

67900

UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA

REPORT OF A MISSION TO ZIMBABWE

(19 to 26 June 1984)

By

A. C. Basu

ILO/ECA Household Survey Specialist

Statistics Division

July 1984
Addis Ababa

This report is the sole responsibility of the writer. It has been submitted to the Department of Technical Co-operation, United Nations, which may alter or supplement these findings.

TABLE OF CONTENTS

	Paragraphs	Pages
1. Introduction	1'1 - 1'4	1
2. Second round of Zimbabwe National Household Survey Capability Programme, 1984-85	2'1 - 2'3	1 - 2
3. Sample design	3'1 - 3'3	2 - 3
4. Data collection procedures for Income, Consumption and Expenditure Survey	4'1 - 4'12	3 - 7

Appendices

Appendix A - List of persons met

Appendix B - Proposed plan for allocation of sample and
field staff.

1. Introduction

1.1. The Central Statistical Office (CSO) of the Government of Zimbabwe initiated the Zimbabwe National Household Survey Capability Programme (ZNHSCP) in October 1983 with an agriculture and livestock survey and a demographic socio-economic survey in communal land areas (peasant areas). Under separate arrangements, the demographic socio-economic survey was extended to the country as a whole and additional data were collected on energy use, water supply and sanitation and nutrition status of children on the basis of a national sample.

1.2. The second round of ZNHSCP is scheduled to start from September/October, 1984 and will go on for one year. During the second round the agriculture and livestock survey will be repeated in communal land areas and a household income, consumption and expenditure survey (ICES) will be conducted on a nation - wide basis. The CSO had already done necessary preliminary work for the ICES but for the final planning of this survey they invited a mission from the Economic Commission of Africa. This is how the present mission originated. The mission took place at Harare from 19 to 26 June 1984.

1.3. The mission started with a preliminary discussions with the Deputy Director, CSO, and other senior officers on the plans for ICES already prepared by the CSO. These plans, particularly questionnaires and data collection procedures, were subsequently examined in detail by the mission in close consultation with the concerned officers of the Permanent Sample Survey Unit (PSSU) of the CSO. A meeting was held on 22 June 1984 with the PSSU and other user-units of the CSO like the Prices Unit and National Accounts Unit. In this meeting the mission explained its main suggestions on the plans for the ICES and outlined some of the technical issues which needed to be examined during pilot surveys, scheduled to be undertaken in July 1984. The mission attended another meeting on 25 June 1984 with the PSSU and other user-Departments of Government like the Commission of Enquiry into Taxation and Planning Department. Finally, the mission had a round-up meeting with the PSSU in which the procedures to be followed in testing some of the outstanding technical issues were agreed upon.

1.4. A list of persons who participated in the various discussions is given at Appendix A. The mission wishes to record its deep appreciation of help and co-operation received from all persons it met.

2. Second round of Zimbabwe National Household Survey Capability Programme, 1984-85

2.1. Preparations for both the surveys, viz, agricultural and livestock survey and income, consumption and expenditure survey are very much advanced. A time-table has been prepared for various phases of operations. The field work will last from September/October 1984 to September/October 1985. The surveys will be mainly financed by the Government of Zimbabwe who have allocated funds worth Zim \$ 700,000 for the purpose. Assistance mainly in terms of equipment is expected from Statistics Sweden. Ten micro-computers have been requested from Statistics Sweden to ease data

processing problems. According to plans, a micro-computer will be installed at each of the 8 provincial offices for data entry and some tabulation, if feasible. The arrangements will need to be tested on receipt of micro-computers.

2.2. A good field organisation has already been set up with a supervisor at each of the provinces, several team leaders under each supervisor and 4 to 5 enumerators under each team leader. Most of the staff are already in position and only some extra team leaders and enumerators will have to be selected. According to present plans, there will be in all 8 supervisors, 28 team leaders and 132 enumerators. It is also proposed to assign one person to each provincial office to attend to editing of returns and preparation of manual summaries of data. An enumerator will be assigned to work in one or two divisions or 2 to 4 segments of 100 households each. They will mostly use public transportation to move from one segment to another. Team leaders will have motor-bikes for supervising the work of enumerators. There is a shortage of vehicles for the provincial offices and this is a matter of some concern for the CSO.

2.3. Data processing arrangements are still not satisfactory as the CSO does not have its own computer. At present, the CSO does not have any programmer. However, if the micro-computers become available and function satisfactorily, the position will be relieved a great deal. For the present the CSO is going ahead with arrangements for manual summaries of important data in the field and in provincial offices so that at least some preliminary results and reports can be released in advance.

3. Sample design

3.1. A Master Sample consisting of 155 Divisions or sub-Divisions of about 4000 households each, representing all Provinces and Areas of the country, has already been selected. This will constitute first stage sample. At the second stage a sample of two segments of 100 households will be selected from each Division. At the third stage 20 households will be selected from each segment in communal land areas and 30 from each segment in other areas. The proposed plan for allocation of sample to Provinces and Areas is shown at Appendix B. The sample will be self-weighted at Provincial level.

3.2. In communal land areas, 20 households selected from each segment will be common for both agriculture and livestock survey and income, consumption expenditure survey. In fact, it is proposed to take the same 20 households as were covered during the first round (1983-84) of the agriculture and livestock survey. The reason for this seems to be that area measurement of fields for these 20 households have already been carried out in the first round and to that extent there will be less work for the agriculture and livestock survey in the current round making it easier for the enumerators to handle simultaneously the additional work of data collection for income, consumption and expenditure survey. In areas other than communal land areas there is no such problem of integration because there will be only one survey on income, consumption and expenditure. In these areas the enumerators will cover more households each.

3.3. In the communal land areas a scheme of sample rotation will be adopted under which a household will be covered 3 times in a year at fixed intervals. The same rotational arrangement will be applied to other rural areas also, viz, commercial farming areas, resettlement areas and small scale farming areas, except that enumerators will cover 15 households a month each instead of 10 in communal land areas. In urban and semi-urban areas, rotational arrangement will not be applied because of frequent migration of households and resistance to repeated coverage as noticed during the pilot surveys conducted in 1983. In these areas a group of households in the sample will be enumerated for a month only and replaced by another group of households under a scheme of sampling with replacement. The enumerators will cover 15 households each in a month in urban and semi-urban areas.

4. Data collection procedures for ICES

4.1. The CSO had conducted intensive pilot surveys during May-June 1983 on collection of data on household income, consumption and expenditure. Later a small-scale survey was also conducted in a township. The questionnaires and procedures were tested in these exercises and based on the experience gained and also on the basis of detailed discussions with the Prices Unit and National Accounts Unit, the present questionnaires for the ICES have been drawn up. The mission examined the questionnaires and found them to be comprehensive. Instructions have to be drawn up carefully to explain to field staff many finer points involved. About data collection procedures there are a few points which the mission felt should be further reviewed and tested during the forthcoming pilot surveys for any possible modifications. These are discussed below:

A. Burden on respondents

4.2. During previous pilot surveys it was found that a majority of households could maintain daily records as the following figures would show:

Percentage of households filling in record books
in English or Vernacular or none (Pilot Survey 1983)

Area	English	Vernacular	None	Total
Communal	38	46	16	100
Commercial	77	11	12	100
Urban	93	5	2	100
	62	27	11	100

Based on the above experience, the CSO intends to use maintenance of daily records by sampled households as the main plank for data collection. It is also proposed that maintenance of daily records by households will be checked and supervised by enumerators at least twice a week and in cases where the households are unable to maintain daily records, the enumerators will themselves collect the data by the interview method.

4.3. The point to be noted is that the burden on the households in keeping daily records will be such more in the ICES than in previous pilot surveys, particularly in communal land areas. In the pilot surveys households were asked to keep daily records on expenditure and consumption of food, drink and tobacco only but in the ICES the daily records are to be kept on all receipts and disbursements. In the pilot surveys, daily records were kept for two months only. In the ICES, households in communal land areas will be required to keep full daily records, i.e., on all receipts and disbursements, for three reference months when they will be covered by the rotational cycle and for the remaining 9 months also they will be required to keep daily records of receipts and operating costs of household enterprises. It is also to be noted that in the communal land areas the 20 households selected from each segment are proposed to be the same as those covered in the first round (1983-84) when they were exposed to a large number of surveys like the agriculture and livestock surveys, demographic socio-economic survey, energy use survey, water and sanitation survey and nutrition of children survey.

4.4. Even allowing that in communal land areas, households may have a few transactions to record every day, the burden on the households seems to be somewhat excessive and they may be already tired of participating in many surveys in the last round. Therefore, the question of respondent fatigue and its likely effects on the quality of data needs to be considered. There are several alternatives, viz, (a) to replace households in communal land areas by a fresh sample of 20 segment or at least a fresh sub-sample of 10, (b) to simplify the daily records system to, say, recording expenditure on food, drink and tobacco and similar items where a short recall period is important and (c) to collect data by interview method only with a short recall period of not more than a week for fast moving items and upto a month for others. It was agreed that these issues would be further considered and relative accuracy of data obtained by the record book method and interview method tested during the forthcoming pilot surveys.

B. Burden on enumerators

4.5. According to present arrangements, the enumerators will check the daily records maintained by households twice a week, collect additional details wherever necessary and if record books are not being maintained satisfactorily, collect all the information by the interview method. The enumerators have also to collect information on household particulars, sources of regular income and regular non-food expenditure. In addition, the enumerator has to prepare the data as follows for every household for the reference month:

- (a) Transfer data from daily record books to a weekly form on consumption expenditure on food, beverages and tobacco
- (b) Add up the weekly data and transfer them to a form on monthly record of consumption expenditure on food, beverages and tobacco
- (c) Transfer data from daily record book to a weekly form on operating costs and receipts for household enterprises

- (d) Add up the weekly data on operating costs and receipts for household enterprises and transfer the data to a monthly form
- (e) Add up the data in daily record book on all other transactions (income, non-income receipts, purchases, and non-expenditure disbursements) and transfer the data to a monthly form
- (f) Transfer the monthly data on income and expenditure by major groups and sub-groups to a summary form.

4.6. It appears that clerical work which an enumerator is required to do is somewhat too much and may undermine the quality of primary data because the enumerator may not be able to devote sufficient time to probing, interviewing and checking the quality of data they collect or obtain. Also, significant transcription errors cannot be discounted in transferring data from one record to another. The main reason why the enumerators have to prepare so many forms is stated to be that the CSO cannot at present depend upon computer processing of data and arrangements regarding micro-computers are yet uncertain and, therefore, main results of the survey may have to be brought out in time by manual tabulation. Under the circumstances, advance manual tabulation of data is a necessary and desirable objective but even with that the mission felt that there was scope for simplifying the clerical work assigned to enumerators. For example, weekly summaries of transactions could be prepared by enumerators on the record book itself or on a simple form with each item coded according to a Master Code List and one composite monthly form could be prepared with all transactions recorded against appropriate codes.

C. Measurement of consumption and consumption expenditure

4.7. For the purpose of ICES it is not necessary to measure accurately consumption and consumption expenditure for every individual household, which is operationally difficult. What is needed is per household consumption and consumption expenditure in the aggregate for a domain. For this purpose certain simplifying assumptions can be made. For example, purchases can be taken to equalise consumption in the aggregate. Of the two concepts of purchases, viz, goods and services delivered or paid for during the reference period, the CSO will like to use the former, recording separately financial transactions on credit purchases or hire purchases. Another component of consumption comes from goods received in kind in lieu of wages, or as drought relief and gifts. Quantities of such goods are generally small and again it can be assumed that they will balance out with consumption in the aggregate. Difficulty comes in regard to consumption from own produce, like maize in rural areas, when the produce goes into stock first in bulk and comes into consumption later according to needs. In this case actual consumption should preferably be determined by weighing from day to day.

4.8. It will not be possible for the CSO to provide weighing scales to sampled households. Only a few enumerators may be given scales in connection with the survey of agriculture. Therefore, the CSO has to consider what will be the best way for recording consumption of home grown produce. Several alternatives were considered in this regard. One suggestion

was to provide standard containers to the households asking them to record how many containers of the article, say, maize meal, are used for consumption. The weight of the article per container in standard unit, say, kilogram or grams, can be determined by weighing once for all. If it is difficult to provide standard containers to households, another suggestion was to select one container from among those possessed by households and use the same method for determining quantity consumed. It was agreed that the CSO would consider various possibilities and try them out in the pilot surveys to lay down a standard procedure for recording consumption of home grown produce.

4.9. A connected problem is to determine the weight in standard units of articles received or purchased in non-standard units like a bundle, heap, piece, etc. As far as possible, the quantities should be available in standard units or at least the equivalence between the non-standard unit and standard unit should be known for imputation of value, determination of price and other purposes of users. If scales were available for households, the quantities could actually be measured. In the absence of scales, an estimate of quantity in standard units may have to be obtained from households or from independent market enquiries. It was agreed that the CSO would look into this problem also during pilot surveys.

D. Imputation of value of transactions in kind

4.10. Receipts and disbursements in kind have to be assigned imputed values for taking them as part of income and expenditure. Two main problems which arise are at what level, viz, household, enumerator or central office, the valuation should be done and what prices should be used for valuation purposes, viz, producers' prices preferred for national accounts purposes or market prices preferred for consumer price index number purposes. The problems were discussed with the CSO and it appeared that for the sake of uniformity of procedures and quality of data it would be best to do the imputation at provincial offices. It would also be necessary for the CSO to arrange for independent collection of prices at the main markets of the areas being covered by the survey. It was agreed that the CSO would consider these matters further and take suitable steps.

E. Income distribution statistics

4.11. Estimation of income distribution is mentioned to be one of the objectives of ICES. The mission pointed out that two important requisites for income distribution statistics are (a) sufficient number of observations in higher income brackets and (b) an estimate of annual income for each individual household. As regard (a), it is necessary to stratify households by income levels and use a larger sampling fraction for households in higher income brackets. The sample design for ICES is already final. It provides for income stratification through proxy variables like ownership of land and livestock but does not use varying sampling fractions in order to keep the sample self-weighted. It has to be seen from the final survey results whether sufficient number of observations come in higher income brackets.

4.12. As regards (b), rotational sampling procedure proposed to be used in communal land and other rural areas will yield an estimate of annual income of individual households. However, in urban and semi-urban areas, households will be covered just for one month. The mission, therefore, suggested trying out some simple approaches to obtaining an annual estimate of household income in urban and semi-urban areas during the forthcoming pilot surveys. It was agreed to try out the following two approaches:

- (i) The CSO is already going to collect information from households on regular sources of income and other receipts, e.g., wages and salary, rent, remittances received, pension, sale of products, etc., and number of times during last 12 months such income, etc., were received. This could be related to the data on actual income and receipts of the household recorded for the reference month and an estimate of annual income arrived at.
- (ii) A range of annual income of households will be drawn up, e.g., less than \$500, \$500 to less than \$1,000, etc., and each household will be asked to tick the income-range in which it is supposed to fall considering its income over a year. Of course, it is a rough and ready method but households in urban and semi-urban areas may be better informed about their annual income.

The mission handed over to the CSO a copy of ECA Statistical Bulletin No. 16 in which some articles have appeared on income stratification and cost-reduction of household income-expenditure surveys.

Appendix A

List of persons met

Dr. G. Mandishona	Director, C.S.O.
Mr. D. Mzite	Deputy Director, CSO
Mr. R. Tendere	Deputy Director, CSO
Mr. C. Maxwebo	Assistant Director, Permanent Sample Survey Unit, CSO
Ms. D. Chalmers	Head of Prices Unit, CSO
Mr. C. N. Perirenyatwa	Statistician, CSO
Mr. C. Kwizai	Statistician, CSO
Mr. A. M. Harrid	Secretary for Commission of Enquiry into taxation
Mr. V. Nyathi	Under Secretary, Planning Department
Dr. Mynt Tin	UN Adviser on Sampling, CSO
Ms. U. Chowdhury	UN Adviser on National Accounts, CSO

PROPOSED PLAN FOR ALLOCATION OF SAMPLE AND FIELD STAFF OVER PROVINCES IN EACH AREA

Divs. = Divisions or Sub-Divisions
 Segs. = Segments
 Hhs. = Households
 Sups. = Supervisors
 T.L. = Team Leaders
 Enus. = Enumerators