of their households.¹

¹ In total 187 countries reported to the UN for censuses in the 1975-1984 period and of these 181 covered economic activity topics. In this Working Paper any discussion of the numbers asking each topic will refer to this total of 181 countries which covered economic topics. Only 138 of the 181 countries asked a separate basic question(s) on economic activity ('employed', 'unemployed' etc.). Other countries often combined for one question response alternatives related to 'economic activity' with response alternatives related to other topics, usually 'occupation' or 'status in employment'. In these countries 'did not work' was a response category or 'occupation'/'status' was to be left blank for those who did not work.

The first question or questions of the economic block of questions are almost always designed to identify those who are 'economically active'. The subsequent economic questions on the census questionnaire mostly apply to the *economically active population (EAP)* and thus the question(s) to



identify the EAP are the key to the whole block of questions on 'economic' topics.

The conceptual basis of this measure is presented in the 1983 Thirteenth International Conference of Labour Statisticians: *Resolution concerning statistics of the economically active population, employment, unemployment and underemployment* and later ILO manuals and guides on the topic. The Resolution and the later ILO work are tied to and compatible with work on the United Nations *System of National Accounts 1993 (SNA)*. This Working Paper will not discuss these conceptual issues² but will concentrate on the practical issues of identifying the EAP for a Population Census. The basic model of economic activity is given in diagram 1:

Diagram 1 - Economic Activity Components of the Total Population

By the "Total In-Scope Population" is meant: the total population net of any groups excluded from the scope of the Census, e.g. foreign resident diplomats or troops are usually excluded from the scope of a country's census.

For easy reference table 1 lays out a summary of the major activities which are regarded as economic and non-economic. The emphasis in the table is on activities commonly found in many developing

² See References United Nations, 1993 Chapters VI and XVII, and Hussmanns et al, 1990

countries, but obviously every situation cannot be important in all of them. The census planners should try to draw up a similar table specifically for common activities in their country, to guide questionnaire development for the economic questions. Discussions on the final list of economic activities for the census should include National Accounts experts as well as other important users of census results on the population's economic characteristics.

To make changes to the definition of the EAP, as well as changes in the ways of measuring the scope of economic activities of the population, may lead to major problems of comparability between the results from one census and the next, between the results from censuses and surveys in the same country, and between censuses in different countries. One major problem has often been the exclusion of many activities done by women from consideration as economic activities, with the consequence that there has been a major underestimation of women's role in the economic activities of many countries.

For the following discussion it is best to look at the two components of the EAP (the Employed and the Unemployed) separately.

2.2A Problems of Identifying the Employed EAP

An employed member of the economically active population is broadly speaking a person who during the reference period does any activity which produces goods or services of the type which falls within the economic production boundary defined by the SNA . Too often in the past, questions such as "Did you have any job or business of any kind in the last" produced an immediate answer 'No' from respondents who are farmers, petty traders or similar. They seem to have heard the word 'job' and assumed the question was about wage jobs. Such questions alone without probes or follow-up addition questions will almost always produce an underestimate of the employed population. The word "job" should definitely be avoided in the basic question on this topic. Some of the major problem groups for identification of the 'employed' are given below, in the sense that persons only engaged in one or more of the activities discussed below may not regard themselves as 'employed' or as 'having a job' without some prompting by the questionnaire and/or the enumerator.

Table 1 : Economic and non-economic activities

Economically Active	Not Economically Active
<p>Employed</p> <p>C Wage jobs- Full time or Part time</p> <ul style="list-style-type: none"> - Permanent or temporary - Casual or piecework • Including <u>paid</u> child minding and other <u>paid</u> domestic work • Can be paid in cash or kind (e.g. food or accommodation) <p>C Businesses Activities- Large or small</p> <ul style="list-style-type: none"> - Agricultural or non-agricultural <p>Examples - Small shop/Kiosk/Street Stall</p> <ul style="list-style-type: none"> - Preparation/Selling Juice, Soft Drinks <p>? Taxi Operator</p> <p>? Shoe cleaning/Sewing Business</p> <p>C Any activities on own or family farms for the purpose of production for sale or for home consumption including:</p> <ul style="list-style-type: none"> - Planting crops - Harvesting crops - Keeping birds and other pests off crops - Weeding <p>? Transport of goods from the fields for storage or for sale</p> <p>? Fetching water and firewood for domestic use (See Para? .)</p> <p>C Fishing, Collecting Shells or Seaweed for sale or home consumption</p> <p>C Processing of Agricultural or natural products for sale <u>or</u> home consumption</p> <ul style="list-style-type: none"> - Mats, Hats from natural or grown fibres - Furniture from natural timber - Butter/cheese etc. from milk - Oil from Oil seeds/fruit - Preparation of charcoal <p>C House or farm building/construction</p> <ul style="list-style-type: none"> - Fence/enclosure/storage construction - Road/Irrigation Construction - House construction/additions 	<p><u>Neither Employed nor Unemployed</u></p> <p>Persons doing the following activities <u>and</u> Economically inactive in the period</p> <p>C Full time students</p> <p>C All types of Housework including:-</p> <ul style="list-style-type: none"> Unpaid child minding-own/other children Education/Training of own children at home House cleaning and decorating Cooking/Preparing meals for own H?hold Caring for the sick and aged (unpaid) Repairs (minor) to own Dwelling etc. Repair of own domestic equipment & vehicles <p>C Persons in the following status <u>and</u> economically inactive in the period</p> <ul style="list-style-type: none"> - Retired - Sick - Disabled - Living off investment, rental or pension income (no current activity to earn it)
<p>Unemployed</p> <p>Not Employed <u>and</u> Active seeking/Available For work (See Para? ..)</p>	

N.B. A similar list of activities for each country should be made early in census preparations to assist in questionnaire design and during testing, and to be used later in manuals and training.

- c **Part Time or Casual Work:** Part time work, casual work, piece work or similar, even though thought of as 'jobs' seem often not recognised as 'real' jobs and are often badly under-reported in censuses. Respondents often seem to think the 'government' is only interested in recording full time jobs for the census. This, and the fact that the respondent is often a little suspicious of the questions, and often not paying tax on casual income, reinforces the tendency to say 'no'. Unless there is a supplementary question or probe on these activities or a full prompt list, they may not be recorded on the census questionnaire. (The guarantee of confidentiality and the need for and the uses of the data should usually be re-stated before the economic questions, as these are often particularly sensitive.)
- c **Businesses, particularly informal businesses:** Respondents with larger enterprises can be quite open about their business activity and in some cases the interviewer can actually see the business or is interviewing in it and thus these are often not a problem for identification. However, small informal activities such as street selling, shoe cleaning, beer brewing and the wide range of informal businesses common in many countries, are often not regarded as real 'jobs' or real 'work' and are not recorded. Interviewers must probe for all these types of activities and/or have a good prompt list. Interviewers must also be trained to be observant. A woman obviously cooking a large number of bread rolls or other food or making several hats or mats is almost certain to be employed economically and a few gently probing questions about what she is doing, will give most of the information is needed for the census questionnaire. (It has been known for interviewers to interview a small shop owner and family, in or near their shop but still record no economic employment.)
- c **Unpaid work in family business (non agricultural):** Persons, often women, working without pay in family shops or small manufacturing activities etc. are one of the hardest groups to record as 'employed' in censuses (and in surveys). It often needs strong probing or an alert interviewer to extract information on these activities. The training should stress the strong likelihood that when there is a small family shop or similar informal activity being conducted by one member of the household, it is very likely that other members of the family will also be working there.
- c **All agricultural work, not only formal farms:** There is often a problem that most farming in developing countries is not regarded as a real job or real work. To register those working on commercial or formal registered farms either as the owner or as an employee, is usually not a problem. However work on the small common village or peasant farms, whether producing cash crops or not, seems to need specific probing if it is to be recorded adequately
- c *The following are examples of activities that are considered as economic because they contribute to production as understood by the SNA. When considering their impact on the number of employed persons recorded in the census one should recognise that where they are important, such as in subsistence farming, they may not be the only productive*

activities undertaken by an individual. Thus only those persons for which this is the only form of economic activity will represent an addition to the employed population.

- c **Agricultural work for home consumption:** The greatest problem besides unpaid work in family businesses in most countries is agricultural work mainly for own consumption. In many developing countries the amount of such work is very significant and usually done by women who do not do any other type of economic activity. For identifying this group, a broad question about any work at all on own or family farm or a prompt list will be particularly useful.

- c **Processing primary products for home consumption:** These activities include making mats, pots, furniture, processing milk for butter or oil seeds for oil, weaving textiles mainly for home use. The SNA states that these activities should be included within the production boundary if they represent a significant proportion of the total production of the relevant item for that country. This issue will need discussion with National Accounts staff and other data users. The activities are significant economic activities in certain countries and are often made for sale as well as for home consumption. When the products are sold by households the activities have sometimes been recorded, but when the activities are mainly for home use, they have rarely been recorded in censuses, and, will definitely need special mention or probing if they are to be taken into account. It will also be necessary to try to identify these activities separately if possible so that additions to previous estimates of economic activity can be gauged for comparability purposes.

- c **House and farm building work:** This type of building work which adds to the household's capital (provided it is not just simple repairs), is regarded as economic work by the SNA and the persons engaged should be recorded as 'employed' when doing this work. These activities include fence making, construction of animal enclosures (e.g. for cattle, pigs or poultry), road or irrigation ditch construction as well as home building or major additions. These tasks are sometimes agricultural off-season activities and needs special probing to be taken into account. They should definitely be included on any prompt list and in interviewer's manuals as examples of economic activities.

- c **Collecting Firewood and Fetching Water:** These two activities are included within the boundary of economic activities. In many villages and some urban areas, these activities are daily activities of women and often children, particularly fetching water. The effect of including both these activities as economic activities in many countries may be to make almost all women economically active and employed. There will be a corresponding reduction in estimates of the not economically active population and, in many cases, unemployment estimates. This can be worrying particularly in a Population Census where under-employment is rarely measured. There is, however, considerable concern about the identification and recording of these activities, which will need strong probing as they are not commonly thought of as being in the scope of "work" or "employment" in most countries. Representatives from some predominantly rural agricultural countries have stated that these activities have been included as employment for household surveys recently, but that the results still show relatively low participation rates in economic

activity for women, which is unlikely to correctly reflect the actual situation. Very good interviewer training and quality control will be necessary to ensure the consistent inclusion of these activities within the EAP in censuses and surveys. It is essential that persons considered as 'employed' solely on the basis of these activities should be tabulated separately, so that the effect of their inclusion can be clearly identified for comparability purposes. Note that both unemployed and not economically active estimates will be lowered by the inclusion of these activities in the EAP.

Fetching water is often combined with working in the food garden or with other domestic duties such as washing clothes and babies in a nearby stream or at a well/stand pipe. Collecting firewood often is done on the way back from the water source, or is done on the way to or from gardens for agricultural work. Identification of the major activity in all these cases will be difficult and estimates of time taken on economic activities will be particularly difficult. Clear guidance will also have to be given on the incorporation of these categories into the classifications for all other economic topics. Special pre-test or follow-up surveys, e.g. time use studies, are likely to be necessary to gauge the full effect of the inclusion of these activities in the EAP for many countries

It is recommended that this issue be discussed with National Accounts statisticians and other data users in detail during census planning. The means of identification of all these effects should be planned for during census preparations, and the full effects of their inclusion on all estimates should be measured during pre-census testing.

2.2B Problems of Identifying the Unemployed Population

The first major requirement to be counted as an 'unemployed' member of the 'economically active population' is that the person should not be employed during the reference period. The second major requirement is that the person in the recent past should have been actively seeking work at which (s)he could have worked in the relevant reference period, or in which (s)he could start working almost immediately if offered a job during that period.

With the broad scope given to employment as explained in the previous section and as shown in Table 1, there has to be a corresponding reduction in the scope for unemployment. This has worried some of those analysing the labour markets in poor countries when they see that the measured unemployment rates there are considerably less than in many wealthier countries. However, this is definitely a reflection of reality. Lacking the unemployment benefits and other social services common in most developed countries, most people in developing countries often cannot be totally unemployed or they would not survive. Few families can support totally unemployed youngsters or adults. Many people in developing countries make meagre incomes from a variety of informal activities or survive by growing their own food. In developing countries unemployment in this strict sense is therefore mostly found in urban or peri-urban areas where a person can be totally unemployed while obtaining support from employed other family members or relatives.

The group 'unemployed' only includes persons not employed and who had actively been seeking work. Means to 'actively seek work', as understood in developed countries, include: registration at employment offices, applying to employers in person, replying to newspaper advertisements or taking similar active steps to find wage jobs. The active steps also include trying to obtain a license, or funding or other steps to start business or, similar steps to start an agricultural activity. These "active" steps are often a problem to identify in most developing

countries, particularly in rural areas. There are often no employment officers or they are known to be ineffective and few bother to contact them. There are also often few business or government offices in the area at which to apply for work. Funding or suitable land for businesses or agriculture is often also very limited. However the person has no work and may be very obviously available for work if any type of economic activity was open for him/her in the area. Women in particular may keep themselves busy with housework and take no active steps to find employment, but if the opportunity presents itself they could easily be available for that work. The ILO international recommendations do recognise this problem and allow countries to relax the actively seeking work criterion if necessary in their situation. Very few countries seem to have done this in their censuses and this may partly explain why very low unemployment rates are reported from most developing and transition countries.

In many developing countries the unemployment rate defined in this way is not particularly relevant as an indicator of the general situation in the labour market. A low general unemployment rate certainly does not mean that the developing countries or regions do not have employment problems. The problems are more complex than a simple rate can show and this is why better and broader economic data are needed, so that the situation of both the EAP and the non-EAP can be examined in some detail to show the real problems. However, this does not prevent the unemployment rate as conventionally defined, from being a useful indicator of labour market problems for particular groups in these countries, e.g. for persons with higher education or particular forms of training.

To try to obtain a better insight into the unemployment problem one might try to test the possibilities for relaxing the 'actively seeking work' criterion. Household surveys often include questions on 'actively looking for work' and on 'available for work'. This provides a possibility for investigating the effects of relaxing one of the criteria when defining 'unemployment'. Testing should be done to establish the effect before the relaxed definition is introduced into the census. The 'available for work' criteria is better as a separate question than as a simple response category. However, it is probably best to aim for a simple, crude unemployment measure from the census and leave it to household surveys to investigate more precisely defined concepts.

Census planners should definitely investigate this often thought simple topic in much more detail and be sure of their aims and if possible, exactly what they are measuring.

3. CURRENT ECONOMIC ACTIVITY (see WR, paragraphs 2.168 - 2.208)

The WR recommends that countries consider measuring both *the currently economically active population* and *the usually economically active population*. In the past, most countries have measured only current activity. Of the 187 countries which reported to the UN on censuses in the 1975-1984 period, 146 used a current period (day of census, last week or month) and 47 used the last year as the reference period for a usual measure. Some had questions using both periods. It has always been acknowledged that the current activity measure had limitations if the census was conducted at a particular seasonal time of the year, e.g. during the dry season. However, there are a number of difficult technical problems in using the longer reference period of the usual measures, and they are discussed in Section 2.12 of this handbook.

The *currently economically active population* is identical to the *Labour Force* concept, which has been the basis of employment and unemployment measures in both censuses and household surveys for many years. Its major advantage is that it has a short reference period close to the time of the interview, and this minimises memory problems for the respondents. It is also easier to measure the characteristics of the economic activity for the short reference period as there are usually fewer changes during that period than during a longer one. The disadvantage is that it can only represent the activity situation during that current period, and this may not be representative or typical of the annual or average activity patterns if the country or region has strong seasonal patterns of activities.

The measures are termed 'current' measures because of the short reference period close to the census date. It is unlikely that they or any other census measures will give very 'current' indicators of the employment situation at the time when census results are released, because of the usual lengthy period for census processing. As noted earlier, household surveys are used to obtain very 'current', i.e. up-to-date, estimates. However, it is usually true that there are not major changes in the basic structure of the EAP while waiting for census results, and that they consequently are very valuable economic indicators, particularly for small geographic areas.

Census planners need to weigh up the advantages of a current measure with its more definite accurate measure of activity during the short reference period against the more difficult measure of 'usual activity' which can reflect the activities over e.g. a twelve months period. As comparability with previous results is of major value also for census data, it is recommended that if the 'current' approach was used in the past then one should continue with it, but consider whether to include some additional measure of 'usual' activity as well, and *vice versa*. Statistics on the EAP should always be published with the reference period prominently noted so that users are fully aware of this: e.g. 'employed population in the week of, 2000'. This has often not been done in the past, but can be important for the correct understanding of the statistics in countries with pronounced seasons in certain types of economic activity in certain regions, e.g. agriculture or tourism.

3A Measurement and Related Issues:

Before exploring possible questions on this topic, a few basic issues relevant to all questions on current activity will be discussed.

3A.1 Reference Period

The recommended reference period for 'employment' is the seven days previous to the Census enumeration day. This is obviously the closest short period. However, some countries prefer to use the calendar week prior to enumeration day as they find respondents relate better to a fixed calendar period. Note that when using the calendar week approach, the exact starting and ending day should be given e.g. from Monday to Sunday last week. The use of either the previous seven days or the calendar week should be included in any pre-testing for the census.

Some countries have been experimenting with one day (e.g. the day before the enumeration day) as a reference period in surveys, but it is not known if any country has tried this in a census. Such a measure would be the most 'current' measure possible, and would minimise problems of recall by the respondent. An Indian study³ has shown that employment tends to be lower and unemployment higher with a one-day reference period compared to the one week period (using the priority rule discussed later). With a population working intermittently the chance of having one day without work is higher than having a complete week without work. Temporary absences from work for one day can cause problems. Most countries have thought one day as a reference period is too short and there is always a danger that something unusual may happen on that day if not nationally at least in some regions. There are also problems of avoiding Sundays or other traditional rest days for the country concerned.

A one month reference period has been tried in some countries. However memory loss is likely to come in and there will be more problems related to changes between different activities during the month. In such cases one has to determine a main activity if both are employment activities. If both employment and unemployment occur during the month, one also has to decide whether to use the approach of any work during the month as discussed below, or the 'usual activity' approach of the main activity during the month (see section 12 below).

On balance, the seven-day reference period does seem the most useful one and it is the one that has been used in most countries for both censuses and surveys for a long period. It is particularly useful to use the same period for the census as for Labour Force Surveys, for comparability purposes. Any change of reference period should definitely be subject to pre-testing and an evaluation made of the effect of the change on the comparability with the results from previous censuses and this should be published.

3A.2 Basic Rules Regarding Economic and Non-Economic Activities

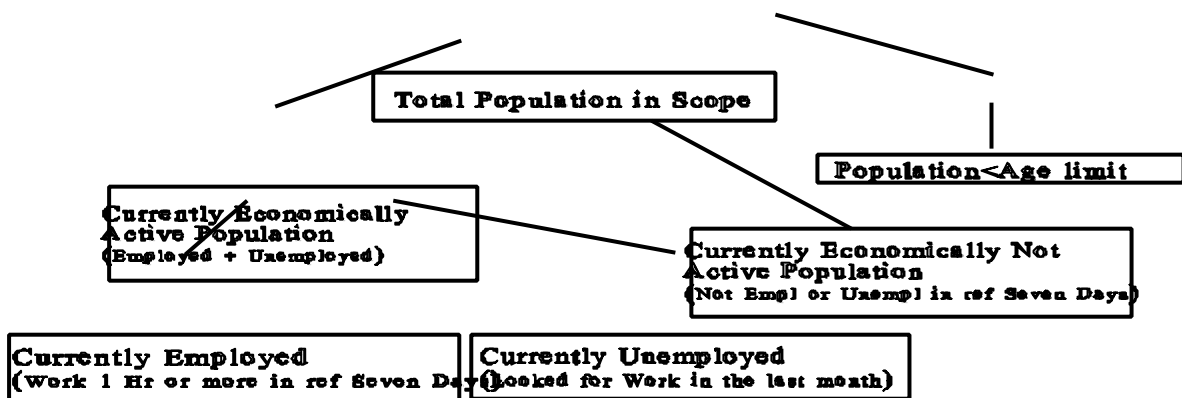
³Paper by P. Visaria for ESCAP/ILO Seminar on Employment and Unemployment Stats, January 1989, Bangkok

The basic rules for the economic activity questions are that, within the reference period:

- c Economic activities take preference over Non-economic activities
- c Within Economic activities Employed activities take preference over Unemployed activities.

For current activity:

- c a person is taken as employed if they do any work at all in the reference period . ‘Any work’ is commonly taken as a minimum of one hour during the reference period. It has generally been found that the number of persons working very few hours (e.g. less than five) is very small. The stress on ‘any work at all’ is very important and essential to capture part-time work as well marginal forms of employment.
- c Unemployed persons have to be actively looking for work during a recent period which may include the reference period for ‘employment’ and to be available to start a job offered, almost immediately (see the discussion in section 3B).



- c The currently economically active population is the sum of the ‘employed’ and the ‘unemployed’.
- c The currently not economically active population is then those who are neither ‘employed’ nor ‘unemployed’ in the reference period.

Diagram 2 - Components of the Total Population by Current Economically Activity

3A.3 The Wide Range of Economic Activities

This aspect was discussed in detail in section 2. The problems of identifying the economically active population are relevant for both usual and current activities. However, it is worth re-stating here that the key to all the economic questions is the identification of who is ‘employed’ and then who is ‘unemployed’. One question by itself will rarely do this. It has been proved

that the common question alone “Did you do any work for pay or profit in the last seven days?” will tend to lead to underestimation of the ‘employed’ population. The use of a *Prompt card*, i.e. a series of questions or a question with a series of prompts covering all the commonly missed groups, is essential to avoid this.

3A.4 Multi-Purpose Questions

It has been common to determine the economically active population through a question with response alternatives which allow the derivation of particular categories, e.g. for ‘status in employment’. The categories for ‘status in employment’ would be used as prompts. For example “In the last seven days did you do any work as a) a wage earner/paid employee, or b) own account worker with employees, or ... etc.”. To do this may save space on the questionnaire, but it has almost certainly helped to underestimate the economically active population. This problem was enhanced by the use of technical terms such as ‘own account’ which are difficult for non-statisticians to understand correctly. If at all possible the initial question on employment should be left to stand alone, and questions for other topics should be asked separately. The census training of enumerators must emphasise the basic importance of the key question(s). The importance of doing so has been shown in quality investigations of both censuses and surveys.

3A.5 With a job or enterprise but not working

The aim has always been to include as ‘employed’ those persons who are temporarily absent from their jobs. The details of this issue have been the subject of much discussion and fine lines of distinction have been drawn, particularly in developed countries. In developing countries and particularly for censuses, trying to draw these fine distinctions could be confusing and it is suggested that only the following rules be followed:

Include as employed

a) **Paid employees** who are-

- c Absent on paid leave (recreation/annual/sick/maternity leave) or paid training
- c Absent from work without pay because of industrial disputes, machinery breakdowns, shortage of materials etc. but continue to have a formal relationship to their job or feel that they definitely have a job to go back to.

b) **Self Employed** including **unpaid helpers** in family businesses, who respond that-

- c They are temporarily absent from the activity and the activity is continuing in their absence, i.e. because other members of the family are continuing to work on the family farm or business, orders are still being received or in some other way which indicate that the activity is still operational.

Problems have arisen with the concept of 'temporary absence' for agricultural self-employment in developing countries: In several cases, large numbers have been recorded as temporarily absent from agricultural activities. It must be stressed to interviewers that the agricultural off season when very few are working should not be counted as 'temporary absence'. This concept should only cover temporary and short absences caused by sickness, weather, family or village obligations (e.g. funerals, attending meetings, taking children to clinic etc.). If the off-season is counted as a 'temporary absence', then no seasonal unemployment will be recorded. It may be necessary to set a maximum period for how long an absence can last and still be considered as 'temporary' to act as a guide, e.g. two weeks.

In general a common sense understanding of a temporary absence has usually managed to cover most cases successfully. Detailed discussions of unusual cases have often confused interviewers and produced excessive numbers being recorded. This situation should be carefully examined in pre-tests and re-interviews to ensure their proper recording.

3A.6 Students

Students should be subject to exactly the same economic questions as other members of the population. School attendance or attendance at other training institutions, should be recorded in the education and training block of questions on the census questionnaire. It is important to remember that 'students' can be employed either part time or full time, particularly during vacations. In some countries, sectors or areas they form a significant proportion of the employed population. Similarly students can be actively seeking work or be currently available for work, either full time or part time. Sometimes they are only studying because there is no work available, or they are seeking part time work to help pay for their studies. Some users may not want full time students in e.g. tabulations of the unemployed. Then the responses to the 'education' questions can be used to screen out full time students during tabulations.

3A.7 Unemployment

Problems of measuring 'unemployment' were discussed in detail in section 2B. A few aspects are worth re-stating here. The traditional strict measure of 'unemployment' which requires persons to be not working and to have been actively seeking work will generally mean that the measured 'unemployment' rates for many developing countries will be low. Both the broad definition of 'employment' and the requirement that a person should have been actively seeking work, act to lower the 'unemployment' rate.

The 'actively seeking work' criterion is part of the international recommendations but may not be well suited for most developing countries unless broadly interpreted, i.e. to at least include as 'seeking' asking friends about possible jobs or work opportunities. The possibility and relevance of using only the 'currently available for work' criterion should be explored.

While the international recommendations do not specify a precise reference period for actively seeking work the previous month or four weeks has been used most commonly. The requirement to be 'not working' still applies to the reference week in such cases. For the 'available' criterion the international recommendations state that the period should be the current reference week and the next few weeks (both two and four have been suggested). This extension of the start of a job offer period into the future allows a person to make the arrangements necessary to cope with other commitments, e.g. women engaged in childcare or housework in particular. Lengthening the periods will give broader measures of unemployment and add to the numbers of unemployed persons.

Note the need to be aware of and try to avoid including any public holidays and other major events in reference periods for search or availability.

Ideally questions on both 'actively seeking' and on 'available' should be asked to make it possible to give statistics for both 'strict' and 'relaxed' unemployment measures. It may, for example, be useful to ask both questions in one census to provide both strict and relaxed estimates of unemployment, particularly for comparing the results, and then possibly continue in future censuses with one concept only.

The possible variations on the unemployment question(s) should be thoroughly tested before being introduced. Pre-testing should also focus on the respondents' interpretation of the word 'available', particularly when translation in the field by the enumerator is common.

In general the census cannot be used to obtain timely indicators for rapidly changing situations, and the more refined in-depth measures of unemployment should be left to Labour Force and other household surveys. The census measure's major value is that it supplies statistics for small areas and small population groups.

3B Example Questions

In many countries the national censuses have used a question on current economic activity for a long time and thus have some experience with the topic. However there have often been problems with the question(s), the most common being the resulting undercount of the total number of persons economically active, particularly among women. This problem is likely to be even more pronounced when using the wider scope for economic activity now recommended, as discussed in section 2.2.

To show how national statistical offices have tried to cope with the problem of identifying all persons currently economically active examples of questions used have been chosen to illustrate various good practices. As there are usually some problems with each question or set of questions given comments will be made on each example. Census planners from other countries may wish to contact their colleagues in the countries with the chosen examples, for further information on the relative success of the various example questions. No examples

were found which explicitly mentioned that the production for home consumption, including fetching water and collecting firewood, now is considered as representing employment.

The first example is from the **Palau 1990 Census**

Q 21. a) Did ... work at any time LAST WEEK, either full time or part time?

Work includes part-time work such as delivering papers, or helping without pay in a family business or farm. It also includes active duty in the Armed Forces. Work does NOT include own housework, school work or volunteer work. Subsistence activity includes fishing, growing crops, etc. NOT primarily for commercial purposes.

Read each category and mark (X) the ONE box that applies.

- 1 ? Yes, worked full time or part time at a job or business AND did NO subsistence activity
 2 ? Yes, worked full time or part time at a job or business AND did subsistence activity
 3 ? Yes, did subsistence activity only)
 4 ? No (did not work OR did only own) **SKIP TO 25**
 housework, school work, or)
 volunteer work))

Q 25. Was ... on layoff from a job or business LAST WEEK?

If?No?, ask ?Was ... temporarily absent or on vacation from a job or business last week?

- 1 ? Yes, on layoff
 2 ? Yes, on vacation, temporary illness, labor dispute, etc.
 3 ? No

Q 26 a) Has ... been looking for work to earn money during the last 4 weeks?

- 1 ? Yes (**GO TO B**)
 2 ? No (**SKIP TO 27**)

b) Could ... have taken a job LAST WEEK if one had been offered?

If?No?, ask ?For what reason?

- 1 ? No, already has a job
 2 ? No, temporarily ill
 3 ? No, other reasons (in school, etc.)
 4 ? Yes, could have taken a job

Q 27 When did ... last work at a job, business or farm even for a few days?

- 1 ? 1990
 2 ? 1989
 3 ? 1988
 4 ? 1985 to 1987
 5 ? 1980 to 1984
 6 ? 1979 or earlier
 7 ? Never worked or did subsistence only

The basic economic activity question in Q21a is very long but does prompt on the major problem categories. The categories for the answer are also useful prompts. However there is some concern that the question does tend to become rather complex with both basic economic

activity and the combination of subsistence activity with other activities being asked in the one question.

Only persons answering 'NO' to Q21a were asked Q25. As can be noted only the strict concept of unemployment was used. Also the question on availability for work referred to 'Last Week' whereas it is recommended that the next four weeks be used to allow persons to consider alternate arrangements for their current non-economic activity (e.g. arrange child minding).

The next example is from the **Botswana 1991 Census**. The questionnaire was in the Landscape layout common in some parts of Africa with one page (generally) collecting details for all family members.

Type of activity during past 30 days	
During the past 30 days did ... work for cash? 1 Yes for someone else) GO TO 2 Yes for self) A 14 3 No GO TO A13	Then what did ... do during the past 30 days? 1 Family business 2 Work at Lands/Farms/Cattle Post 3 Activity seeking work 4 Housework 5 Student 6 Retiree (Other specify)
A 12	A13

The answer categories for the questions are useful in that they prompt for unpaid work particularly in Agriculture and Family Businesses. However, the combination of the basic activity status question with other topics, in this case 'status in employment', should be avoided if at all possible. With the landscape layout there is always very little room for prompts or explanation on the questionnaire, and in this case the manual and training would have to have thoroughly covered the other categories of 'Work' and the meaning of 'Actively Seeking Work' in particular.

The next example is for the **1996 Canadian Census**, from their interview schedule.

Q37. Last week, how many hours did you work (not including volunteer work, housework, maintenance or repairs for your own family)?

Include as work:

- C *working without pay in a family farm or business (e.g., assisting in seeding, doing accounts);*
- C *working in your own business, farm or professional practice, alone or in partnership*
- C *working for wages, salary, tips or commissions.*

Number of hours (to the nearest hour)

OR

None

Q38 Last week were you on temporary lay-off or absent from your job or business

Mark one circle only

No

Yes, on temporary lay-off from a job to which expect to return

Yes, on vacation, ill, on strike, or locked out or absent for other reasons

Q39 Last week did you have definite arrangements to start a new job within the next four weeks?

No

Yes

Q40 Did you look for work during the past four weeks?

For example, did you contact a Canada Employment Centre, check with employers, place or answer newspaper ads?

Mark one circle only

No

Yes, looked for full-time work

Yes, looked for part-time work (less than 30 hours per week)

Q41 Could you have started work last week had a job been available?

Mark one circle only

Yes could have started work

No, Already had a job

No, temporary illness or disability

No, personal or family responsibilities

No, going to school

No, other reasons

Q37 does prompt very well on some of the problem categories of economic activity and the later questions thoroughly identify temporary absence from work and probe for unemployment. It combines a basic activity question with the collection of 'hours worked' data. This may have influenced data quality on one of these topics. The reference period for Q41 would have been better if extended into the future as explained for the Palau question above.

The next short self enumeration example is from a recent **United Kingdom** test for their 2001 Census

Q20 Last week were you doing any of the following?

(X all the boxes that apply)

In paid work

Retired from paid work

- In full time education or a student
- Working on a government sponsored training scheme
- Looking after family or home
- Permanently sick or disabled
- Temporarily sick or injured
- Looking for work and available to start within two weeks

- Looking for work but not available to start within two weeks
- Waiting to start a new job
- Doing unpaid work in own/family business
- Doing unpaid voluntary work

Q21 Are you currently in paid work?

- Yes
- No

The UK categories are not necessary suitable for developing countries, but the technique of multiple answers is an interesting one which census planners in other countries might consider.

The **final example is an untested hypothetical example** to show the coverage of the new activities to be regarded as employment plus some other questionnaire techniques.

<p>Prompts: Any work you did in the last 4 weeks? Any Fishing or Seafood Collecting! Make anything for sale or your own use from farm or natural products! Fetch any water or collect any firewood! Any work in a business of any type! Any Type of wage job(Full time or part time)!</p> <p>C2: <i>Did you do any work for one hour or more in the week?</i></p> <p>C3: <i>Did you do any unpaid work in a family business?</i></p> <p>C4: <i>Do you usually work but happened to be absent last week because of leave, sickness, bad weather, industrial troubles or other reasons</i> Interviewer: If Yes to any of C1 to C4 skip to next Section</p> <p>C5: <i>Did you actively look for work sometime during the last four weeks?</i></p> <p>C6: <i>If offered a work opportunity could you start within the next four weeks</i></p> <p>C7: <i>What were you doing, what was your situation, last week?</i></p> <table> <tr> <td>Studying</td> <td>1</td> <td></td> </tr> <tr> <td>Housework.....</td> <td>2</td> <td>CODE</td> </tr> <tr> <td><u>Not Working</u> and</td> <td></td> <td></td> </tr> <tr> <td>Disabled</td> <td>3</td> <td></td> </tr> <tr> <td>Sick.....</td> <td>4</td> <td></td> </tr> <tr> <td>Retired/Aged.....</td> <td>5</td> <td></td> </tr> <tr> <td>Pension, Rental or</td> <td></td> <td></td> </tr> <tr> <td>other Income recipient...</td> <td>6</td> <td></td> </tr> <tr> <td>Other</td> <td>7</td> <td></td> </tr> </table>	Studying	1		Housework.....	2	CODE	<u>Not Working</u> and			Disabled	3		Sick.....	4		Retired/Aged.....	5		Pension, Rental or			other Income recipient...	6		Other	7	
Studying	1																										
Housework.....	2	CODE																									
<u>Not Working</u> and																											
Disabled	3																										
Sick.....	4																										
Retired/Aged.....	5																										
Pension, Rental or																											
other Income recipient...	6																										
Other	7																										

The major points to note are:

- c Prompts are included on the major employed activities. These should be made specific to the country and include the most important activities likely to be missed.
- c Separate questions emphasise the one hour limit to pick up short-time work, unpaid work and temporary absences. These are the situations most commonly missed. If separately recorded the answers to these probes allow a measure of additional persons added to employment as a consequence of them. .
- c Both the strict and the more relaxed definition of ‘unemployed’ can be used on the basis of the responses given to questions C5 and C6

A possible extension would be to make each of the prompts in C1 a separate question with their own ‘Yes/No’ answer. This would supply additional data and may be useful for creating comparability with the results from previous censuses, but will extend the sequence of questions. The temptation to incorporate the status in employment variable here should be resisted. An alternate approach would be

to use a Prompt card in place of the prompts to Question C1. A possible prompt card is given as Diagram 5. Note that in each country a tailor made prompt card would need to be constructed to suit the particular national circumstances. The examples on the Prompt Card need to be varied and added to suit the situation in each country and the order of categories need to be tested so that the card does prompt for important activities most likely to be missed. As stated earlier prompt cards have proved very effective for surveys and certainly should be examined and tested for censuses.

It should be noted that for all the example questions the response categories for the 'not economically active' have a value in their own right. The categories should also be checked in pre-tests to ensure they are being understood and are sufficient and useful for the situation in each country.

2.3C: Pre-tests

The following aspects may need pre-testing on current activity:

- Any change in length or type of reference period from that used in previous censuses.
- Success or otherwise in recording difficult groups e.g. part-time and unpaid work etc..
- Effects of inclusion of all additional groups from the extended production boundary on all classifications e.g. effect of inclusion of fetching water and collecting firewood on activity, status, industry and occupation groups.
- Effect of prompts, additional questions or prompt cards with the previous point.
- Possible additional categories/wording/examples for prompts or prompt cards based on persons wrongly being recorded.
- Temporary absences - what is being taken into account ?.
- Evaluation of 'seeking work' compared to 'available for work' for the unemployed.
- Categories being recorded in 'Other' for the 'not economically active'.
- If a simple layout is employed its success in recording both employed and unemployed.

2.3D: Data Processing Issues

The following are some points for data points for data consistency and tabulations on this topic.

- c It is useful to do an age distribution of the categories of the non-economically active. Extreme occurrences e.g. retired persons below 45 years, should generally be re-coded and any unusual groupings at unusual ages in general should be investigated.
- c Tabulations of the characteristics (age/occupation etc.) of the temporarily absent should be done as part of evaluation of this category.

- c Note that the current activity reference period and the reference period for any question on usual activity may not overlap. 'Usual' activity may cover up to the end of the previous month and 'Current' activity is often the previous seven days from the enumeration day. In this gap the person may have changed activity e.g. become employed or unemployed or retired. Thus it is not recommended to force any consistency between these data items (if both are asked) during data processing.

ECONOMIC ACTIVITY

DID YOU DO ANY OF THE FOLLOWING ACTIVITIES IN THE LAST 7 DAYS

C Any Activities On Your Own or the Family Farm, Garden, Carrle Post/Kraal of any kind.

(Products can be for sale or family use)

Examples: Planting Crops

Weeding Crops

Harvesting Crops

Chasing Birds or other pests off Crops

Looking after Cattle or other Animals

Moving Crops to storage or sale

C Fetch any water or collect any firewood

C Any Kind of Business Activity big or Small

Examples: Small shop/Kiosk/Tuck shop

Street or Market Selling

Shoe Cleaning/Repair

Beer Brewing/Repair

Making/Selling Hats, Mats, Baskets, Caps

C Catch, collect, Cultivate any Fish, Prawns, Seaweed, Shells or other food from the Sea, River or Fish/Prawn Farm

(Fish etc. can be for sale or family food)

C Make anything from Farm or Natural Products for sale or own use

Examples: Making Handicrafts, Mats, Hats from Straw or timber

Making Charcoal

Making Butter from Milk

C Do any Construction or Major Repair Work on Your House or Farm

Examples: Build/Repair Fences/Kraals

Make/Repair Irrigation Channels

C Have any Type of Wage or Salary Job paid in money or by food/clothing/accommodation

Examples: Full or Part time jobs

Casual or Piecework Jobs

Permanent or temporary Jobs

Including any temporary absences for leave, sickness or family/village responsibilities

2.3E TARGET POPULATION FOR FOLLOWING TOPICS (ref. WR 2.212 - 2.213)

Once the 'Currently Economically Active' have been identified as described earlier, the remaining economic topics only refer to this subset of the total in-scope census population. The topics in the following sections are characteristics of the 'job' or 'jobs' associated with the person identified as economically active. The target population for the questions and the selection of the job or jobs to refer to is of major importance and the following points should be noted before proceeding to these topics when preparing for the census.

- c **2.3E.1 Current or Usual Activity:** The characteristics of the job or jobs are usually collected for 'Currently economically active population' rather the 'Usually economically active population'. Compared to the short reference period used for 'current' activity the long reference period used for usual activity leads to a considerably larger proportion of persons who have experienced both mixed activity status, as employed, unemployed and or NEA, and more than one job during the period. This often leads to considerable difficulty in identifying a main job to be the reference for employed characteristics and similar problems of a reference job, if any, for the unemployed (if covered). The short reference period, usually seven days, has been used in most countries for censuses and surveys for a considerable period and there is a background of experience in the limited difficulties that occur. The relative precision of the current measure and general ease of interpretation for interviewers and respondents makes it strongly preferable to any usual measure for characteristics questions. It is very strongly recommended that any country starting to use usual activity for all their economic characteristic questions should conduct a very extensive pre-testing program to identify all difficulties and to build experience in applying the concepts.
- c **2.3E.2 Employed Persons only, or Employed plus Unemployed:** The WR do recommend the collection of employment characteristics for the unemployed as well as the employed. For the unemployed the reference job should be the last job held. This has been done in a few censuses. For clarity such questions for the unemployed should be a separate block of questions from those for the employed. However, because of pressure of space on census questionnaires in some cases only a simple note has been inserted to tell the enumerators to ask the same questions for the unemployed as for the employed, but for the unemployed to refer to the last job they held. This has led to some confusion and relies on uncertain interviewing skills to change the question for differing situations.
- As noted in Section 2.2B on the 'unemployed', the numbers of unemployed recorded in censuses is often relatively low in developing countries, and concentrated in the younger age groups in urban and peri-urban areas. Very few of such persons have had previous job experience and what little experience they have had is usually of limited relevance for the longer term economic or labour market policy planning and implementation for which census results are most useful.
- In some countries a 'job they are seeking' approach has been adopted for the unemployed. However, it has been shown that few 'unemployed' have a clear idea about the exact type of job they are realistically seeking due to their limited experience. Thus very often the most appropriate answer to a question on the characteristics of the job they are seeking would be

‘any job’ and this is also of limited use for the formulation or implementation of economic or labour market policies.

For these reasons it is generally thought that in censuses, questions on the characteristics of the last job of unemployed persons should be severely limited. Such information is better collected in specialised household surveys where more in-depth questioning is possible.

- c **2.3E.3 The Reference Job:** Employed persons can and often do have more than one job in any reference period. In general, the reference job should be chosen as the job on which most time is spent during the reference period. This is usually not difficult for the short reference period for ‘current’ activity.

However, problems may arise with persons temporarily absent from a ‘main job’ in the reference period. The WR does recommend that jobs from which the person is temporarily absent should not be considered as the main job if the person is employed and at work in another job during the reference week. It is not stated, but implied that if the person does not have any other employment in the reference period, then the job from which (s)he is absent should be the reference job, and it has usually been found that most economically active persons do tell you about any temporarily absent job and expect this to be recorded. This particularly applies for wage earners on leave etc. but is also very common for the self employed. Census planners need to review this issue for their own country and decide what procedure to follow. If it is decided to use the temporarily absent job as the reference job in the cases where the person is at work in another job during the reference period then a note will be needed on the questionnaires and/or manuals. This procedure has worked well in some countries. Interviewers should be instructed to include any other current activity as a secondary activity (if recorded) and hours worked for the ‘main job’ will be zero. It should be noted that systematic exclusion of temporarily absent ‘jobs’ can cause major problems of comparisons with other employment data e.g. from employers, as well as some anomalies. This can particularly arise when a census is conducted in school holidays as is the case in some countries, e.g. when teachers are given the jobs, temporarily, as enumerators for the census.

- c **2.3E.4 Consistency:** It is essential that once the ‘main job’ is identified all characteristics should refer to this same main job throughout the following questions. The questionnaire design must be such as not to confuse respondents or interviewers on this point. When any secondary activities are identified they must be clearly separate and placed so as not to confuse the flow of questions relating to the main job. This is usually not difficult with current activity (see later examples) but can be quite difficult with usual activity.

2.4 STATUS IN EMPLOYMENT (ref. WR 2.226 - 2.235)

This is one of the more common economic topics in Population Censuses and one of the most important. To know the number of persons working for others (‘employees’) or working for themselves (‘self employed’) is very important for the understanding of the structure and functioning of any labour market. The variable ‘Status in Employment’ was recorded in 66 of the 181 countries that reported to the UN for censuses in the 1975-1984 period. This type of information was also often collected partly in several other countries with mixed questions. The most recent and thorough

discussion of the topic was made at the 15th ICLS in 1993. The resulting *International Standard Classification of Status in Employment*, ICSE-93 specifies six groups:-

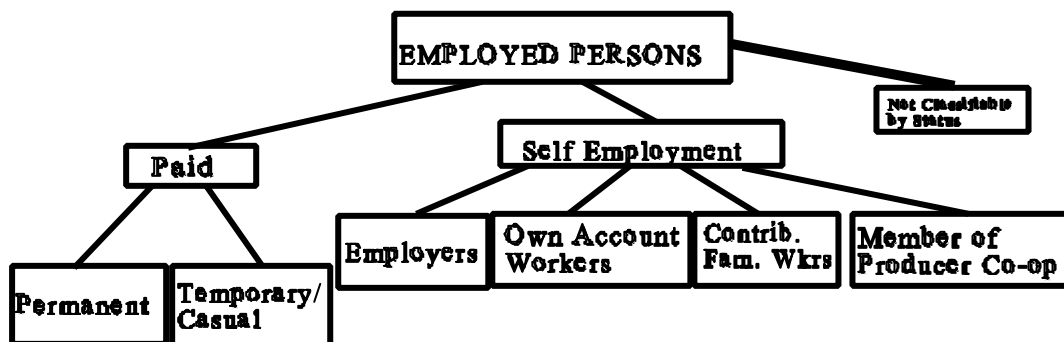
1. Employees
2. Employers
3. Own-account workers
4. Members of Producers' Co-operatives
5. Contributing family workers
6. Workers not classifiable by status

The groups are virtually the same as those which were used before except that behind the change of terminology from 'Unpaid family workers' to 'Contributing family workers' there is a modification of the definition of this group. Otherwise the main change is that the Resolution as passed by the 15th ICLS⁴ gives a much stronger conceptual base for the Classification and deals with many of the problem situations which arise when using the classification. Broadly ICSE-93 classifies jobs according to the type of economic risk the job entails and the control which the person in that job has over the establishment and other workers.

2.4A Measurement and related Issues:- The following points should be noted before possible questions are discussed.

- C **2.4A. 1 General Model-** The six categories of the ICSE - 1993 can be represented diagrammatically as shown below.

Diagram 4 : ICSE 1993 Classification of Employed Persons



⁴ See references - ILO 1993b

The ICSE is applied as a classification of the status of the jobs of employed persons only, in most cases. If an employed person has more than one job and only one job can be recorded and classified (as is the case for most censuses) then it should be the main job in terms of time spent (see section 2.3E above).

As can be noted from the diagram the major distinction is between 'Paid jobs' and 'Self Employment Jobs' and this distinction is discussed in more detail in point 2.4A.2. However, the key points are: (i) the paid jobs have some form of supervision and a fixed agreement of some type regarding the amount of payment in cash or kind; while (ii) the income for self-employment jobs depend solely on the profits (or expectation of profits) of the activity or enterprise which they control.

The distinction between the first two sub-groups of the Self Employed Jobs is according to whether the enterprise which the person singly or jointly controls, has paid employees on a continuous basis ('Employers') or not ('Own Account workers'). Note that the distinction is based on the presence of employees on a continuous basis, i.e. to be an 'employer' one must be employing and paying someone on a continuous basis for one's business. Payment may be in cash or kind (e.g. food, clothing, accommodation, or in some cases training only)

'Contributing family workers' are by definition unpaid and usually live in the same household and are related to other 'self-employed' family members who actually control the enterprise (and are either 'employers' or 'own account workers' in the same enterprise). However this restriction on living in the same household can be relaxed.

The last group of 'self-employed' comprises 'members of producers' co-operatives' where the members jointly determine the organization of work and the distribution of proceeds of the enterprise. 'Members of producers' co-operatives' may be rare in many countries and this category is not used in censuses in countries where they are thought to be unimportant numerically. If used, care must be taken to ensure that a person merely selling or buying goods through a sales or retail co-operative are not mistakenly categorized as 'members of a producers' co-operative'. The person must actually work as a member of the co-operative producing goods or services. Employees of any form of co-operative should be excluded from this group and be classified as 'employees'.

C 2.4A.2 Problems distinguishing between 'paid employees' and the 'self employed':

There are several groups of jobs on the margin between 'employees' and 'self-employed', which pose problems for correct classification. Some of these are discussed below and census planners should identify those which are common in their country and decide whether they should be identified separately and how they should be classified if not. Some research is often necessary, and the commonly found situations should be covered by field manuals and the training of field staff.

- Owner managers of incorporated companies: These persons are usually paid a salary by the enterprise in which they or members of their family also own a controlling part of the shares. They may also receive a part of the profits through the shares they own or may purchase shares at a favourable price (e.g. through 'stock options'). They act as the top managers of their enterprise and thus exercise functions similar to those of 'employers'. Because they receive wages, which

are remuneration for their work and not for the capital investment, they are for national accounts purposes defined as 'employees'. ICSE-93

- recommends that they be identified separately if possible, to allow users of the statistics to choose whether to group them as 'self-employed' or 'employees', because other users of these statistics will tend to prefer to group them with the 'self-employed'. If the separate identification of persons in this group is not possible, then it is recommended that they be recorded as 'self employed'.
- Outworkers: This type of work arrangement is common for a significant number of persons, particularly women, in many countries. The 'outworkers' usually work from their homes with some agreement with a factory or entrepreneur who supply the materials worked with, or at another location away from the factory. The 'outworker' agrees to complete the set task on the materials supplied by a set time for a set payment. When such written or oral contracts exist, the 'outworker' is in effect a 'paid employee' similar to a factory-based pieceworker. They have little control over their work and do not share either the risks or rewards of the entrepreneurial part of the activity. Note that they should not be confused with other home based workers who buy the materials to work with and bear the risk of selling the product to others. Such home based workers are in effect 'self employed', even though they may have a continuing and long term relationship both with suppliers of raw materials and buyers of their end product. With no formal agreement or guarantee on the supply of raw materials and the sale of the product these home based workers are bearing the risk and gaining the reward of 'self-employment'. Often other family members become involved in the activity either as partners or as unpaid helpers, and the sub-contracting of part of the work to others is quite common. Research needs to be done in each country to determine the situation(s) of any home based workers and how to identify such activities and, if necessary, on how to differentiate the paid employee work from the self employment work. This must be stressed in manuals to ensure that these activities are recorded as economic activities, and that all field staff record the activities in the same manner for 'status in employment'.
- Business Partners: Workers may enter into a partnership with another person either long term or just for a short term contract for a particular job. These arrangements should be no problem for the 'status in employment' classification. Each person in such an arrangement is sharing the risks and rewards of the business activity and each should be recorded as self employed.
- Commission workers: These workers often are paid a small basic retainer and then a commission based on their sales. Usually the basic retainer in such cases is very small and the major component of the person's remuneration is based on commissions on sales. Such person should usually be recorded as 'self employed'. They are bearing most of the risks and gaining the rewards of the job. Both 'commission workers' and workers who are renting a piece of equipment, a place of operation or other means of business (e.g. taxi drivers, street hawkers, hair dressers, shoe shine boys) often see themselves as 'employed' by the owners of the assets which they rent. However, this does not make them 'employees' and this should be stressed in manuals and training in countries where such an interpretation is common.

There are likely to be other problem categories in each country. Their classification should be based on the degree of risk the person is exposed to for the major part of his/her remuneration from the job. If

the person bears most the risk (and gets the reward) then the person is in 'Self Employment'. If the enterprise takes most of the risk and pays most the remuneration then

the person is a 'paid employee'. Some additional marginal cases are discussed in the ILO references.⁵

- c 2.4A.3 Sub-Classifications:** It is not unusual for data users to want the census to provide them with sub-classifications under the major general groups of ICSE-93. In addition to those already mentioned some of the more common possibilities are:
- 'Paid Employees' by whether 'permanent/regular' or 'temporary/casual/piece work'. These types of sub-classifications of employees are specifically mentioned in ICSE-93 and are shown on the previous diagram. In ICSE-93 it is stated that 'employees with stable contracts', or 'regular workers' could be separately identified. Census planners will have to decide whether there is sufficient demand for such sub-groups and which groups, but care should be taken that any such groups are clearly identifiable in the local situation. Generally it is best to leave these sub-categories of 'paid employment' to Labour Force or other household surveys, because of the complex set of questions normally needed to establish the distinctions.
 - 'Self employed' by whether in agricultural activities or not, and those in agriculture by whether the agriculture is mostly for cash or for home consumption. These sub-classifications are particularly attractive to National Accountants and in some countries even further subdivisions have been made⁶. However, it is generally recommended that such details should not be collected in censuses but through special surveys or case studies; or be approximated through a combination of the 'self-employment' response to the 'status in employment' variable and the appropriate agricultural categories of the 'industry' variable (see section 2.7 below).
- c 2.4A 4 Combination with determination of 'activity status:** It is stressed in sections 2.3 and 2.12 on current and usual economic activity status respectively that it is very undesirable to combine these topics with any other topics in the same question. However it has been relatively common to combine the ICSE categories with the determination of economic activity status, with the 'status in employment' categories acting as prompts. This has usually detracted from the accuracy of the data on both topics and therefore the topics should be separated. Avoided should be questions which start "Did you do any of the following in the last 7 days? 1. A paid Job etc.". It has been shown

⁵ ILO 1988, 1993b and Hussmans et al 1990

⁶ See Bain D. 1996

in several tests that this immediate mention of 'paid employment' focuses attention on this situation and some respondents then think the whole series of questions is about paid employment and answer 'NO', not considering whether their situation can be described by other 'status in

employment' groups, thus being recorded as 'not employed' and missing all the following questions on occupation, industry etc..

- c **2.4A 5 Combination with Institutional Status Question (Government/Private etc.):** This does seem to be a combination which works well for a census and does not cause any problems for any other topic. This combination is discussed in Section 2.8.

2.4 B POSSIBLE QUESTIONS

The first and major point to note about a question on 'status in employment' is that the ICSE categories as worded do not have to be given in the census and the order of the ICSE categories does not have to be followed. The aim is to be able to derive these categories from the replies to the question or questions.

Not recognising this creates a major problem as considerable effort may be wasted on training in the meaning of 'self employment', 'own account worker' etc. Interviewers then in the field often have used these words as prompts to respondents who also did not understand the terms. Time will be wasted with lengthy explanations but there will still be confused replies from respondents (e.g. self employed in Government jobs). It would be far better to use locally recognised terminology

The first example is from the **Japanese 1995 Census**.

employment status	Employee	4	Self-employed, not
Part-time workers are classified as? <i>employee?</i>	Director of a firm		employing others
? <i>Self-employed?</i> includes a proprietor of	or corporation	5	Family worker
unincorporated business or a person working on	Self-employed,	6	Doing home handicraft
his/her own account.	employing others		

The questionnaire is in 'portrait' format with separate columns for each person. As can be noted Directors have been identified separately, illustrating the earlier point on Owner/Managers of Incorporated Companies. The other interesting variation is the separate identification of 'Doing Home Handicraft' which is presumably significant enough to warrant separate identification. This would cover both the production of such goods for sale, and the production for home use included by the new employment boundary. It is assumed that in the Japanese version of the question or in the field manual 'family worker' is defined as unpaid work and thus equivalent to the 'contributing family worker' category of ICSE-93. The answers could be combined into the strict status categories as required with the 'handicraft workers' being included with the 'own account workers' and the 'directors' being classified as 'employees' or 'employers', as discussed earlier. Note that an assumption would have to

be made that the directors' enterprises do employ someone on a continuous basis and that the 'home handicraft' workers do not.

The next Example is from **Malawi 1987 Census**. Note that it comes from a landscape format questionnaire with the common problem of this format of limited space and quite cryptic instructions

Persons aged 10 years or more		
Economic activity		
Activity status (during last seven days)	Occupation etc.	
.....		
.....One line for each person.....		
.....		
Activity Status Categories		
<u>Active:</u>	<u>Unemployed:</u>	<u>Inactive:</u>
Mlimi	Worked before	Home worker
Employee	(a) Seeking work	Student
Family business worker	(b) Not seeking work	Dependent
Self employed employer	Never worked	Independent
	(a) Seeking work	Other
	(b) Not seeking work	

The question does suffer considerably from the combination of the determination of 'current activity' and 'status in employment in the one question. However the major point of interest is the category for 'mlimi' amongst the status categories. This word means 'working on own farm' in the local language. Similar categories have been used in a few other countries and this technique can have major advantages.

Respondents in countries with large traditional agricultural sectors rarely recognized themselves as being 'self employed', 'employers', 'own account workers' or 'in business' in either the English wording or in local translations. However they usually have no problem recognizing that they were working on their own farm or ranch etc.. It is thus logical to use this separate category or question and then also, if possible, ask if they regularly employ anyone or not. Then there is no difficulty in obtaining the ICSE categories, when required.

Note that no attempt would be made in these cases to split the household members into one 'own account worker' or 'employer' and the rest as 'contributing unpaid family helpers'. In the past, trying to make this distinction within a family often caused problems with lengthy discussions about whose farm it was, who owned the land etc. and what to do if the 'head of household' or farm 'owner' was absent etc. In reality such farms are family farms with all members contributing and sharing the risks and rewards of their labour. In these cases the separation into e.g. 'own account worker' and 'contributing family worker' is not correct from a conceptual point of view, and previous data was often difficult to interpret because of the different practices in the field.

Note that with the broader concept of economic activity now being recommended the situation of people working on their own farms etc.; repairing kraals, building houses etc.; and making mats, butter, charcoal etc. for own use, have to be allowed for in the questions and the response alternatives. It should also be possible to identify separately people in this situation, for special analysis and to allow comparisons with statistics where they are not included. An advantage of a category similar to the Malawi one is that it allows these activities to be coded to, for example, 'own or family farming', and by cross-classifying this with 'occupation' codes such activities can be separately identified and tabulated.

An added advantage of having a separate category for these activities is that one can then get a relatively clear figure for those who are 'self-employed' outside agriculture, and of the number of 'contributing family workers' in these non-agricultural business activities. In many countries the common meaning of 'business' does not include traditional agricultural activities. However, commercial agriculture is understood to be a business, as is the buying and selling of agricultural products. These are suitable interpretations also as the basis for economic policies. Thus, for the Malawi example 'business activities with employees, and without employees' would be a better formulation on the questionnaire than e.g. using the ICSE-93 terminology. This illustrates the need to adjust to local situations and to use local terminology. Examples should be given if necessary.

2.4C Pre-tests

This topic has been used frequently in the past but it is strongly recommended that tests be carried out in the light of the recommended wider interpretation of economic activity and some of the suggestions above. Some aspects to be investigated are:

- Recording for 'status in employment' for those engaged in the broad range of agricultural economic activities now included in production using either suggestions above or with other formats.
- Examples of problem groups (mentioned above) in the local situation.
- Local interpretation of or expressions for 'employees on a continuous basis', 'business' and 'unpaid help in family business'
- Any sub-groups of paid employees or self employed if it is decided to introduce them.
- Producer Co-operatives - do any exist and how are they recorded currently if there is no special allowance for them. Is a category needed?
- Any problems with persons temporarily absent from their main activities.

A good critical review of the past and proposed use of statistics on 'employment status' groups by national accountants and labour market analysts is strongly recommended before the current round of censuses to guide the development and testing on this topic.

2.4D Data Processing Issues

Some data processing aspects have been mentioned above and in the following sections several checks back against the ICSE categories will be recommended. A particular point to note with the example questions above is that the standard 'status in employment' categories will usually need to be derived from the answers given. This is relatively simple with modern tabulation software and most statisticians and data processing staff are now accustomed to much more complex derivations from survey data.

No checks against age, sex or education level are recommended for the ICSE categories.

2.5 OCCUPATION (ref. WR 2.212 - 2.220)

'Occupation' is a description of the kind of work a person does at the workplace (in their job) irrespective of the person's 'status in employment' or the 'industry' of the workplace. 'Occupation' is not a new topic to most countries. Almost all countries have included the topic in earlier censuses and it is the most common economic topic asked in censuses, except for the basic 'activity status' (employed/unemployed etc.). In many countries the census is the only source for statistics on the occupational profile of the employed population. The occupational distribution from the most recent population census and the changes since the previous one are major components of each country's or region's Labour Market Information (LMI). As noted in the WR, it is strongly recommended that countries code their occupational data in a way that makes it possible to produce statistics in accordance with the *International Standard Classification of Occupations (ISCO-88)*⁷. ILO has provided considerable assistance in the use of this classification with the major documentation being contained in Hoffmann (2001), Hoffmann et al (1995) and Hussmanns et al (1992). This section will concentrate on the questions to obtain the necessary detail for the successful coding of 'occupation'. Coding issues are discussed in Hoffmann (2001).

2.5A Measurement and related Issues

c 2.5A.1 Target population: As discussed in 2.3E.2, the major target of occupational questions is the employed population. If occupation of last job is required for the unemployed population it is recommended that they get a separate question. The practice of asking the same question for employed and unemployed and relying on interviewers to change the wording is usually confusing, strains the capability of many census interviewers and leads to poor results.

c 2.5A.2 Question sequence: It is recommended that the 'occupation' question be asked before the 'place of work' and 'industry' questions and after the 'status in employment' question. The focus in the 'status' question is on the individual's work contract situation, and it is logical to follow it with 'occupation' where the focus is on what the

c

⁷ See references ILO 1990

- c individual does. For 'place of work' and 'industry' the focus then shifts to where the person works and the activity at that establishment. This order assists to prevent confusion between 'occupation' and 'industry'. 'Occupation' may also be considered to be the most important topic, and may therefore be given priority by coming first. (That the sequence is different in the well tested questionnaires of the United States, Australia and Canada may, however, indicate that question formulation may be as important as sequencing for good results.)
- c **2.5A.3 Pre-coded questions:** Using pre-coded response alternatives also with the occupational question(s) has the major attraction of that it is by far the least costly solution as one does not have to code the answers after interviewing. However there are major disadvantages to pre-coding. 'Occupation' is a complex topic and even with a very well thought out set of response categories and with excellent training there is great difficulty for interviewers (or the respondents themselves) to place a respondent's job in the correct category. Both the validity (correct categorization) and reliability (same categorization made by different interviewers of equivalent responses) of pre-coded occupational categories has been shown to be very poor. In addition, only a limited number of categories are possible with pre-coding and thus the details needed by many users of such statistics cannot be provided. Most countries have concluded that pre-coding is not a reasonable alternative for this major variable in a census and that the expense of a coding operation therefore is warranted.
- c **2.5A.4 Information needed:** The ISCO-88 Classification and national occupational classifications based on the same principles are structured so that jobs requiring similar skills are grouped together. This does not mean, however, that the response to be written on the census questionnaire should provide information about these skills. **The information to be recorded on the questionnaire should be the type of information needed to determine the correct occupation code for the respondent's job.** As explained in Hoffmann (2001) this information should usually consist of a job title, supplemented with one or two words to indicate the main tasks and duties of the job. With properly constructed coding tools this type of information will allow detailed, reliable and effective coding which will give statistics of great value for many forms of labour market description and analysis needed as a basis for policy formulation and implementation.
- c **2.5A.5 Agricultural activities:** Agricultural activities are often relatively easy to describe, e.g. vegetable farmer, maize or rice farmer, goat raising or cattle rancher are broad job descriptions. A description of the actual tasks done in the reference period can be given as response to the second question or second part of the question. A problem arises when the classification makes a distinction between those for whom these activities are mainly for sale or mainly for home consumption, which most classifications based on ISCO-88 do if subsistence farming is of importance in the country. This sub-division is of major interest for many users. It may require a second question if this distinction cannot be expected to be reflected in the reply given by the respondents themselves. A possible supplementary question may then be: "Do you produce mainly for sale or is it mainly for your own use?". As a general rule such
- c
- c questions should be actually written in on the questionnaire and not only given as notes to interviewers. In developing countries with a large number of farmers it has generally been found that interviewers have been able to manage this addition to the occupation question with

reasonable accuracy and that they usually have a good understanding of subsistence farming. More precise estimates or complex sub-divisions such as ‘all cash crops/part cash/all subsistence’, are best done by separate questions for this group or preferably in specialized surveys or the agricultural censuses rather than in the population censuses.

- c 2.5A.6 Other non-market production:** As noted in earlier sections there are many activities which are regarded as production even if not money raising, and which therefore are considered to be ‘economic’. Examples are: fetching water or firewood, processing of farm or natural produce (e.g. making butter, brewing beer, extracting oil, making hats, mats or clothing), own house repair/construction; farm construction work such as digging irrigation ditches or building fences; building of communal roads. When responding to questions such as “*What kind of work do (...) do? What are the main tasks and duties?*” words reflecting these activities should be recorded as for any other job, i.e. with a ‘title’ and some description of the tasks performed. However, it will help overall coding if interviewers are told to record that such activities are mainly for own use, similar to the distinction between agricultural activities which are mainly for money raising and mainly for own use. If some of these activities are very common and there is no other way of identifying them separately it may be necessary to create special occupational codes similar to that for ‘subsistence farmer’. It should be noted, however, that on farms in particular these activities are relatively rare as a main activity separate from the general farm work. They are often carried out as secondary activities of farming families. They can be a main activity in the agricultural off-season and in non-farm settings. In countries where they are likely to occur reasonably often it is very important that they be allowed for and interviewers should be given guidance about how to record such activities for the coding of ‘occupation’ and ‘industry’.
- c 2.5A.7 Training:** Interviewer training is the key to good occupational descriptions for subsequent coding. Interviewers should be briefed on the need for accurate and relevant information about the job. They should be thoroughly drilled on adequate and inadequate descriptions through series of examples. The examples should be local and come from the queries and problem cases in recent censuses and surveys. Descriptions such as ‘Manager – managing’; ‘Public Servant - Office work’; ‘Supervisor – supervising’; ‘Clerk - clerical work’; ‘Apprentice – helping’; ‘Labourer - manual work’; and similar uninformative responses must be stressed as inadequate or they will occur frequently. Field practice should focus on the responses to the ‘occupation’ questions. Supervisors should be instructed to send interviewers back to households when inadequate responses are given. It is only with such a concentrated effort that the quality of occupational responses will improve and, with a similar effort on coding, the quality of the final statistics.

2.5B POSSIBLE QUESTIONS

Occupational questions have been asked for a long time and there has been a considerable amount of research carried out on how to best formulate these questions and code the responses. Most of this research has been done in developed countries, but much is still likely to be relevant for developing countries. Some of the major findings are:

- c The word 'occupation' can be misleading and may be best left out of any actual questions on the topic. For developing countries where translation in the field is very common, the terminology being used by interviewers in the local language should be carefully checked during testing and training periods. As always, the aim is to get the meaning of what you are asking across to the respondent, consistently, rather than insisting on the terminology in the language used on the questionnaire.
- c Space allowed for recording has been shown to be a major factor in poor descriptions of jobs and thus poor coding. In some countries good questions have been asked, but the space allowed for recording the response has been very limited.
- c It has been shown that it is most effective if two separate questions are asked - A description of the job and then a question on the tasks or duties actually performed. A combined question has proved to be far less effective.
- c Research has also shown that the quality of occupational descriptions is quite poor when given by an informant other than the jobholder. Every effort should be made to interview all employed respondents in person for these questions

The first example below is from the **Namibia 1991 Census**. Two questions were asked as recommended and the basic questions are quite sound. The questionnaire was in the Landscape format, which usually has restrictions in space for both questions and answers. In this case the blank space in the question area could have been used for more explanation and examples. However the major problem is the very limited space for the two answers.

To be asked of all persons aged 10 years and over

Occupation	Name and address of workplace
a) What kind of work did ... do?	What is the name and address of ...?s workplace?
(b) What are ...?s main duties at this job?	
A 15 (4)	A 16
(a).....	.....
(b).....	.....

The next example is from the **South Africa 1996 Census** where the questionnaire was in Portrait format. Two questions were asked also but more explanation and examples were given which is better practice. Also more space was available for the two answers. The use of the word 'occupation' in the actual questions is not recommended. . Very similar questions

were also asked in a separate block for the unemployed referring to their last job, which is good practice.

- Q19.3 Focus on the occupation of (the person)
What would you call this occupation? For example, plumber, street trader, cattle farmer, primary school teacher, domestic worker.
- Q19.4 Describe (the person's) main duty/activity in more detail For example, installing pipes in new houses, selling fruit and vegetables, breeding cattle, reaching primary school children, cleaning and cooking.

The third example is from the **Hong Kong 1991 Census**. This has an interesting variation of a third question on the qualifications needed for the job to assist with coding. However, it is not known how the responses to this element were used in the coding process. Normally one would have expected such questions to function better with some examples.

2P31 b What was your occupation?	_____
What are the main tasks or duties you have to perform in that occupation	_____
What educational or professional qualifications are required by that job?	_____

The last example is from the **French Guyana 1990 Census** and shows the application of two pre-coded questions.

- Q20 Mention your professional position for your actual employment
- | | | | |
|---|--|-------|-----|
| C | Manual worker, specialized worker | ..... | ? 1 |
| C | Qualified worker or highly qualified | ..... | ? 2 |
| C | Master agent supervising workers | ..... | ? 3 |
| C | Master agent supervising technicians | ..... | ? 4 |
| C | Technician, Designer | ..... | ? 5 |
| C | Teachers, Social workers, Nurses and staff of B category in public services | ..... | ? 6 |
| C | Engineer, Professionals (Persons who do not have professional skills are not considered even if they contribute for social security under professionals) | ..... | ? 7 |
| C | Professors and all persons of A category of the public service | ..... | ? 8 |
| C | Employed in office, employed in commerce, agent of service, assistant nurses, nursery staff, persons of C or D category of public service | ..... | ? 9 |
| C | Other cases. Give details: _____ | | ? 0 |
- Q21 What is your main function?
- | | | | |
|---|---|-------|-----|
| C | Production, manufacturing | ..... | ? 1 |
| C | Installation, maintenance, repairation | ..... | ? 2 |
| C | Cleaning, nursery, housing services (servant) | ..... | ? 3 |
| C | Lifting, storage, transport | ..... | ? 4 |
| C | Secretary, data entry, teller | ..... | ? 5 |
| C | Management, accounting, administration | ..... | ? 6 |
| C | Commerce, sales, technical business | ..... | ? 7 |
| C | Research, study, method, computing | ..... | ? 8 |
| C | Managing Directors or Direct deputy | ..... | ? 9 |
| C | Other cases: (Give details) _____ | | ? 0 |

It was mentioned earlier that pre-coded answers for occupation will not give the type of statistics needed by the large majority of data users. However, there may be censuses where this solution is unavoidable because of limited funding. Then the pre-coded categories should be carefully thought out. Occupations for which information is definitely required should be given separate codes and others should be grouped together. There will be very severe limitations on the number of separate codes possible, and even with good training only rough estimates of the numbers in these groups will result. **Note that the resulting response categories normally will not be represented by the broad groupings used in the occupational classification in use in the country. One should definitely not try to simply use the first digit groups of ISCO-88 or the national standard classification.** Neither the national classification nor ISCO-88 was constructed for use in this way. It is also very unlikely that the meaning behind the titles of some of the groups e.g. 'Associate professionals', will be recognizable to interviewers.

In the example from French Guyana considerable training would have been necessary to ensure interviewers were aware of the contents of all the groups and to guide respondents. It is assumed that more detailed occupational categories were derived from the answers to the two questions.

2.5C Pre-tests

Even if an 'occupation' question has been asked several times before it is worth testing possible improvements to the question. Better wording, better examples, better space should all be tested. As always, the test(s) should have stated objectives and be quantitatively evaluated. Any questions with pre-coded answers must be thoroughly tested to minimize errors and to ensure that you know how interviewers are going to interpret the summary groupings given, in realistic conditions.

2.5D Data Processing Issues - Data edits are a key to good occupational results. Checks will have to be made between 'occupation' groups and 'education' levels: e.g. most 'professionals' should not have nil education or primary school level as 'educational attainment'. Checks should also be done between 'occupation' and 'sector of employment': e.g. 'government administrative workers' should be in the 'government' sector. (Note, however, that in the 'government' sector there will a large number of jobs given other 'occupation' codes than that for 'government administrative worker'.

Occupational data should be coded to as much detail as made possible by the recorded information, see Hoffmann (2001) for further details.

2.6 PLACE OF WORK (ref. WR 2.245 - 2.247)

In the past this topic has been included in censuses in some European and North American countries, but will have been a new topic in many countries if included in the 2000 census. Where included the actual address of the place of work has often been recorded and used to code the location to a fine geographic level. This has allowed detailed tabulations and mapping of place of residence by place of work. Additional questions have often been asked on the method of travel to work and these and other variables have enabled the production of statistics on important travel-to-work patterns. This information has then been very valuable as a basis for transportation plans.

What has been recommended in the WR is more limited, and also more reasonable given the resources most countries' census operations. The three categories below would have to be allowed for and preferably separately identified whatever the aims of any question on this topic. In developing countries a very limited question on the topic would give a valuable insight into working arrangements and particularly assist with identifying some categories of informal sector workers, but see Mata Greenwood (2001) for a more detailed discussion.

2.6A Measurement and related Issues

c **2.6A.1 Recommended categories:** The three recommended categories are -

- (1) Working at or from home: This includes persons whose work is directly at their home, e.g. doing agricultural work on the farm near their home; non-agricultural production for own use at home, including that which takes place on the farm; informal sector activities, such as production for sale at home or sales at or adjacent to the home (small shops etc.).

(2) The category also includes home based work for a wage e.g. sewing/tailoring or such professional activities as accountancy or computer programming which sometimes are conducted as a business from home. Persons staying in 'work camps' or in 'military compounds' as well as 'paid employees' in agriculture living on the farm would be included here. Domestic employees living with or near their employer should also be taken as 'working from home', even if they travel to another residence e.g. every weekend. In some countries farms are often a considerable distance from farmers homes that are in a central place e.g. a village. In these cases a definition of 'near' would need to be set preferably in terms of time, according to local objectives of the question e.g. include farms within 30 minutes travel time.

(2) No fixed place of work: This category is restricted to persons who travel from place to place for their work and do not report daily in person to a fixed address as a work base: e.g. hawkers, travelling salesmen, long distance truck drivers, seafarers, fishermen and some taxi drivers. Excluded are construction workers etc., as they should be taken as working at their current work site, if based there longer than a week, and be classified to group (3).

(3) With a fixed place of work: All other employed persons should be included in this category, including all persons who move around in their job but have a fixed base location to which they report daily e.g. bus/taxi drivers (with a base), train and airline staff and the construction workers mentioned above.

< **2.6A.2 Implementing the recommended categories** - There is no major conceptual problem with the above categories. Decisions may be necessary on how close to home is 'Work at home' for informal sector activities. Those taking place on the same plot of land should definitely be taken as 'at home'. Other decisions will depend on national circumstances. However, it is suggested that places of work that are within easy, e.g. five minutes, walking distance should also be considered as 'at home'. The problem with farms at a distance from the home was mentioned earlier. Pre-testing should help to establish all such problem categories and their treatment will have to be included in training and manuals for field staff.

2.6B Possible questions

Given below is an example from **Canada's 1996 Census** from their self-enumeration schedule.

<p>Q43 At what address did this person usually work?</p> <p>365 Laurier Ave. West</p> <p>Number _____</p> <p>Name _____</p> <p>Type _____</p> <p>Direction _____</p> <p><i>If direction (e.g. North, South, East or West) is a</i></p>	<p><i>part of the street address, please include it.</i></p> <p><i>If street address is unknown, specify the building or nearest street intersection.</i></p> <p><i>Note: Some large cities are made up of smaller municipalities. Identify the municipality rather than the larger city, for example, Toronto rather than Metropolitan Toronto, Saanich rather than Victoria.</i></p>
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<p>07 ? Worked at home (including farms) Go to Question 45</p> <p>08 ? Worked outside Canada Go to Question 45</p> <p>09 ? No fixed workplace address Go to Question 44</p> <p>10 ? Worked at the address specified below: Specify complete address</p> <p>11 Street Address (see sample)</p> <p>_____</p> <p>_____</p> <p>City, town, village, township, municipality or Indian reserve</p> <p>_____</p> <p>12</p> <p>Province/territory</p> <p>_____</p>	<p>_____</p> <p>13 Postal code</p> <p>_____</p>
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This is an example of the more detailed questions used in some developed countries mentioned earlier. Note however that the three recommended categories are there. In other countries the three basic categories could simply be asked without further elaboration, but in developing countries it will be essential to give examples or notes on the questionnaire for the common situations in that country. An example of possible notes for a questionnaire is given below.

C Working at home

- : Include
- Farmers and their employees living on that farm
 - Domestic paid workers living on their employers plot
 - Home based wage jobs
 - Home production for own use or sale
 - Fetching Water and Firewood
 - Other informal activities based at or near the home

C Working without any fixed location.

C

- : Include only activities with no fixed base - Hawkers, travelling salesmen or long distance drivers, seafarers

C Working at or from a fixed location

- : Include all activities with a fixed location or base e.g. Bus drivers, Construction workers as well as Normal shop/office/factory workers

For a landscape questionnaire layout the notes or examples would have to be considerably reduced because of the limited space and reliance have to be placed on the Manual and on training.

2.6C Pre-tests: This is a relatively simple topic but as a new topic for most countries it will need thorough testing focusing on problem groups and how to allocate them to the categories given.

2.6D Data processing issues: The categories as given will be useful Labour Market Information (LMI) in themselves. The cross-classification of these location categories by 'status in employment' and 'industry' and 'occupation' will give very valuable information on the structure of employment. This will be the case particularly for the 'informal sector', but also for the identification of other categories which often are of special interest, such as 'paid employee home-workers'. These target groups should be clearly identified early during the census preparations and the processing steps necessary to extract them should be tested, to ensure the target groups are being correctly identified.

2.7 INDUSTRY (ref. WR 2.221 - 2.225)

'Industry' is a description of the activity of the place of work, i.e. of the establishment in which the employed person works. It describes what the establishment does, not what the individual does when working for that establishment. As a census topic 'industry' is only slightly less common than 'occupation' and has been included in several census rounds in many countries.

It should be noted that 'industry' is a key classifying item for most employer- and establishment-based employment and wages surveys. However, most such surveys only cover larger formal employers and therefore a population census is usually the only possibility for

comprehensive and detailed statistics of all employment by 'industry'. The census statistics on 'industry' is thus a major basis for most countries' economic statistics as well as for their Labour Market Information Systems. It is essential for comparability that the same 'industry' classification is used in all relevant surveys.

Many developing countries have been using the *International Standard Industrial Classification of all Economic Activities (ISIC rev. 2)* approved in 1968, but it is hoped that all countries had changed to a classification compatible with ISIC rev. 3⁸ by the time of the 2000 round of censuses. 'Industry' coding in population censuses and surveys is not as widely discussed or documented as 'occupation' coding, but there are useful suggestions in Hussmanns et al (1992), as well as in other ILO papers and documents, and is discussed in more detail in Hoffmann(2001). As this is an established topic, census planners may think this topic needs little attention. However, there are many problems with much of the census industry data collected in all countries and the points discussed below should be particularly noted.

2.7A Measurement and related issues

- c **2.7A.1 The reference unit:** The 'industry' description and code should refer to the establishment where the person actually works, and not the legal unit to which the establishment may belong. For example, a major company in a country, 'XYZ Ltd', may be well known but engage in a variety of activities at different locations around the country. Generally 'industry' should be coded for each separate establishment (usually at separate locations), not only to the main activity of XYZ Ltd. With access to a reasonably up-to-date register of establishments, where 'industry' is coded for each unit, the 'industry' question should aim to collect the detailed name and address of the person's place of work. Then coding can be done by reference to the register and be compatible with employer surveys based on the same register. This is discussed further in Hoffmann (2001).
- c **2.7A.2 Incomplete registers of establishments:** Unfortunately few countries have a comprehensive updated register of employers with separate identification of all establishment locations. Thus, in most countries the detailed name and address of the establishment can only be used as source for the correct 'industry' code for a proportion of respondents, and a description of the activity at the establishment has to be used as the basis for most of the assigned codes. However, even if a 'Register of Establishments' (or Employers) is very poor, it is often useful to have a limited list of 'major companies/enterprises' with their 'industry' codes when creating the coding indexes

⁸ See references United Nations 1989

described in Hoffmann (2001). For example, 'XYZ Ltd' may be dominantly an iron and steel mill but may also have 'XYZ Coal Mines' and 'XYZ Iron Ore Mines' as separate establishments. Entries in the coding index for 'industry' reflecting this structure will help to ensure that respondents working at these separate establishments are given their relevant 'industry' codes and not simply coded to the code given to 'XYZ Ltd'. A similar listing of major government departments and organizations is also very useful in coding respondents working for the government to their correct 'industry' codes: e.g. to code those working with the country's health administration separate from those working in government hospitals.

It is therefore good practice to ask for a description of the place of work first and then to ask the 'industry activity' question relating to that actual place of work of the employed person.

- c **2.7A.3 Information needed for industry coding** - There are generally two components to the desired 'industry' question(s). The first part of the question should ask for the name of the place of work with details of division or branch for larger private enterprises and government institutions and establishments (or the full name and address when access can be had to an establishment register. The second part must be a good description of the main products or the main functions of the establishment.
- c **2.7A.4 Training:** Interviewer training is the key to the collection of good 'industry' descriptions. Interviewers should be briefed on the need for accurate and relevant 'industry' information. They should also be thoroughly drilled on the difference between adequate and inadequate descriptions through series of examples. The examples should be local and come from the queries and problem cases in recent censuses and surveys. Unsuitable descriptions such as 'Manufacturing', 'Public service', 'Teaching', 'Farming', 'Selling things' and similar imprecise responses must be stressed as inadequate or they will occur frequently. Field practice should focus on the descriptions given for the 'industry and 'occupation' questions. Supervisors should be instructed to send interviewers back to households when inadequate descriptions are given. It is only with such a concentrated effort that the quality of 'industry and 'occupation' descriptions will be adequate, and, with a similar effort on coding, the quality of the resulting statistics. Any lists of major enterprises (private and government), if used, should also be handed out when training interviewers and be explained, so that the interviewers are also fully aware of why it is necessary to record the location description for the different units.
- c **2.7A.5 Production for home consumption:** Production for home consumption can be significant in some countries. Subsistence agriculture is usually the most common relevant activity but other activities are also possible, particularly in the agricultural off-season. These activities were discussed in more detail in 2.5A.5 and 2.5A.6 regarding the occupational classification of such activities. The same type of problem arises for 'industry'. ISIC, rev.3 did not have 'industry' codes for subsistence agriculture nor corresponding codes for manufacturing for home consumption or own account construction, but a strategy has been developed, and is presented in United Nations (2001). It is very important to have a strategy for identifying these activities separately when they are significant.
- c **2.7A.6 Problems with persons working at home or with no fixed location:** It is often confusing to ask for details about the place of work for persons working from home or with no fixed location.

If an address is recorded for such cases, this may only be that day's location for a hawker, or some description of the home location. There are two alternatives: a) Continue to ask the question for all the employed but tell interviewers to write in 'home' or 'no fixed location' for these cases or b) try to design the questionnaire so that the place of work is not required to be recorded for these cases. This is discussed further in the possible questions below.

- c **2.7A.7 Paid staff for private households:** These workers include mostly 'domestic servants', 'gardeners' or 'watchmen' working directly for private households. Their situation needs to be identified on the questionnaire. They can then be coded to a separate 'industry' code, e.g. 9500 for ISIC, rev.3. Generally the first part of an 'industry' question should serve to identify them as they are either working from home when they live on the premises, or interviewers should be instructed to record 'private household' as their place of work. This will differentiate them from persons working for security companies, gardening/landscape companies or domestic service supply companies. The procedure must be explained well to interviewers, as this group is usually significant in developing countries.

2.7B POSSIBLE QUESTIONS

'Industry' questions have been asked in several censuses in many countries and thus there is usually some experience with this topic. However, there are still many problems being located with the resulting statistics. The following issues have been found to be of concern:

- c Lack of space on the questionnaire for recording the relevant information has been found to be the major factor in inadequate 'industry' descriptions. This is particularly so if the 'landscape' format is used for the questionnaire.
- c The word 'industry' should not be used in the question as it has been found that respondents' understanding of the word is not often what we are aiming for. However, the word has been given as a heading for the question in some cases as this has often been found useful to guide interviewers. After training they should not be confused as to the meaning of this term.
- c Examples should be local ones which are known to have caused problems often. The temptation to give too many examples should be avoided as it will clutter the questionnaire and may confuse the interviewer. Similarly instructions to interviewers have to be restricted to the most critical ones only.

The first example question below is a comprehensive one from a **United Kingdom census test in 1996**. The questionnaire is for self-enumeration.

<p>Q23 What is the name of your employer?</p> <p>< Please do not use abbreviations.</p> <p>< Give the trading name if one is used.</p> <p>< Civil Servants - give names of departments.</p> <p>< Local Government Officers -give name of employing authority.</p> <div style="border: 1px solid black; height: 30px; margin: 5px 0;"></div> <p>Q24 What is the main thing which the organization you work for makes or does, at the place where you work?</p> <p>< Describe clearly what the employer (or yourself if self-employed) makes or does</p> <p>< Civil servants - write ?Government department?.</p> <p>< Local government officers - give departments in which employed.</p> <div style="border: 1px solid black; height: 30px; margin: 5px 0;"></div>	<p>Q25 What is the address of the place where you work?</p> <p>< If you are not reporting a fixed place tick ?no fixed place? .</p> <p>< If you work mainly at home, tick ?mainly at home?.</p> <p>< If you are employed on a site for a long period, give the address of the site.</p> <p>< If you do not work regularly at one place but report daily to a depot or other fixed address, give that address.</p> <p>? No fixed place</p> <p>? Mainly at home</p> <div style="border: 1px solid black; height: 30px; margin: 5px 0;"></div> <p style="text-align: center;">Please remember to give the Postcode</p> <div style="border: 1px solid black; width: 100%; height: 20px; margin: 5px 0;"></div>
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The questions cover both ‘industry’ and ‘place of work’ topics. They show how the problem groups mentioned earlier, i.e. persons with ‘no fixed place of work’ and ‘working from home’ can be identified and thus not create confusion when coding ‘industry’. The notes on the questionnaire are extensive and do take considerable space. Obviously ‘local government’ is seen as a particular problem in the UK for ‘industry’ coding.

The second example below is from the **South African 1996 Census**.

<p>What is the full name of the business/company/organization for whom (the person) is working?</p> <p>Where is this place of work?</p>	<p>If the person works for him/herself, and the business does not have a name, enter ?self? in appropriate column. If doing PAID domestic work in a private household, enter ?domestic service? .</p> <p>Name of suburb/village/settlement.</p>	<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> </table>										

This is also an example of a fairly comprehensive 'industry' question, but does not attempt a combination with 'place of work'. It has very useful notes regarding the 'self employed' and 'paid domestic work'. Presumably the Manual and training for interviewers gave guidance on how to record persons 'working from home' and persons with 'no fixed place of work'. It would have been best to record these statements for the answers to Q19.6 in these cases. The word 'industry' has been used in Q19.7 but alternates are given in case this was not understood, and this is good practice. Question 19.6 does refer to the 'person's employer or company' whereas it is the actual 'establishment' or 'place of work' that is recommended as the reference for 'industry'. It is uncertain how large multi-establishment companies or similar government departments would be recorded.

Both the examples above take considerable space, which may not always be available. Even though not desirable, census planners may be forced into using only one question for 'industry', particularly with the landscape questionnaire layout. In such cases it will still be better to ask a combined question on the name of the location and the activity, rather than solely asking about the activity. It has been shown that solely requesting a description of the activity often gives misleading answers.

A possible hypothetical untested question is-

What is the name of your place of work and what are the main Activities/Services/products of this place of work?

Good examples would have to be given and the training would have to be very effective for such a complex question to succeed.

Pre-coded answers: As with ‘occupation, the use of pre-coded response categories is not desirable, as it is very difficult for field staff to allocate ‘employed’ persons to the correct ‘industry’ category. In addition this strategy will have as result that only very limited ‘industry’ detail will then be available for this important variable. It is, however, easier to

draw up such a pre-coded list for ‘industry’ than for ‘occupation’ and the field allocation is likely to be more accurate. However, the list of categories will be severely limited and the resulting groupings are likely to be of very limited usefulness.

2.7C Pre-tests

The ‘industry’ question should always be included in any pre-testing program because of its importance, even if the topic has been asked many times before. Most developing and many transition countries are still searching for means of improving the collection of this important topic. Aspects that need to be tested include: most suitable order for this block of question; identification of production for home consumption; identification of ‘informal sector’ activities; means of obtaining good ‘industry’ descriptions; most effective examples and notes to be included on the questionnaire; identification of establishments with different ‘industry’ codes when they belong to the same large enterprise or government department; identification of private household activities.

2.7D Data processing issues: There are a limited number of consistency checks of ‘industry’ codes with the results from other questions. These include checks that persons coded to ‘government administration’ are in the ‘government’ sector (but note that many ‘government’ sector workers will work in other ‘industry’ groups), and that only certain ‘occupations’ are coded to the ‘industry’ category for ‘private households with employed persons’. Other edits are generally not definite and depend on the situation in that country. Particular attention should be paid to any codes identifying separately ‘production for home consumption’, including ‘subsistence agriculture’. ‘Informal’ sector derivations should be carefully checked to ensure only relevant industries are shown. Some limited

checks are possible of 'industry' against 'status in employment': e.g. 'self employment' cannot occur for 'public administration', 'private households with employed persons' or for 'international

organizations'. A full range of edits should be prepared before data processing commences but cross tabulations with other topics should be done early and progressively to locate inexplicable occurrences which will need explanation or possibly further edits. Do not leave this to the final tabulation phase or these queries can delay results considerably.

2.8 INSTITUTIONAL SECTOR OF EMPLOYMENT (ref. WR 2.239 - 2.244)

As noted in the WR, the total economy is grouped into five mutually exclusive sectors by *the System of National Accounts (SNA)*⁹. These are:

7. The non-financial corporations sector
8. The financial corporations sector
9. The general government sector
10. The non-profit institutions serving households sector
11. The household sector

For a detailed description of each of the sectors, please consult the WR or the SNA itself.

The nature of the detailed conceptual differences between these sectors makes it quite difficult for a Population Census to implement the distinctions between them precisely. Only 3 of the 181 countries that reported to the UN for censuses in the 1975-1984 period attempted to collect information on Sector of Employment. However, several countries have attempted partial collection of these categories, particularly for the 1990 round of Censuses, and these questions have provided very valuable statistics.

2.8A Measurement issues

- c **2.8A.1 General:** The main relevant distinction which can be made in a population census is to split 'paid employees' into 'government paid employees', i.e. those employed in Sector 3 above, and the 'other paid employees'. The 'industry' codes for 'financial services' will allow an approximate split off those 'employees' from the 'other paid employees', providing an approximation to employment in Sector 2 above. Employment in Sector 4 above is very difficult to measure separately in a population census as the required information on the characteristics of the establishment (their non-profit status and who they service) cannot be generally expected to be known by many of the persons employed in them. Thus it is expected that 'paid employees' of establishments in Sector 4

⁹See United Nations 1993

will mostly be grouped together with those included in Sector 1, although some may consider themselves to be government employees.

This section will concentrate on the possibility of obtaining a split of 'paid employees' into 'government' and 'other'. This split also is a very important one for labour policy analysts as almost all employment estimates and policy plans attempt to provide separate statistics for the 'government' and the 'other' (mostly 'private') sectors. This is because of the perceived difference in relevant policies for the two sectors.

c **2.8A.2 - Definition of government:** The definition of 'government' states that:

1. All branches of government should be included (national, state/provincial or local); plus
2. social security funds imposed and controlled by those units; plus
3. non-profit institutions (NPIs) engaged in non-market production that are controlled and mostly financed by the units in categories 1. or 2.

The employees of 'all branches of government' should not be difficult to identify in a population census. Employees of 'social security funds' (category 2) can be identified, but the issue is whether one needs to take extra steps to ensure they are included in sector 3 rather than with, for example, sector 2 or 1. This would need a separate question/category or instruction to include them with 'government' given as a note, and this could clutter the questionnaire for a relatively small number of 'employees'.

Category 3 above is also quite difficult to identify separately in a census and it is suggested that, in general, employment details should be collected from the institutions (establishments) themselves and not in the census. However, included among the NPIs may be some schools, hospitals and trade associations which are government controlled but partly financed privately. When such types of NPIs exist in a country it is essential that clear guidance be given to field staff whether to include or exclude them from the 'government' sector for the census. This issue should be discussed with National Accounts and Labour Policy analysts. Obviously local terminology rather than National Accounts terminology should be used in Manuals or notes to interviewers (e.g. "include all employees of government aided schools, colleges and hospitals as government").

The situation for all semi-government or parastatal organizations needs to be made clear. In many developing countries there are many such organizations. Some are now being partly or fully privatized. For simplicity it would be best to exclude all such organizations from 'government' for the census question. However this needs to be clearly stated with full examples in the field manuals and in the training. It should be made very clear whether organizations such as the Post Office, national railways, Harbour Boards, National Airline etc. are to be classified as 'government' or not. Their status and ownership varies from country to country and over time in any country. Often interviewers and

respondents think of some of these as ‘government’ organisations even when they are partly or fully privatised.

- c **2.8A.3 - Sub-divisions of ‘government’:** Some countries will want to identify separately different categories of ‘government’: e.g. ‘national government’, ‘state/provincial government’ and ‘local government’. Then care should be taken to ensure that the

distinctions between these categories are clear and well understood by field staff and respondents. In some countries there are complex situations, for example where the ‘central’ government pays and controls the teaching staff of schools but ‘local’ governments pay and control other staff and the general management of the schools. Such situations seem to always lead to confusion even if explained well to field staff. If there are too many such complex situations, it is recommended that these sub-divisions of ‘government’ not be attempted. If attempted, the procedures should be pre-tested.

- c **2.8A.4 - Sub-divisions of ‘other’:** Some countries have sub-divided the ‘other paid employees’ into categories for ‘missions/churches’, ‘N.G.O.s’ or ‘para-statals’, when such organisations are significant employers in the country concerned. With any such set of sub-categories it is recommended that the relevant questions and response alternatives should be well tested to ensure they are easily and accurately understood. For example, the N.G.O. category has produced some surprising results when tested. The term ‘para-statal’ may also need a locally known definition, as in some countries the term means commercial enterprises in which the government has a controlling interest or ownership.

- c **2.8A.5 - Combination with the ‘status in employment’ variable:** The major categories suggested for this topic, i.e. those of ‘government’ and ‘other’ are sub-categories of ‘paid employees’ from the ‘status in employment’ classification, and when formulating the relevant questions the categories of two variables can be combined with little difficulty as shown in the examples below. This is generally recommended and should not cause problems. However, this approach should be tested if introduced for the first time.

2.8 B POSSIBLE QUESTIONS

The first example below is from the **Bermuda 1991 Census**.

Q45	Were you self-employed or working for someone else in your (<u>main</u>) job last week?	
	Self-employed	Worked for someone else
	Ĥ With paid help (Employer)	Đ As Bermuda Government employee
	Ī Without paid help	Ñ As employee of a Foreign Government
		Ō As employee of private company/person
		Ó As unpaid worker in family business/farm
		? Not stated

The question is a reasonably standard 'status in employment' question with 'paid employees' split into two 'government' categories and 'private' for a 'sector' classification, in line with the discussion earlier in this section. 'Unpaid worker in family business or farm' is listed as part of 'working for someone else', even if the corresponding ICSE-93 category is part of 'self employed'. It may have been shown in testing that respondents recognised the category better under the 'worked for someone else' heading. For tabulation and publication of the results they may easily be regrouped. The question does tend to use ICSE terminology and use of local wording might have been better, as mentioned earlier.

The second example is from the **Palau 1990 Census** and is very similar to a corresponding question used for the U.S. census.

Q 30	Was ... <i>Read list. Mark (X) one box.</i>
	1 ? Employee of PRIVATE FOR PROFIT company or business or of an individual for wages, salary, or commission.
	2 ? Employee of a PRIVATE NOT FOR PROFIT, tax-exempt, for charitable organization.
	3 ? Local or territorial GOVERNMENT employee (territorial/commonwealth, etc.)
	4 ? Federal GOVERNMENT employee.
	5 ? SELF-EMPLOYED in own NOT INCORPORATED business, professional practice or firm.
	6 ? SELF-EMPLOYED in own INCORPORATED business. Professional practice, or farm
	7 ? Working WITHOUT PAY in family business or firm.

The question does provide more of the 'sector' categories than usual. It does assume that respondents do know if their workplace is a 'private, for profit' company or a 'private, not for profit' organization. It is strongly recommended that the understanding of any such categories be thoroughly tested before being introduced. 'Government employees' as a group is separately identified, but 'self employed' is not categorised by whether with or without 'employees'. Instead the 'self employed' are categorised by whether their business is incorporated or not. These categories have other uses, but the full ICSE-93 classification could not be produced from the response categories given here.

2.8C Pre-tests

The suggestions for pre-testing this topic are very limited. If the suggestion above to combine questions for 'institutional sector' and 'status in employment' is adopted then it is likely that any testing should also be combined. The main points noted for testing on 'institutional sector' are:

- c Respondents' interpretation of 'government', particularly regarding 'semi-government' or 'para-statal' organisations. Identify necessary prompts and notes on the questionnaire, or instructions for Manuals and training, to try to record the meaning desired in that particular country.

- c Test any sub-categories of 'government' or 'other' (particularly 'profit/non-profit' as in Palau) which it is decided to identify separately.

Other points regarding the topic are more for research than testing, and cover the availability of data for the other sectors mentioned initially and the suitability of the 'industry' classification being used to also assist with identifying these sectors. This should be done in collaboration with National Accounts staff.

2.8D Data processing issues

If the question on this topic is combined with the 'status in employment' question(s) as suggested then one major consistency check will not be necessary. If it is not, then it needs to be ensured that no 'government' sector workers are 'self employed' or 'unpaid helpers'. There are no possible checks against sex, age or education level. Checks against the 'industry' and 'occupation' classifications were discussed when reviewing those topics.

2.9 INFORMAL SECTOR (Ref. WR 2.240 - 2.244)

The size and structure of the ‘informal sector’ (IS) is a topic of considerable interest and importance, particularly in transition and developing countries. In many countries this ‘sector’ is considered to engage fifty per cent or more of the persons in non-agricultural employment, either as a main or as a secondary activity.

A growing number of countries are now obtaining reasonable estimates for the size and structure of the IS, mostly using a household survey methodology, at least at the first stage. The 15th ICLS gave the first international guidelines on the development of statistics on the IS¹⁰ and the ICLS resolution should be consulted for a detailed review of definitions and data collection procedures.

The ICLS recommendations do not mention measurements from population censuses, and it may be difficult to obtain precise identification of those working in the sector with this source because of the limitation in the number of questions which can be included. However, it should be possible to obtain some good indicators on at least some segments of the IS and this is important because of the significance of IS activities in many local communities.

The topic is new as a recommended topic for censuses. For the 2000 round of censuses most attempts at measuring employment in the IS will be experimental, and it will be very useful to compare experiences between countries with this topic in order to improve measurement methodology over time.

It should be noted that as such statistics are in high demand, data analysts are very likely to attempt to develop measurements of the IS from census data, even if those responsible for the census do not make such estimates.

In this section several approaches to obtaining IS measures will be discussed.

2.9A Measurement and related issues

- c **2.9A.1 Main conceptual features of the IS:** As summarised in the WR, the ‘informal sector’ is part of the ‘household sector’ in terms of the ‘institutional sector of employment’ variable. ‘Informal sector’ units are neither ‘incorporated businesses’, which have a legal entity separate from their owners or shareholders, nor are they ‘quasi-corporations’, i.e. production units which do keep a reasonably complete set of accounts even though they are not incorporated or registered so that the finances of the business are kept separate from those of the household(s) which owns or controls the business. Thus IS units are found among those business activities which are carried out by households, but for which no complete set of accounts is kept, i.e. their business transactions cannot be totally and clearly separated from other household transactions. It is how to identify separately individuals

¹⁰ ILO 1993a

c

c working in such activities, which is the problem when measuring employment in the ‘informal sector’.

It must be noted that the IS should not be confused with the concept of activities of the ‘hidden’ or ‘underground’ economy or with illegal activities. In most countries, most if not all IS activities are legal and ‘above ground’, at least in the sense that the only laws and regulations broken will refer to those relating to operational licenses or the payment of taxes and social security contributions.

The 1993 ICLS resolution recognised a sub-division of the IS into:

- Informal own-account enterprises, which can employ contributing family workers and the occasional paid employees but do not have ‘paid employees’ on a continuous basis.
- Enterprises of informal employers, who can employ paid employees on a continuous basis, but usually only on a small scale, e.g. with less than five employees.

Thus there are both ‘own account’ workers, ‘contributing family workers’ and ‘paid employees’ in the IS.

c **2.9A.2 Practical identification of IS activities:** In most countries with a large IS, analysts (official or otherwise) have usually tried to obtain statistics on the IS from previous censuses by making use of statistics according to ‘sector’, ‘occupation’, ‘industry’ and ‘status in employment’, if available, and on this basis derive those groups which they think will approximate the IS or some of its activities: e.g. taking the ‘self employed’ coded to the ‘industry’ code for ‘street sellers and hawkers’ to approximate this segment of the IS. It is a similar approach which is recommended in this section for obtaining better measures of the IS. It is definitely not possible to ask a simple question such as “Do you work in the informal sector?” and obtain reasonable results. Thus the approach below is to first examine what can be obtained by using the other topics/variables and their classifications which are included in the census, and then look into possible additional questions and response categories which may be used to give more refined measures of the IS. It is strongly recommended that countries use this approach, i.e. examine what can be obtained from their currently proposed questions and classifications and then examine possible further questions to provide refined measures of the IS. This should be done whether or not it is decided to make a serious, ‘official’ attempt at IS measures from the census, as users of the census’ results are very likely to ask for estimates of IS employment from the census, nation-wide as well as for local labour markets.

The first major point is that it is easier initially to identify what is not in the IS, and to make sure that the persons engaged in these activities can be identified separately and thus excluded from consideration either for additional questions and/or during the tabulation stage.

There are two groups which clearly can be excluded from the IS or be separately identified, using information obtained with the ‘status in employment’, ‘sector of employment’, ‘industry’ and ‘occupation’ questions. These are:

- a) All paid employees working for the ‘government’, or ‘semi-government or ‘para-statal’ enterprises (or NGOs or ‘international organisations’ where significant). These ‘employees’ can be identified principally from the appropriate ‘sector’ and ‘industry’ categories.
 - b) All persons engaged in ‘agricultural’ or ‘non-market production’ activities (as ‘own account workers’ or ‘paid employees’) or as ‘private household employees’. To what extent and how these groups can be identified separately are discussed in the next three sub-points before returning to other issues.
- c **2.9A.2.1 Agricultural Activities:** Agricultural activities for home consumption or for sale, and as an un-incorporated enterprise, are part of the ‘household sector’, but are usually not included in the IS. Population censuses can and usually do provide valuable measures for the identification of persons engaged in these activities: ‘Industry’ classifications based on ISIC, rev.3 can be made to allow separate identification of ‘subsistence’ or ‘traditional’ ‘agriculture’ from ‘commercial’ ‘agriculture’ and occupational classifications based on ISCO-88 usually allow for a distinction between ‘market oriented agricultural workers’ and ‘subsistence agricultural workers’ where this distinction is important. It is recommended that if possible persons classified to these categories should be identified and be excluded from the remaining discussion of the IS.
- c **2.9A.2.2 ‘Non-market’ production activities:** These activities include the processing of primary products for home consumption, e.g. making butter from milk, oil seeds for oil, making mats from straw or reeds, weaving cloth from fibers; and building or carrying out major repairs on the family farm or house, e.g. fence or irrigation ditch making; as well as fetching/collecting water and firewood. As noted in Section 2 persons in these activities are to be included as ‘employed’ if such activities are important in the national economy, and they are included in the ‘household sector’. They are not commonly included in the IS, however, because they are non-market as well closely tied to agricultural activities. Note that the processing and building activities are often done partly for sale (which is IS) and partly for home consumption (which is not IS), but that they can become the only or main economic activity during certain periods, e.g. in the agricultural off-season. Note also that these activities usually cannot be separately identified by the use of standard ‘industry’ and ‘occupation’ codes, as persons with jobs consisting of only such processing or building activities for own use should be coded to the appropriate ‘industry’ group (e.g. ‘manufacturing’, ‘construction’) and ‘occupation’ (e.g. ‘process worker’, ‘construction labourer’), and will be difficult to differentiate from similar workers who are producing for a market and thus are to be considered for inclusion in the IS. These problems should be carefully examined, particularly in countries where such ‘non-market’ activities are significant. Interviewers will need
- c
- c guidance on how to record these situations, and one should probably introduce special codes for them in the respective classifications. Note again that the ‘status in employment’ question

suggested in Section 4B would include most of these activities among those ‘working on own or family farm etc.’ and that this will assist in identifying them separately from the small scale non-agricultural businesses which are in the IS. This is another reason for considering such a status question.

- c **2.9A.2.3 Employees of private households working as maids, cleaners, guards etc.:** These paid employees are included in the ‘household sector’ and are often considered to be part of the IS, but they should then be shown separately. A special ‘industry’ code is usually used for such employees, e.g. code 9500 in ISIC Rev. 3. The occupational classification should have separate codes for each of these occupations, so that this component of the ‘household sector’ employment can easily be identified through cross-classification with the ‘industry’ variable. Then the users of the statistics have the option of keeping them within or outside the IS according to descriptive or analytical needs.

c **2.9A.2.4 Summary of groups to be excluded from IS**

If a serious attempt is to be made to identify (components of) those employed in the IS, census planners need to think through all the above steps and ensure that questions and coding allow the identification of these groups.

In Summary - TOTAL EMPLOYED POPULATION

Minus: Workers in Government, Semi Govt etc.

Minus: Workers in Agricultural Activities

Minus: Workers in Production. for Home Use

Minus: Private Household Workers

= WORKERS IN ‘PRIVATE BUSINESSES’

The above uses the term ‘private businesses’ in the colloquial sense and as often widely understood.

If the above categories can be reasonably identified then the remaining problem is to separate workers in ‘informal’ private enterprises (businesses) from the rest.

Depending on national circumstances one may also exclude the following persons on the basis of certain responses to one of the questions already included in the census:

Minus: Persons working in certain occupations (e.g. ‘medical doctors’, ‘lawyers’) who need a formal authorisation to practice.

- c **2.9A.3 Identification of IS activities (continued):** The reference unit for the characteristic ‘informal’ is the business or enterprise in which the person works. Out of the wide range of private business activities it is necessary to identify those, normally small, business undertakings which are commonly referred to and understood as belonging to the

c

c

- c 'informal sector'. These activities cover a wide range of activities, ranging from 'beer brewing', 'street selling', 'buying and selling of (trading in) agricultural produce', 'handicraft making for sale', 'sewing of clothing for sale' and 'hawkers to small 'transport businesses for goods or people' (e.g. using taxis, donkey or hand carts).

The further theoretical qualifications needed on these private enterprises are again usually expressed in the negative:

- a) The activity should not be as a formal registered incorporated company as these would have to keep a full sets of accounts.
- b) The remaining activities should not be conducted such that a complete set of accounts is kept (i.e. as quasi-corporations).
- c) Usually an upper size limit is set on the number of paid employees on a continuous basis working for an IS enterprise (e.g. less than 10).

The size limit of paid employees will be discussed further in the sub-point below.

- c **2.9A.3.1 A size limit on the number of employees:** The upper limit on the number of employees in the own account enterprise to be regarded as an 'enterprise of the informal sector' is usually decided in each country according to the local circumstances. If there is a business register which supports employer/establishment based statistical surveys, this often includes only establishments above a certain size, often expressed in terms of the number of paid employees. If this is the case then the IS should be complimentary to the scope of this register. In countries where there is a Value Added Tax (VAT) and a lower limit of total sales for VAT registration, then such registration may be a logical criterion for defining the scope of the IS. (Note that with VAT non-registration as the criterion there will be IS units with total sales larger than the threshold for VAT registration, either because of deliberate tax evasion or because the registration requirement has not yet been complied with.) It should be noted that surveys have shown that the number of IS enterprises declines rapidly with increasing number of paid employees on a continuous basis, as most enterprises with higher employment are usually not informal for one of the reasons given earlier.

- c **2.9A3.2 Summary of second round of exclusions from IS**

WORKERS IN 'PRIVATE BUSINESSES'

Minus Persons working in registered incorporated companies

Minus Persons working in other enterprises (businesses) with complete accounts

Minus Persons working in companies with 10 or more paid employees on a continuous basis.

= WORKERS IN THE INFORMAL SECTOR

The specified exclusions cannot usually be determined from the answers to questions on other topics included in the census. Relevant questions would thus have to be asked, and the types of questions possible and whether respondents can be expected to have this knowledge is considered in the next part of this section.

2.9 B POSSIBLE QUESTIONS

This section is confined to questions especially on the IS, however information from questions on other topics will be raised where directly relevant. The first three points below discuss possible questions about the person's main job (economic activity). The following two points raise the possibility of a question on secondary activities and a question at the household level respectively, both with the aim of obtaining a better measure of total IS employment.

2.9B.1 Questions relating to the persons main employment: The IS is a characteristic of the private enterprise in which the person works. It is important to design and locate any proposed IS question so that it relates to the correct sub-group of the total population. The IS questions would usually be best if they followed a 'sector' question and only those working for private enterprises were directed to it.

The **Palau 1990 Census** question given in 2.8B is interesting as it combines a partial IS identification within the 'sector' classification by sub-dividing the 'self employed' by whether they work in a NOT INCORPORATED business or an INCORPORATED one. This would assist greatly in identifying self employed in the IS but is not sufficient as unincorporated businesses keeping complete sets of accounts will not be identified, nor will any 'paid employees' working in the IS be identified from this question.

A few countries (e.g. **Brazil, French Guyana** -self employed only, **UK 1996** test) have asked for the numbers of 'employees' or 'paid employees' working at a person's place of work. The results can be used for an approximate IS identification.

No census questionnaire has identified that separately has asked one or more questions to establish all the qualifications on the IS mentioned earlier. However, an untried hypothetical question covering all the possibilities discussed earlier is given below.

UNTESTED HYPOTHETICAL EXAMPLE

PERSONS EMPLOYED IN PRIVATE BUSINESSES ONLY

Is the business you work in:

- C A Registered Company (e.g. Pty or Ltd)?
- C Keeping a Complete set of Accounts?
- C Registered for VAT collection?
- C Having 5 or more paid employees on a regular basis?

Interviewer: For each of the above record one of the following codes

Yes1

No2

Don't know3

As explained in the earlier discussion, to be employed in the IS the person would have to answer NO to all four questions above. For most IS small business operators, whether 'employers' or 'own-account workers', the questions would not be difficult. For 'contributing family workers' interviewers would have to be trained to ensure that the answers should be the same as for the person(s), usually in the same household, who is/are the 'self employed' operator(s) of the same business. 'Paid employee' respondents are much less likely to have the required knowledge about characteristics of the business activity such as whether the business is registered or are keeping a full set of accounts, but will normally know approximately how many 'paid employees' are engaged on a continuous basis. Because the reply to other questions above than that concerning the number of employees most often will be "Don't know", it should be established through testing whether it is worthwhile to ask the complete set of questions of 'paid employees'. Problems are likely to be even more severe if another person is used to answer questions on behalf of the actual respondent.

The sequence of questions indicated above could become fairly complicated. Therefore one may prefer to ask just one simple additional question for this topic. A question about the number of paid employees would be the easiest and could be asked for all employed persons. The results from this question is also of general interest and the elimination of certain sectors and industries which are known not to be represented in the IS could be done during data processing or analysis. If this one question is to be applied to all the employed it may be best to place it after the question on 'place of work'.

2.9B.2 Identification of IS activities from other characteristics: Some countries have tried in surveys to identify some IS activities from other characteristics than those discussed above. One examples is the location of the place of work, particularly by identifying those persons who have no fixed work location or those who are working at home. If the major first set of exclusions mentioned in 2.9A.2 can be established from the replies to other questions, the supplementary use of the location classification can be a very effective way to identify some IS activities. The 'industry' codes for all those 'private business activities' without a fixed location or done at or from home would could be carefully examined to determine which are likely to be almost entirely IS activities.

Another approach is to ask a specific question to identify one segment of the IS. The question below from the **Antigua and Barbuda 1991 Census** is an example of this

<p>Q7.15 Do you/does he/she move all your/his/her goods every night: e.g., fruits, nuts, lottery tickets, clothing/shoes, etc.?</p>

<p>1 ? Yes (Informal trader) 2 ? No</p>
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An expanded 'location' question for Brazil seems to have had a similar aim. This may be useful for broader planning in particular countries, but can only identify a sub-sector of the IS. The questions also tend to be complex, may easily be mis-interpreted and would need very careful testing. Generally such approaches are best left to household surveys where the interviewer will have more time with each respondent than in a census.

2.9B.3 No additional questions: only derive from answer to other questions: As mentioned earlier to do this is often the current option in many censuses, as no specific question designed to identify the IS has been asked. Even if none of the questions mentioned in 2.9A.2 are being asked, it may still be possible to arrive at some rough estimates of employment in the IS. The replies to the 'status in employment' question provide the most useful information for such derivations. The 'self employed with no employees' and 'contributing family worker' categories are the most useful ones for identifying possible IS workers. If those engaged in 'agricultural' work can be excluded by using the appropriate 'industry' codes or other means, then most of the remaining persons in employment in these two status categories will be working in the IS in many developing countries. Careful consideration of other 'industry' and 'occupation' categories, combined with local knowledge, may lead to the exclusion of other jobs and a more refined measure. However, similar possibilities are difficult to find for the 'self employed with employees' and for 'paid employees'. Thus only for two components of the IS workforce can rough measures be obtained by this approach. However, for some countries this may be the only approach they can afford, at it may be better than making no efforts at all.

2.9B4 Secondary Activities - Almost all IS activities can be done either as a main or as a secondary activity for the individuals involved. In some countries the numbers engaged in IS activities as a secondary activity is almost as large as those engaged in them as a main activity. With the difficult economic circumstances in many countries, it is only by engaging in secondary activities that many who work as 'paid employees' as the main activity can survive and support their families. In many cases one member of a family will engage in the IS activity as a main activity and other household members will assist as secondary activities. It should be noted, however, that very few countries have asked census questions about secondary economic activities.

One country, Cook Islands, asked the complete block of economic questions again with regard to secondary activities, but for most countries there probably will be insufficient space for this approach to be used. If the complete set of questions were asked for any secondary activities, the same procedures as described in part A above could be used for identifying persons engaged in the IS as a secondary activity.

A possible alternative approach is to use a simple question such as the untested hypothetical example given below. A major aim would be to identify secondary IS activities, but the responses could have broader use than that. The question would come after all questions relating to the main activity.

UNTESTED HYPOTHETICAL EXAMPLE

<p>Q Sec 1: <i>Besides your main economic activity covered in the previous</i></p>

questions, did you engage in any of the following forms of secondary economic activity in the last seven days?

- C Working on any form of small business for yourself or with a partner
- C Working unpaid in a family business?
- C Working on your own or family farm or ranch?
- C Working in a paid second job?

Interviewer: For each of the above record one of the following codes

- Yes1
- No2
- Don't know3

The questions have been kept simple to obtain a rough broad estimate of secondary activities in these categories. 'Yes' answers to the first two categories could then be considered to identify IS self employment jobs. Probably most of those answering 'yes' to the last question would be in an IS paid employee jobs. If the first two categories were asked alone, a note would need inserting to exclude agricultural activities from them. The IS questions could be more rigorous and specify for example that the business should have less than five continuing paid employees. However it has been shown in surveys that secondary activities almost always are with units that have few employees. This, however, should be confirmed by testing. The indicated responses to such questions would only provide a crude measure of secondary activities, principally IS activities, but the results may be better than having no estimates, in particular for small areas and population groups, and could be used with higher geographic level survey estimates to impute other characteristics at local levels.

2.9B.5 Identification of IS activities at the household level: In many cases IS activity is a household activity with several members of the household engaged full or part time. Identification of the number of households with some engagement in IS activity, preferably by type of household and activity, is extremely valuable information in itself and also for creating a sample frame for later IS surveys.

The household information can be obtained during listing preparations for the census, provided 'solutions' can be found to the following problems, if they arise:

- It is often difficult to match the individual household information from the listing with the replies obtained for the household during the census enumeration.
- IS activities are often intermittent. People stop and start particularly the smaller IS activities which are also often seasonal. Listing information collected over a year or more prior to the census (as is often the case) may not relate to economic activities at the time of enumeration.

Thus although listing data can be useful for both the IS identification and for other enterprise characteristics (ref. WR 1.42-3), it is far more useful if some question is asked during the actual enumeration.

No household question on this topic could be located from the sample countries. The following question is hypothetical and untested, but is provided for illustrative purposes.

UNTESTED HYPOTHETICAL EXAMPLE

HH1: *Did any member of the household engage in one of the following small scale business activities in the last seven days*

- C Making or repairing any items (e.g. clothing, pots, hats, furniture, metal products)?
- C Preparing food or beer for sale?
- C Selling food, clothing etc. at the market, in a small shop etc?
- C Transporting people or goods, using e.g. taxis, hand carts?

Interviewer: For each of the above record one of the following codes

Yes1

No2

NOTE: Must be own or family business with less than five employees on a regular basis. Not working as a paid employee.

The question targets particular types of IS activities. This is the most effective approach and it can be extended to other categories. It would obviously have to be changed for each country to fit local examples and priorities. It could also be asked generally about small-scale business activities with a variety of examples.

2.9C Pretests

As a completely new topic in most countries, any IS related question should be subject to thorough testing. It is strongly suggested that a test of any IS question be followed by complete re-interviews using a detailed household survey questionnaire to check both whether the identified IS activities really are IS activities and whether any relevant IS activities were being missed. Possibly the results may be sufficiently accurate for at least self-employed activities, but this should be clearly established. Tests would need to cover a variety of rural and urban areas and various types of IS activities. They should be combined with test derivations of IS categories during processing and analysis as discussed below.

2.9D Data Processing Issues

As noted earlier, careful checks and cross-tabulations of 'status in employment' categories by 'industry' and 'occupation' groups will be essential to edit any IS data and re-coding is likely to be necessary to remove absurdities.

The over-riding issue for the design of a procedure to measure employment in the IS measure is that it should be clearly thought out whether such measurements are likely to be attempted. If the answer to this is 'yes', the question(s) and procedures must be carefully thought out and well tested. It is very likely that some computer derivation or at least strong edit checks will be necessary and these need very careful thought and prior testing. It should be remembered that such preparations will prove to have been well worth the extra effort when the demands for small area and regional estimates of IS employment start coming.

2.10 TIME WORKED (ref. WR 2.209 - 2.211)

'Time worked' is a very valuable topic for many countries, both developed and developing, where there is a growing proportion of employees with non-standard working hours and a growing number of self-employed persons. In these situations observing only the number of persons employed will estimate the total amount of work done very imprecisely. One needs information about the time worked by those employed to obtain such estimates with any reasonable degree of precision and comparability over time and between groups. Information about 'hours worked' is also essential for studies of the relationship with 'income', 'underemployment' and 'productivity', as well as for some National Accounts measures.

'Time worked' was asked in 84 of the 181 countries which reported to the UN for censuses in the 1975-1984 period. It is recommended that time worked on all economic activities be recorded for all person 'employed' and not just for 'paid employees'.

Many countries rely on household surveys for measures of 'time worked' and it is true that conceptually better measures and a larger variety of measures can be obtained by the more thorough and time-consuming methodology which they can use. However, it is only in a census that you can obtain measures for small areas and for small groups of the employed population. In addition, estimates of 'time worked' from employer surveys usually only cover large, formal employers. Excluded from such surveys are usually 'informal sector' workers as well as persons engaged in small-scale agriculture and in production for home consumption.

2.10A Measurement and related issues

c 2.10A.1 Objective of the question: If the block of 'economic' questions asks about current activity then the question(s) about 'time worked' should also relate to the current short reference period. The objective thus is to measure actual time worked in the current reference period. Note that such measures will include some 'zero hours' for persons temporarily absent from work (on holidays, sick leave etc.) throughout the reference period. Reduced hours as compared to 'normal' hours will also be recorded if any part of the reference period is taken for holidays or off sick etc. All overtime, paid or unpaid, should be included. Thus this concept measures time actually worked rather than e.g. time paid for.

Although the UN recommends the measure of actual hours worked, some data users may prefer to measure the 'usual' hours worked in a corresponding short reference period. This measure would be of the hours worked during a 'usual' or typical week, including overtime hours regularly worked, whether paid or unpaid. Days and hours not usually worked should be excluded as should unusual periods of overtime. In some censuses, questions have been asked about both 'actual' and 'usual' hours worked. Users of the statistics should be consulted regarding the most useful measure(s).

Measuring the 'usual' economic activity is often done by referring to the weeks or months worked during a long reference period, such as the last 12 months (see section 2.12 below).

It is not recommended that any attempt be made to establish the 'usual' hours for such a long period, as recall and calculation errors are likely to be severe.

- c **2.10A.2 What time to include:** Included should be the total time spent producing goods or services during the reference period, including any 'overtime', time spent in preparation for work or in maintenance or repair of equipment, as well as short 'tea' breaks. Teachers should include their preparation and similar work related time in addition to the time actually in front of a class. Hawkers and other sales workers should include time waiting or looking for customers. However, long meals breaks should be excluded as should time off for holidays, vacation, sickness or industrial disputes. Time spent travelling to a work place should also be excluded, except where such travelling is part of the job, e.g. for taxi drivers, workers travelling to or between variable work sites.

As mentioned earlier, the total time worked should include all activities included as economic activities as detailed in section 2.2. If practical, time spent on secondary activities should be recorded separately from the time spent on the main activity.

- c **2.10A.3 Accuracy:** When using only a single question, the accuracy of the answers for 'time worked' will usually be poor. The accuracy can be improved by asking and recording the time worked each day in the reference period and in each job. However this procedure does take more time and space on the questionnaire to be possible in a census operation. It is, however, worthwhile to train interviewers to ask about each day and then add the hours for each day before recording the answer. For rural farmers in many countries, interviewers will have to impute the time from other information, as such workers often do not have clocks and watches and can only answer in terms of sunrise, sunset, half-days etc. It is acknowledged that the time spent on non-market activities such as production for home consumption and fetching firewood and water, will be very difficult to assess accurately. Some countries collect 'time worked' only for 'paid employees' in their census and rely on e.g. time use surveys for measuring the 'hours worked' of those with less standardized or supervised activities.
- c **2.10A.4 Pre-coded categories or open questions:** In some countries pre-coded ranges have been used for the answers to this question to help the respondents understand that precise estimates are not needed and to avoid that the replies cluster on 'round' values, such as 35, 40 or 45 hours per week. This procedure may, however, provide another source of error as interviewers with limited education may record the wrong category. There will also be a rounding error as the mid-point of each range has to be taken as basis for the calculation of averages etc. It is generally thought best to ask and record an estimate of the actual number of hours. The answer recorded should normally be rounded to the nearest hour as fractions or decimals of an hour imply a very dubious accuracy. The asking and recording of individual hours also allows a review of the detailed distribution of hours worked. This will be particularly useful if some users of employment statistics wish to set a higher limit for hours worked for those persons who are to be considered as 'employed' in certain tabulations than the one-hour criterion recommended. (The available

evidence of the distribution of workers according to hours worked has usually shown very low numbers of persons working very few hours per week, e.g. below 10 hours.)

It is not recommended that a question using the categories 'part time/full time' be used on the questionnaire. Even with notes to interviewers, respondents often will apply their own, inconsistent interpretations of these terms. Output categories for tabulations can of course be called full time and part time after reviewing the overall distribution of hours worked.

2.10B Possible questions

The example given below is for the **Bermuda 1991 Census**.

<input type="checkbox"/>	
Q39	Last week how many paid jobs did you work at?
	? Not stated jobs
	â ã ä å æ ç è é ê
Q40	How many hours do you normally work in your (main) job in a typical week, including overtime whether you are paid for it or not?
<input type="text"/>	<input type="text"/>
	? Not stated hours
<input type="radio"/>	â ã ä å æ ç Ô Õ Ö
<input type="radio"/>	Î Ī Đ Ñ Ò Ó Ô Õ ê
FOR PERSONS WITH 2 OR MORE JOBS, OTHERWISE GO TO 42	
<input type="text"/>	<input type="text"/>
Q41	Excluding your main job how many paid hours do you normally work in your other jobs in a typical week?
	? Not stated paid hours, other jobs
<input type="radio"/>	
<input type="radio"/>	â ã ä å æ ç Ô Õ Ö
	Î Ī Đ Ñ Ò Ó Ô Õ ê

The Bermuda questionnaire was designed for data processing using optical mark readers (OMRs). It is a relatively detailed question and asks for main and secondary activities separately. It asks for the 'normal' or 'usual' hours rather than the 'actual' hours worked in the last week. A complete series of questions would be to ask for the actual hours first for both main and secondary activities separately and then the 'normal' hours. The sequence of 'actual' then 'usual' or 'normal' hours has been shown to improve accuracy in some tests. The questions do prompt the inclusion of overtime, but might have benefited also by including prompts on some of the other points mentioned above.

2.10C Pre-tests

Where 'time worked' is a new census topic, it is strongly recommended that it be included in the pre-testing program. Testing should focus on evaluating the accuracy of the answers by conducting a second interview using more detailed, household survey questions and the wording, layout, prompts and examples most suitable for improving accuracy. In industrialized countries it has been found that responses giving few 'hours worked' often tend to be too low, whereas responses with many 'hours worked' tend to be too high. Little testing has been done in developing countries, and should particularly focus on time spent on activities which do not represent 'paid employment'. The respondents' estimates for such activities are likely to be even more problematic in these countries than elsewhere.

2.10D Data processing issues

Data edits for this topic should concentrate on consistency checks. If a person is recorded as temporarily absent from their main job then the actual hours recorded for that main job should be zero. If a person has more than one job recorded then hours worked should be recorded for all jobs for both 'actual' and 'usual' measures. If 'actual' hours are recorded separately for all jobs then 'usual' hours should also be recorded for the jobs.

2.11 INCOME (ref. WR 2.236 - 2.238)

'Income' is not a common topic in population censuses. It was only asked in 40 of the 181 countries reporting to the UN about censuses in the 1975-1984 period. The topic is recommended in the WR, but it is recommended that only very restricted categories of individual income be collected. In particular it is recommended that only cash income be collected and that non-cash income be excluded. The value of home production and of income paid in kind (e.g. as food, clothing and accommodation) are extremely important components of the total income for individuals and households in most developing countries, but measurement is extremely difficult even in household surveys and therefore not recommended for a population census.

The measurement of cash income itself raises many problems and the major ones are discussed below. For 'economically active persons' it is recommended that only income from

employment be collected for the individual. However, it is recommended that, if possible, an item of total household income be collected, including any cash income from interest, dividends, rent, social security benefits, pension and life insurance annuity benefits.

It should be noted that censuses in some developed countries have a long history of collecting detailed cash income information at the individual level with few problems e.g. Canada, USA, Australia. When detailed data is collected by the source of the income, the results will allow the identification of economically depressed areas, as well as providing statistics on the source of the incomes in these areas. This information, used together with other characteristics from the census, will help in the development of social and economic policies to assist such areas and/or to monitor the effects of existing programs to help them.

'Income' is often thought to be a sensitive topic, but the degree of sensitivity seems to vary significantly between countries as well as between groups within the same country. Some groups, e.g. larger businessmen, do sometimes refuse to answer the topic in any format, but 'paid employees' and IS operators have been generally co-operative in most countries, within the limitations of capacity to provide accurate estimates of their income.

2.11A Measurement and related issues

c Accuracy of measurements: It must be noted that even with the restriction to 'cash income' only, the income information in a census is usually very approximate. Regular wage earners may know their regularly paid income but the self-employed and particularly the small IS operators are very unlikely to be able to give good estimates of their income. This also applies to agricultural income, as it is also often seasonal. Measurement of income received for casual, temporary and intermittent work is also often very approximate. A major problem is that often the census replies are given by one member of the household for all household members. This person often does not know other household member's income and only very rough estimates, if any, may be obtainable.

Because of these accuracy problems some countries have restricted their income measures to paid employees only, even in Labour Force Surveys. Others have excluded agricultural income and only measured this component in specialized Agricultural Surveys

c What Income to Measure: This is a major conceptual and practical issue. It is useful to distinguish between:

- (i) Income from 'paid employment'
- (ii) Income from 'self employment'
- (iii) Other income (e.g. investment, including rental income; income from social security and insurance schemes; pensions; etc.)

If the aim is to measure solely income from current or usual employment then a measure of the first two items above is sufficient and the questions need only be targeted at the

‘employed’ population (current or usual). If ‘welfare’ is more the concern then the ‘other’ incomes must be included, and the question addressed to all individuals. However, this will make the questionnaire more complex. Note that rental income is not uncommon in many low income areas of developing countries where a significant number of the aged or widows often earn a living by renting of rooms etc. (Obtaining estimates of the net rental income, is, however, often very difficult).

One approach is to ask for income from ‘paid’ and ‘self-employment’ from individuals and to obtain a broad measure of ‘total cash income’ at the household level.

The cash income figure should also always be the amount before income tax or other, similar deductions (e.g. for social security or pension contributions). In some cases an employee may not know this gross figure easily but it can usually be obtained by reference to a pay slip.

For the ‘self-employed’ the income should be the “gross output or takings, minus any operating expenses (e.g. for staff wages, materials/supplies, electricity, gas, water)”. In theory depreciation of capital assets should also be deducted, but this will only be possible from the ‘self-employed’ who operate formal businesses with formal accounts).

- c **Reference Period** - Ideally one would usually like to measure 'current income' with 'current employment' and 'usual income' with 'usual employment', i.e. the income measure should match the employment measure. Except for some regularly paid employees, very short-term income measures (e.g. last week, month) can often be unrepresentative. Rarely is the same reference period for 'income received' suitable for all the employed. For large businessmen a year is often the most convenient as they can obtain this from their accounts or tax records. A year is also the best period for income from activities with significant seasonal variations in earnings, e.g. agriculture. However, for small businesses, particularly in the IS, such a yearly measure is almost impossible to observe with their limited records. For employees an annual figure is also difficult unless they have a copy of the tax return easily available.

One possibility is to vary the period according to the type of employment with either a current or usual measure. However, this would be more complex and take more space than is available on most census questionnaires.

Often the approach which has to be adopted is to take a current, longer period, usually a month, and ask for details about incomes from all types of employment with notes to interviewers to gross up daily earnings and divide annual earnings e.g. to obtain a monthly average. This does of course add to the complexity and inaccuracy of the resulting estimates.

- c **Main activity or all activities:** It is recommended that the income from all work activities be collected rather than for the main activity only. However, in censuses which includes questions about secondary activity, it is very desirable to collect separately cash income from both the main and the secondary activity. This is

c

- c particularly so in countries where the 'informal sector' is important and often provide a secondary activity.

c

- c **Pre-coded response categories:** Pre-coding of income ranges is often used, particularly in some developed countries. It is obviously easier to record the answers when pre-coded ranges are given for the weekly, monthly and annual figures, as they assist with the period problem mentioned above. It is also thought that respondents are less reluctant to give a range for income rather than a 'precise' value. However there is, at least formally, a loss of accuracy in obtaining ranges only and the calculation of average incomes etc. normally will have to be based on the mid-point of the range. If ranges are to be used then good base data on the distribution must be available from pre-tests, household surveys or other sources to ensure that the ranges given are suitable for the relevant income distribution. In some developing countries ranges have been found to confuse interviewers and thus be a source of error. Good pre-testing is essential before their introduction.

- c **Question order:** When an income question is asked it is usually put as the last question of the economic block of questions. This is partly because it is logical to ask all details of employment and then to ask about the income from that employment. It is also often done to sequence all adults to this point, not just the 'employed' persons, and ask about total

income including investment income, pensions etc. It would be illogical to sequence those not employed to a question part of the way through the economic block and then out again.

It is also often thought that it is best to have a sensitive question last in the block of questions, as some persons may refuse not only this question but also all questions from this point onwards. However, as the last question (often on the questionnaire) the question does face the danger of being forgotten, missed or ignored. For example, in Australia the question on total cash income has been placed before the economic block of questions and at the top of a page to emphasise the importance of this question. Countries should test the position and sensitivity of the question in their situation, but it does generally seem logical to have the question at the end of the economic block of questions.

- C **Household questions:** The WR do recommend household income measures as well as individual measures. The household estimates may be derived by summing the individual measures, depending on the question asked at the individual level; or as suggested earlier, a separate, broader question may be asked at the household level. 'Household cash income' is a major general welfare measure, and is needed for studies of poverty as well as other welfare related issues.

2.11B Possible questions

2.11B.1 Individual questions:

The first example is from the **Antigua and Barbuda 1991 Census**

Q7.16 What was ...'s last pay/income period?											
1 ?	Weekly										
2 ?	Fortnightly										
3 ?	Quarterly										
4 ?	Annually										
5 ?	Other (<i>Please specify</i>)										
<input type="text"/>											
6 ?	None										
7 ?	Not stated										
Q7.17 What was ...'s gross pay/income during the last pay period that is before income tax or other deductions? (Present flash card).											
Interview: For self-employed persons obtain 'net income' i.e., receipts less business expenses.											
INCOME GROUP	<table border="1"> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> </table>	0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9		
? Don't know											

This sequence is interesting in that it allows a variety of periods in the first question and then asks about the income for that period in the second question. The 'income' information is collected in ranges and a 'flash' (or 'prompt') card is used to assist in determining the range from the respondent. The use of prompt cards is a common survey technique also being used in some censuses. The questionnaire was designed for processing using 'Optical Mark Readers (OMRs)'. It is also interesting that a 'Don't know' category was allowed on the questionnaire, as this is not always a good practice because interviewers may overuse it. Question 7.16 is definitely worded for 'paid employees' and interviewers would have to rephrase it for the 'self employed'. There is also no allowance for secondary employment and it is uncertain whether total income from all jobs was to be recorded or only income from the main job. Presumably this was explained in the interviewers manual and in training. Even if secondary activities are rare some guidance is necessary when they do occur.

The second example is a very comprehensive one from a **United Kingdom 1996 Census Test**.

<p>Q38 Are you a visitor to the household?</p> <p>? Yes (<i>do not complete the remaining questions</i>)</p> <p>? No (<i>go to next question</i>)</p> <p>Q39 Which kinds of income do you receive? (<i>Tick all the boxes that apply</i>)</p> <p>? No source of income</p> <p>? Salary/wages</p> <p>? Income or profit from self-employment</p> <p>? Pension from a former employer or spouse's former employer</p> <p>? Child benefit</p> <p>? Disability benefits such as:</p> <ul style="list-style-type: none"> * disability living allowance * disability working allowance * attendance allowance * severe disablement allowance * invalid care allowance <p>? Other state benefits such as:</p> <ul style="list-style-type: none"> * retirement pension * Widow's pension * family credit * unemployment benefit * income support * sickness/invalidity benefit 	<p>Q40 What is the total gross income (<i>before any deductions for Income Tax and National Insurance contributions</i>) that you usually receive from all sources?</p> <p>Count all income including:</p> <ul style="list-style-type: none"> * salary or wages * income or profit from self-employment * occupational pensions * child benefit * disability benefit * state retirement pension * family credit * unemployment benefit * income support * sickness/invalidity benefit * maternity allowances * Interest or annuity from savings or investments * student grant/loan * rent from property <p>Do not deduct:</p> <ul style="list-style-type: none"> * taxes * national insurance contributions * superannuation payments * health insurance payments <p>Per week or Per year</p> <p>Nil ? Nil</p>
---	---

* maternity allowance	Less than ?40	?	Less than ?2,000
? Interest or annuity from savings or investments	?40 - ?79	?	?2,000 - ?3,999
? Other sources of regular income such as:	?80 - ?119	?	?4,000 - ?5,999
* student grant or scholarship	?120 - ?159	?	?6,000 - ?7,999
* rent from property	?160 - ?199	?	?8,000 - ?9,999
* maintenance			
? Other sources not already mentioned			

In this example for self-enumeration both ‘sources of income’ and ‘total gross income’ by ranges are asked, but separately. In the USA and Canada it has been common to ask for the detailed income from each source. Questions with pre-coded ranges do take space for the ranges and, as shown, explanatory notes are extensive. The exclusion of visitors in Q38 is interesting. This could also be done during processing provided that ‘visitors’ were identified elsewhere on the questionnaire. The aim presumably was to provide income data only for usual residents and to sum to household totals without visitors.

Note that no mention is made of income in kind (e.g. food, clothing) in either of the above example questions, as most respondents do not think of this as income. However, the fact that this type of income is to be excluded should be said in the manuals and training for the rare cases when interviewers are asked. The prompts to be used on the questionnaire, and the exact questionnaire wording, needs to be established through pre-tests. Note that as with other questions every effort should be made to avoid technical jargon and concepts in the actual questions.

An income question in the questionnaire landscape format can be difficult because of the space needed for the essential notes to interviewers. However, recording space for answers is usually adequate. No country example of an income question using the landscape format was located.

2.11B.2 A household question:

As noted earlier a household cash income measure has been recommended in the WR. It can be obtained from computer records by adding individual incomes but this may be an opportunity to add in other income if it was not included in the individual measures. The example below is a hypothetical untested question that may however assist in the development of a suitable household question in some countries.

HH 2: <i>Please estimate the total household <u>cash</u> income for the last twelve months from all sources including any income from employment mentioned earlier for each person but add on any other income from pensions, rent</i>	TOTAL HOUSEHOLD INCOME
---	------------------------------

<i>or other investments</i> Interviewer: Work with respondents to add individual cash incomes plus any cash income from any type of pension/ welfare payments or insurance plus rental income plus any other investment income.	\$
---	-----------------

2.11C Pre-tests

It must be stressed that the decision to include an income question should not be made lightly. Pre-tests on this topic should be extensive, particularly when the topic is asked for the first time in a census. If possible pre-tests should be followed by extensive re-interviews using household survey methodology to establish the probable limited accuracy of the census measures and thus to advise users. Early pre-tests should establish the prompts necessary for interviewers and their problems with agricultural and informal sector income in particular. As interviewers are required to make calculations in some cases a check on their accuracy is also essential. Users of the resulting statistics should be consulted during testing to ensure the question(s) are obtaining the type of information which they require and with a degree of accuracy that they regard as acceptable.

2.11D Data Processing Issues

Data edits should concentrate on consistency checks. Only persons working in 'paid jobs' or in 'self-employment', according to the 'status in employment' variable, should have cash income, if other types of income is excluded. Persons with secondary 'paid' or 'self-employment' jobs should have income from this second activity. (Note that the converse does not apply in some cases, as the activity refers to last week and the income may refer to the last month). Total household income should always be equal to or more than the sum of the individual job-related incomes in the household. 'Not stated' codes must be allowed for this question in particular and

a strategy decided on how to deal with such cases in the processing of the question, e.g. by imputation or by exclusion from averages. General checks must be run on extremely low and high incomes, which can distort averages badly. These checks can be done by 'status' and by 'occupation'.

2.12 USUAL ECONOMIC ACTIVITY (Ref. WR 2.177-2.179 and 2.202-2.204)

It has been recommended in the WR that countries consider measuring both *the usually economically active population* and *the currently economically active population*.

In the past, most countries have measured only ‘current activity’ because of its relatively recent and short reference period (e.g. last week, last month). It has, however, always been recognised that the ‘current activity’ measure has limitations for many users, particularly if the census was conducted during a particular season. In many countries in Africa and Asia the census is conducted in the dry season for logistic reasons (to avoid transport problems, wet questionnaires etc.), and e.g. in Mongolia the census is conducted in mid-winter when the nomadic population is easiest to reach. The ‘current activity’ measure of economic activity is thus often not representative of the situation for other periods of the year, and then may tend to understate (or, less frequently, overstate) the economic activity. The broad aim of measuring the usual activity is to obtain a ‘total’ or ‘average’ picture of economic activity over all seasons.

If a country has:

- A reasonably even pattern of economic activity throughout the year or;
- A very high proportion of employment in wage earning or formal business activities which by their nature are not usually seasonal or;
- A very good program of household surveys to measure economic activity at differing seasons.

then there is less need to measure ‘usual activity’ in a population census. However, this situation is rare in developing countries. The ‘usual’ measures are conceptually valuable to obtain the twelve months’ picture of economic activity as a basis for all aspects of economic and manpower planning, and are particularly valuable for National Accounts estimates. The twelve months prior to the census date was used for at least one census question in 47 out of 181 countries that reported to the UN for censuses in the 1975-1984 period. However, even in many of these censuses, the major block of economic questions referred to the week prior to the census and the long reference period was used only for one or two questions.

Note that measuring ‘usual activity’ is not a simple exercise. During a 12 months’ period many persons change between ‘economic’ and ‘non-economic’ activities, depending on the season as well as on economic and demographic factors and events, and they can do different types of economic activities at different times of the year. It is very difficult to obtain meaningful responses by simply asking persons: “What was your usual activity in the last twelve months?” or “Were you usually employed?” The questions need to probe for all types of economic activity and preferably aim to quantify the answers in terms of time spent on the various forms of activity. This can mean that it will be necessary to use several questions.

2.12A Measurement and related issues: Before exploring possible questions on this topic, a few basic issues relevant to all questions on ‘usual activity’ will be discussed.

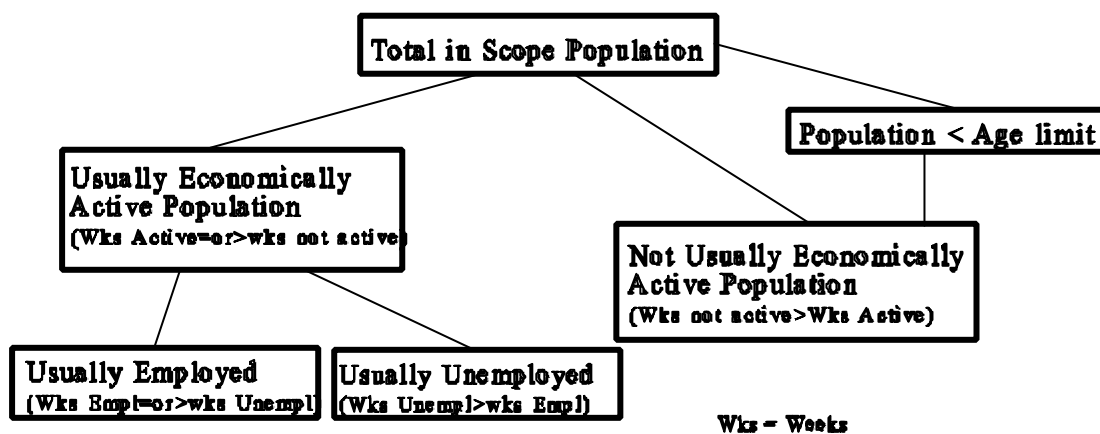
2.12A.1 Reference period: One basic issue is the choice of a reference period. Should the last twelve calendar months be used or a calendar year, e.g. 2000. Recall problems or memory loss is a major problem with such long periods, in particular concerning timing of events and duration of activities, and it has been found best to use the twelve calendar months ending at the month prior to the census. However, some countries have used the calendar year as they think it gives a more definite reference period to which respondents can relate. It also gives a useful reference period for the results. If the census is early in the calendar year then there may be little difference and the calendar year could be preferred. However, this should be established by testing. Another possibility is to fix the reference period by a national event just before the census enumeration (if there is one). For Example "Have you done.....after Independence Day last year?"

2.12A.2 Basic rules regarding 'economic and non-economic activities: As discussed in section 2.3 on 'Current activity', the rules for economic activity questions are that within the reference period:-

- c Economic activities take preference over non-economic activities
- c Within 'economic activities' employed activities take preference over unemployed activities.

Some people are both 'employed' during the same day, week or month as they are looking for other work and/or engaged in 'housework'. The above rules determine the question order. Questions to determine any type of employment activity should always be asked first, followed by questions to determine whether the person can be considered as unemployed, and finally we ask about any non-economic activities. For 'usual activity' the rules also determine the most common allocation of individuals to the main groups:

- c If a person spends more time as 'economically active' than as 'not economically active' over the twelve months, the person is considered to be 'usually economically active', and the converse.
- c If an economically active person spends more time as 'employed' than as 'unemployed', then the



person is taken as 'usually employed', and the converse.

This model is shown diagrammatically below. By the "total in scope population" is meant the population net of any groups excluded from the scope of the census e.g. foreign resident diplomats and military personnel are usually excluded from the scope of a country's census.

An alternative approach is to set a minimum number of weeks to be considered as ‘economically active’, ‘employed’ etc. This is discussed in detail in the ILO survey manual¹¹.

2.12A.3: The reference counting unit: Another basic decision is what unit of counting i.e. days, weeks or months to use to ask about/record for a person’s activity and ultimately derive the major ‘usual activity’ categories. This is again a problem: A ‘days’ based measure would be very good if it can be obtained, but this would be very unlikely to be with any degree of accuracy. Respondents have great problems remembering the number of days they spend on any activity in a reference month and certainly will not be able to give accurate estimates for the last twelve months. ‘Weeks’ may represent a degree of precision which may be possible and would warrant testing. ‘Months’ is the easiest but would be a very approximate rough measure as activities may change significantly during a month.

2.12B: Possible questions

Few countries have asked ‘usual activity’ questions in censuses in the past, and only few countries have tried them in surveys. Thus experience with the topic is limited. It is strongly recommended that the first introduction of the question(s) only be done after thorough pre-tests, and that ‘current activity’ should be the major target for the economic questions, also for reasons of comparability with other censuses and surveys. Most characteristics of the ‘economically active’ population (e.g. ‘occupation’, ‘industry’, ‘status in employment’) should thus be collected only for ‘current activity’. However, in countries such as Brazil, where the census already has used ‘usual activity’ as the major concept in the previous census, and when the statistics users are satisfied with the results, one should of course continue with these measures.

Diagram 5 - Usually Economically Activity Components of the Total Population

¹¹ Hussmans et al 1990 See Pages 50-58

All countries should at least consider the possibility of including a ‘usual activity’ question for the 2000 round of censuses. Census planners should work closely with their National Accounts and Manpower/ Labour Policy colleagues to establish a minimum desirable need for measures of ‘usual activity’.

It is strongly recommended that any question on ‘usual activity’ be put separately either before or after questions on ‘current activity’. Respondents will be very confused if they are asked to switch from a week/month reference period to a year period and then back to a week/month

2.12B.1 Reasonably simple questions: Below are two examples of reasonably simple question sequences from the **Palau 1990 Census** and the **Canadian 1991 Census Interview Schedule**.
PALAU 1990

Q 31 a. Last year (1989) did ... work, even for a few days, at a paid job or in a business or farm, excluding subsistence activity?

- ? Yes
- ? No - Skip to 32

b. How many weeks did ... work in 1989, excluding subsistence activity? Count paid vacation, paid sick leave and military service.

Weeks

c. During the weeks WORKED in 1989, how many hours did ... usually work each week?

Hours

CANADA 1991

Q50 In how many weeks did you work in 1990?

Include those weeks in which you:

- < were on vacation or sick leave with pay;
- < worked full time or part time;
- < worked for wages, salary, tips or commission;
- < were self-employed or an unpaid worker in a family farm or business

? None GO TO QUESTION 52

OR
Number of weeks
CONTINUE WITH NEXT QUESTION
Q51 During most of those weeks, did you work full time or part time? Mark one circle only.
<input type="radio"/> Full time (30 hours or more per week)
<input type="radio"/> Part time (Less than 30 hours per week)

Both sequences came after the main set of ‘economic’ questions, which referred to ‘current’ economic activity. Thus respondents had been already exposed to the such issues. However, note that both sequences have only limited probes or prompts. Generally, as discussed in Section 2.3 on ‘current’ economic activity, considerable probing is necessary to obtain a good coverage of all economic activities. It will be noted that both of these sequences ask for a simple measure of the number of weeks worked with an additional question on the usual working time, and that no attempt is made to measure ‘unemployment’.

2.12B.2 Use of ‘usual activity’ as the reference for all ‘economic’ questions

This strategy was used in Brazil, as mentioned earlier, and also in Vietnam. The first question in Brazil was “Have you worked in the last year or part of it (01/09/1989 to 31/08/1990)?” Presumably the notes and manuals for the interviewers expanded on the definition of ‘work’. There were three answers to choose from (1: Worked regularly; 2: Worked from time to time; 3: Didn’t work). Those assigned to code 3 skipped to a section on ‘unemployment’ and ‘non-work activities’. Those assigned to code 1 or 2 were to take the ‘whole year activity’ or ‘the one they regarded as the main one’ as the reference activity for the other economic questions (on ‘occupation’ etc.). The Vietnam sequence was simpler and asked for the ‘main activity’ as the reference for the other ‘economic’ questions.

As noted, this approach has many complexities and is inappropriate with pronounced seasonal activities or other forms of job changing, and should only be applied after thorough testing. Surveys in Tanzania and Botswana, which have measured ‘usual activity’ using the rules given earlier, have shown considerable differences in the results for ‘usual activity’ and ‘current activity’, even in the basic activity classification (as ‘employed’, ‘unemployed’ etc.). Thus any change from a ‘current activity’ approach to a complete ‘usual activity’ approach is likely to result in lack of comparability with previous census results.

2.12B.3 A complex hypothetical sequence: A comprehensive ‘usual economic activity’ sequence of questions could not be located from any country, and it has been decided to give the hypothetical example below to illustrate many of the points which would have to be considered in designing such a question.

UNTESTED HYPOTHETICAL QUESTION

U1: During the last twelve months up to the end of last month did you:-	
C	Do any work of any kind on your own or the family farm, cattle post/Kraal, or other agricultural holding e.g. Chicken house, vegetable plot etc. ?.
Prompts: The work can be for cash income or for your own food. Including any form of house construction or major maintenance	
C	Conduct any type of business big or small e.g. brew beer, sell cakes, make hats/clothes, etc.?
C	Help unpaid in a family business of any type?
C	Catch/Collect fish, shells or other sea or river products? Collect any water or firewood?
C	Make anything from your farm or natural products for sale or for your own use?.
C	Do any type of wage or salary job - Full time or Part time, Temporary, Casual,, Piecework or Permanent
Interviewer: - Prompt on each group with examples	
U2: How many weeks in the last twelve months were you doing any of these activities in total?	
Interviewer: Include paid leave or paid training as work. Also include short Absences when sick or temporarily absent from work.	
If U2 = 52 Weeks Skip to next Section	
U3: When not working were you available for work if given the opportunity?	
U4: How many weeks were you available for work in the last twelve months?	
Interviewer: - If U2 + U4 = 52, Skip to the next Section	
U5: What were you doing when not working?	
	Student .....1
	Housework.....2
	CODE
	Not Working and
	Disabled .....3
	Sick.....4
	Retired/Aged.....5
	Income recipient..6
	Other .....7

This sequence is complex but would give Labour Policy analysts and National Accountants quantitative measures of the number of weeks in each usual economic activity category as well as the allocation of the population to the overall ‘usual activity’ categories. The number of weeks ‘unemployed’ is a particularly useful measure in countries with a seasonal unemployment problem. The three categories ‘usually employed’, ‘usually unemployed’ and ‘usually not economically active’ as explained in 2.12A.2 can be derived later during tabulations, i.e. from the algorithms

Economically Active and employed- $U2 + U4$ equal to or greater than 26 and $U2 > U4$

Economically Active and Unemployed - U2 + U4 equal to or greater than 26 and U2 < U4

Not economically active - U2 + U4 less than 26 weeks

A series of prompts are used for the first question (U1). This is in line with the recommendations in Section 2.2 and covers forms of 'employment' which are usually difficult to identify. Such prompts would need to be varied to suit the situation in a particular country. An alternative would be to use a 'prompt' card, similar to the one suggested in Section 2.3 for 'current activity', but referring to the last twelve months.

The 'unemployment' question U3 uses the 'availability' concept, but this should be subject to testing and 'actively seeking work' can be substituted if required, as explained in 2.2B. A question of this type would need thorough pre-testing. One major problem will be space on the questionnaire, but this concern needs to be weighed against the value of the information obtained. This question has been worded "Did you" to encourage interviewing the respondents in person. However, it is recognized that interviewers often will have to change the question to "Did do any of the" when interviewing through another informant. It is better generally not to assume the use of informants and word all questions with "you". Interviewers should be able to manage the change necessary for the informant situation.

It should be noted that no attempt has been made to combine the basic categories of usual economic activity with other variables e.g. 'status in employment'. To do so would be difficult, as the status could change frequently with changing jobs and a decision on the 'main' status would be needed. If it is thought essential to have the 'status in employment' variable for the usual activity, it is suggested that it should be collected with a separate question.

2.12B.4 More complex questions

There are several possibilities of more complex questions:

- c Once you start asking about separate activities, as in U1 above, there will often be demands from National Accountants in particular that you record the number of weeks spent on each activity. Besides taking time and space this can be very difficult as often several activities are done in any one week or month and it would take considerable time and effort to discuss and work out a 'major' activity in terms of time spent each week on each activity. However, it may be possible to allow a simple 'Yes/No' answer in a separate column for each of the prompts in U1. This could supply a measure of the effect of each prompt and assist in achieving comparability if a briefer question had been asked in a census before.
- c There are other possible extensions that could be asked and recorded for these basic 'usual activity' questions: e.g. 'Which is the major work activity in terms of time spent?' 'For all agricultural activities, were they were mostly for cash or home consumption?' However, it is strongly recommended that these more detailed measurements, which would be very useful for many types of analysis at the national level, should be collected by household surveys or by detailed case studies. In such surveys more time is available

with better interviewers and detailed checks can also be made. It is also unlikely that the complete coverage of a census is necessary for most of such expanded measurements. The overall accuracy of the census could be jeopardised by trying to collect too much. Some additional detail could be asked for 'current activity' where the reference period is shorter and there is less of a problem of multiple activities (see section 2.3).

C

- c As noted earlier it is strongly recommended that initial questions on 'usual activity' be relatively restricted until experience is gained with the concepts.

2.12B.5 Problems with landscape questionnaire layout: Landscape layout is most suited for relatively simple questions and, as noted earlier, asking any simple question on 'usual activity' is very difficult. It may be possible to design a question about 'main usual activity' with interviewer training and manuals stressing all the problem categories and the rules to apply. Some notes on the questionnaire would definitely help. It may also be possible to ask about the 'number of weeks' 'employed' and 'unemployed' in the last twelve months. (The number of weeks 'not economically active' should be calculated as a residual.) It would help if such questions came after a block of 'current economic activity' questions, which probed on the categories and explained them. The use of a 'prompt' card similar to the one attached to Section 2.3 would help. The 'usual activity' prompt card should differ from the 'current activity' prompt card, for example when activities are very seasonal and certain activities dominate at census time and others during other months of the year. Some countries may wish to try such questions to obtain a rough measure of 'usual activity'.

The only example located of asking about 'usual activity' with the landscape layout was for the **ZAMBIA 1990 Census given below**

FOR PERSONS 12 YEARS AND OVER

ECONOMIC ACTIVITY		EMPLOYMENT STATUS	OCCUPATION	INDUSTRY
What was ...mainly doing in the last 7 days? 1 Working for pay or profit 2 On leave 3 Unpaid work on unpaid hold holding or business 4 Unemployed and work 5 Not seeking work but e for work 6 Full-time wife/home-maker 7 Full-time student 8 Not available for work r reasons.	What has ... mainly been doing since 1989? 1 Working for pay or profit 2 On leave 3 Unpaid work on hold holding or business 4 Unemployed and work 5 Not seeking work but e for work 6 Full-time house-memaker 7 Full-time student 8 Not available for work r reasons GO TO P. 24	Since 1989? Has been mainly 1 an employer? 2 an employee? 3 self- ed? 4 an unpaid worker?	What was..... main occupation since.....1989? <i>(Write name of occupation and enter codes)</i>	What kind of main product of service is (was) produced where works/worked? <i>(Write name of industry and enter code)</i>

(Enter code)	(Enter code)	(Enter code)		
P-19	P-20	P-21	P.....22	P.....23

As can be noted a question on ‘current activity’ was asked, followed by the same question with the long reference period ‘since ...1989’. Both Questions P-19 and P-20 asked “What was ... mainly doing ...?” in the two differing reference periods. The long reference period was then used for the ‘status in employment’, ‘occupation’ and ‘industry’ questions. For ‘current activity’ the ‘mainly doing’ approach is not recommended. It is assumed that manuals and training gave details of definitions for ‘work’, ‘leave’, ‘unemployed’, ‘available’, etc. Details of how successful this approach was, are not available. There would be problems of comparability, if this approach was adopted and the previous census used the more common ‘current activity’ questions. When considering this type of approach one would need to pre-test it well and be aware of likely problems, as explained earlier.

2.12C: PRE-TESTS

Pre-testing will be particularly important for this topic::

- The use of ‘calendar year’ or ‘twelve months’ as the reference period
- Use of ‘weeks’ or ‘months’ as a counting unit
- Use of a ‘prompt’ card
- Use of ‘actively seeking work’ or ‘available for work’ as ‘unemployment’ questions
- General coverage of difficult activities e.g. ‘unpaid work’, ‘part time work’ etc.

Pre-tests must be well designed to be effective. A quantitative method of testing could be to use one question for half a large sample and the alternative for the other half and then analyze the differing results. Two matching samples plus a good knowledge of anything likely to cause other differences would be necessary. Another approach would be to try the alternative questions on matching representative groups of the population and then subject all the respondents to a more in-depth re-interviews on their activities over the reference period and their problems with the first question(s). This would be also followed by quantitative analysis. Note again the need to make the objective of any test is clear and to ensure that the results are well documented for the future.

2.12D Data processing issues: The following are some points relating to data consistency and tabulations:

- c The ‘usual activity’ reference period and the ‘current activity’ reference period may not overlap. The period for ‘usual’ activity may cover up to the end of the previous month and the period for ‘current’

activity is often the previous seven days from the enumeration day. In this gap the person may have changed activity to e.g. become 'employed' or 'unemployed' or 'retired'. Thus it is not recommended to force any consistency between these data items during data processing.

- C Most of the 'not economically active' categories can change from the usual measure to the current measure and consistency here should not be forced. For example a person could be a 'student' all months of the usual measure but be engaged solely in housework in the seven days of the current measure.

c

If 'retired/aged' is given as a category for the 'not economically active' it is strongly recommended that a lower age limit is put on this category (e.g. 45 Years). Do not make the limit too high as some people are retiring or being retrenched from wage employment earlier in recent years. It would be particularly wise to remove persons in the younger age groups from this category as their inclusion may make the results look silly, e.g. having persons 'aged or retired' who are 20 years old.

c Cross-tabulations of 'usual' by 'current' activity are useful to check for large numbers of unusual cases before publication. It may be necessary to go to small area data to find explanations or possible errors of interpretation - e.g. a new large factory or a natural disaster may explain 'odd' looking differences between 'usual' and 'current' activities in particular areas. These are worth explaining in the presentation of the results. The need for special tables on students is explained in section 2.3A.6

2.13 EXAMPLES OF COMPLETE SETS OF ECONOMIC QUESTIONS (NOT YET INCLUDED)

It is difficult to find census questionnaires where the 'economic' questions cover all the topics included in the WR. Some of these topics have been added since the 1990 census round and thus few countries have had a chance to even consider including them. It has been decided to give a few reasonably comprehensive examples of the 'economic' block of questions, to show how they have been structured. It was decided not to include the blocks of questions from the United States, Britain, Canada, Australia or France, even though some of their questions have been used in the preceding sections. The questionnaires used for these wealthier countries are very comprehensive and lengthy, and in most cases will take far too much space for use for the census in the countries which represent the major audience for this Handbook.

2.13.1 Questionnaires using the portrait format

The portrait format is generally recommended and favoured by most countries asking comprehensive sets of questions. This format allows more space for longer questions with prompts and examples, and usually also allows better recording space. Five examples have been attached.

Hong Kong 1991: The Hong Kong questions are reasonably comprehensive, probe on 'unpaid work', ask both restricted and expanded questions for 'unemployment', and identify persons with secondary activities. A prompt card was used for other income (P26). This English version tends to use terminology from the formal definitions: e.g. 'work for pay or profit', 'self employed', etc. which is not recommended. Versions in other languages possibly used local terminology.

Bermuda 1991: The Bermuda questionnaire was designed for processing using optical mark readers (OMRs). The questions were comprehensive and covered 'usual activity' (one question), the identification of secondary activities as well as 'time worked', 'status/sector', 'industry' and 'occupation'. The 'income' questions were separate and used a flash card. The identification of

the main activity in Q38 is not in accord with recommendations and would probably understate 'part-time', 'casual' and 'unpaid' work in particular.

Japan 1995: The Japanese questions covered the major topics, and also included 'place of work'. The first question of the block, Q6, was rather complex and must have raised some problems with mixed activities during the week: e.g. for those with some part time work but mostly looking for work

South Africa 1996: The South African questions were comprehensive but lacked a reference period, although this may have been explained in manuals. They included a separate question on 'previous occupation' for the 'unemployed' (Q18.2), which is recommended if this aspect is to be covered. The questions tend to be long and this is particularly the case for the first question. Elsewhere it has also usually been found necessary to define 'full time' and 'part time'. This was not done here.

Vanuatu 1989 - The Vanuatu questions are in Bislama but can be easily understood by an English speaker. The questions cover both 'usual' and 'current activity', and have a category for 'subsistence farming', as well as identifying separately any 'agricultural/fishing' work for own use and for sale. Self-employment in business activities would have been better identified separately in Q37 as a prompt or this activity may have been missed and then excluded also from Q38 and later questions.

2.13.2 Questions using the landscape format

The landscape format has been particularly favoured by countries in Africa which have very few resources for censuses and often try to fit all question onto one side of a large questionnaire. In most cases the topics included and the space allowed for each topic are severely restricted. Four examples of the block of economic questions in this format are attached.

Mauritania 1988: The only topics covered are 'current activity status', 'occupation', 'status in employment' and 'industry'. The format is interesting in that pre-coded boxes are given for the answers to two topics which act as prompts. Coding boxes are allowed for 'occupation' and 'industry'. It is assumed that the meaning of many of the terms were covered in training and manuals, as there are few notes on the questionnaires.

Namibia 1991: The questions used in Namibia cover the same topics as for Mauritania but ask for considerably more details. Two questions are asked for both 'occupation' and 'industry' and a recording line is given for each. The name and address of the workplace is asked as well as the activities at the workplace which should have improved industry coding. Sector (as 'government/private') was combined with the 'status in employment' question which is recommended. Space for recording must have been a problem in some cases and no allowance was made for coding.

Botswana 1991 & Malawi 1991: The Botswana and Malawi questionnaires are similar in that they both only have three effective columns, and try to combine 'current activity' and 'status in

employment'. As explained in earlier sections this is generally not recommended. Both questionnaires use the useful status category of 'working on own farm' ('mlimi') which as explained earlier is very useful in countries with a large proportion of agricultural activities.

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