



45 957



UNITED NATIONS  
ECONOMIC AND SOCIAL COUNCIL

Distr.  
LIMITED  
E/CN.14/CA5.10/19  
16 September 1977  
Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA  
Tenth session of the Conference  
of African Statisticians  
Addis Ababa, 17-22 October 1977

SOCIAL STATISTICS IN KENYA  
BY  
CENTRAL BUREAU OF STATISTICS: KENYA

CONTENTS

	<u>Paragraphs</u>
Introduction . . . . .	1
The National Integrated Sample Survey Programme . . . . .	2 - 10
The Social Statistics Project in Kenya . . . . .	11 - 25
Anticipated Future Developments . . . . .	26 - 30
APPENDIX - Available Documentation on Social Statistics	

SOCIAL STATISTICS IN KENYA  
BY  
CENTRAL BUREAU OF STATISTICS: KENYA

Introduction

1. The Central Bureau of Statistics (CBS) in Kenya, has in the past two years devoted considerable resources into the development of Social Statistics. The effort has been directed towards enhancing the CBS's capacity to extend its coverage of Social Statistics derived, both from administrative records, and through direct surveys. This paper details the work which the CBS has done in respect of the later activity. This development has taken place in context of the CBS's efforts towards establishing a permanent and viable household survey capability as a part of the CBS's National Integrated Sample Survey Programme. A broad over-view of the infrastructure which is being developed within the framework of this programme is given in a brief outline below.

The national integrated sample survey programme

2. The CBS has established an integrated programme of field surveys to collect information on socio-economic trends. The lack of pertinent and up-to-date information on these trends is, it is felt, a constraint in enhancing still further the impact of the Government's national development programme as set out in development plan. Indeed, such information is a very vital ingredient for the evolution and evaluation of such programmes. The CBS has established the National Integrated Sample Survey Programme (NISSP) to overcome this constraint.
3. The contents of the NISSP itself consist of a series of sample surveys covering a wide range of subject matter on demographic, social and economic trends. The emphasis of the NISSP is on the integrated approach being adopted to undertake the surveys. The focal point of the integrated approach is the multi-purpose National Sample. The 'units of enumeration' for all the sample surveys in this programme are chosen within this framework. Also, it is ensured that all concepts and definitions common to the various surveys are consistently applied in the surveys. Thus, although the content matter of the individual surveys differ considerably from each other, both in scope and structure, the structuring of the programme ensures that inter-connecting links are established between the various surveys and that each survey has an integral role to play within the context of the overall programme. This, it is hoped, is yielding information which is not only internally correct but also mutually consistent. Such information is an essential prerequisite to undertaking an inter-disciplinary appraisal of the socio-economic trends in the country.
4. Although a single multi-purpose sample is usually not more efficient (in terms of the sampling error) than specifically designed samples for individual surveys, given the existing resource constraint in the CBS, other efficiencies that result from the use of the multi-purpose sample, outweigh the handicap of small increases in sampling error. These other efficiencies accrue from the more optimal use of resources made possible by the simple multi-purpose national sample. It also makes possible a more effective use of the limited

supply of manpower with particular savings in the manpower required to undertake the supporting cartographic work. It is expected that these efficiencies will still further lower the costs and make it possible to institute more effective survey controls. The latter will, in time have an effect on the reduction of the magnitude of the non-sampling error.

5. This sample is being utilised for the first phase of the NISSP over the period 1976 to 1981 by which time much of the background information required to undertake a revision of the national sample will have been analysed. The primary source of this information will be the 1979 population census. Given such information and the experience gained in operating and manipulating the sample over the five year period of the first phase, the revision of the sample will be undertaken on a sound basis to cater even more adequately for the requirements of the work programme to be scheduled for the second phase of the NISSP.

6. The objectives of the NISSP are two fold. The first objective is a practical one of creating a comprehensive statistical infrastructure which will ensure the most effective allocation of resources for collecting and processing reliable, representative and relevant information on both rural and urban areas of the country. This entails the development of a systematic national sample, the improvement of enumeration procedures and the application or creation of a versatile multi-purpose computer data preparation, processing, and analysis system. The second objective concerns the nature and coverage of the information generated by the individual surveys. Hitherto the CBS has focused most of its attention on providing a comprehensive and detailed coverage of economic data pertaining to the formal sector. Other areas of enquiry, although by no means ignored have, for the most part, been limited in scope and undertaken on an ad hoc basis. The surveys constituting the NISSP, apart from being designed as an integrated package, are planned to provide a much more inter-linked coverage, than has been hitherto attempted, of the demographic and socio-economic trends in less formal sectors. The NISSP will endeavour to effect a constant monitoring of the demographic trends in the country. Social statistics collected through the programme will provide the much needed additional information required to assess the quality of life of the population and measure the impact which the government's developmental efforts are having in enhancing the same. And finally, the sample surveys in this programme will yield the economic statistics required to investigate the performance of small holder agricultural sector and identify and quantify the size and impact of the much publicized but little understood informal sector.

7. The NISSP is a long term development programme for the Bureau, but the first step taken towards its establishment was the evolution and establishment of the Integrated Rural Survey (IRS). This is only one of the several surveys that are planned to be conducted within the context and framework of the NISSP. Other surveys are the National Demographic Survey (NDS), the Labour Force Survey (LFS), the Fertility Survey, the Agricultural Marketing Surveys and the Crop Forecasting Surveys. However, the fact that the IRS was the first such survey to be undertaken, together with the fact that it, in itself, encompasses a very broad range of subject matter has meant that most of the objectives of the NISSP are already crystallised in a more compact form in the IRS itself.

8. Three principal factors have been taken into consideration in developing the sample design and these are:

(a) To provide a sample framework which will ensure that the constituent surveys in the NISSP yield reliable estimates on population change, labour force characteristics, data on the agricultural sector and other socio-economic information. Although information

is collected at the national level the sample is sufficiently representative to facilitate its dis-aggregation into urban-rural breakdowns and for selected items into provinces and cropping/ecological zones. The sample for the first phase of the NISSP is not of a sufficient size to provide reliable estimates at the further dis-aggregated level of a district.

(b) Based on past survey experience emphasis has been placed on reducing the non-sampling error. With the limited resources available this has been achieved at the cost of increasing the sampling error to some extent. However, this has been effected within the context of the overall objective of minimizing the total survey error by striking an appropriate balance between the expected sampling and non-sampling errors. Emphasis has been placed on two aspects of sample design to reduce the non-sampling error.

(i) Sample units have been well defined. It is important that the enumerator should, for instance have adequate details on the exact description and precise location of the responding unit of enumeration. This is being accomplished by means of detailed and accurate mapping of each sample area - utilising existing maps and aerial photographs from the Survey of Kenya as well as a system of physically numbering and identifying the structures.

(ii) More attention is being paid to improving the quality of supervision of the enumerators work. Given limited resources, one method of achieving this from a sample design point of view is by concentrating all survey activities within a limited number of sample areas called primary sampling units (PSU's). The rural component of the national sample has initially been restricted to 64 PSU's. The time which a supervisor has to spend in travelling to check enumerators' work in rural areas is thus restricted to travel within the boundaries of a PSU. More time, therefore, is available for supervision than was previously possible in the case of the more scattered sample design.

(c) The national sample has been designed to yield economies of operation in the resources allocated to sample development and to on-going field operations. The salient features of such economies are made apparent in that clusters in the national sample have been limited to an average size of about 175 households in the rural areas and 100 households in the urban areas. The selection of the sample for the three main surveys (NDS, LFS and IRS) is effected from within the cluster through the 'nesting' procedure. While all households in a cluster are enumerated for the NDS, a progressively smaller sub-sample of these are selected for coverage in the LFS and the IRS. The sub-sampling is done such that no household is covered in more than two surveys. The number of households in the three is: NDS: 29,000, LFS: 10,000 and IRS: 2,500.

9. The target population covered by the national sample excluded the population in the northern half of Kenya which according to the 1969 census had 5 per cent of the total population of the country. This target population has been dis-aggregated into urban and rural areas. The total sample size of 29,000 households consists of 21,000 households in rural areas and 8,000 households in urban areas selected on the basis of an average sample fraction of 1 per cent and 2 per cent respectively.

10. Given the survey content of the NISSP together with the Bureau's full-time field organization, the CBS is in a strong position to compile relevant social statistics which are 'competently assessed' and conform to 'minimal standards' of accuracy. It is within this framework that the development of social statistics is taking place in the CBS.

### The social statistics project in Kenya

11. The social statistics project in Kenya was started in 1975 and is one of the constituent projects in the UNICEF world wide social statistics programme. This programme was conceived jointly by UNICEF and collaborating governments to help the latter to foster capacity which will enable them to obtain data for monitoring and evaluating social development programmes being executed by these governments.
12. The primary objective of the project in Kenya was to provide information which would enable policy makers to undertake the necessary resource allocation to minimize what may be described as the 'poverty of life'. The main emphasis of the project activity in Kenya in the past two years has been towards development of the NISSP infra-structure and execution of direct surveys as constituent components of NISSP. Before the project was started, the CBS used to collect some statistics on provision of health and family planning and education facilities. Most of the data on other social measures needed to evaluate the impact of these and other services on the recipients were not available. The only exception was the data on infant mortality and expectation of life at birth, which was available for a part of the country in which a demographic survey had been conducted, and data on visits to family planning clinics, on which little reliance could be placed since only a small percentage of women in Kenya have adopted artificial methods of contraception.
13. In the first round of the IRS some information was collected on quality of housing and on accessibility to the various social amenities and water supply during the wet and dry seasons. This information was however limited to types of housing and distances to social amenities. Some of the results obtained have been published in Social Perspectives Vol.2, No. 1 1977 and in 'Integrated Rural Survey, 1974-1975 (Basic Report)'. During the second round of the IRS, more information was secured which would enable further analysis to be undertaken on the quality of housing and social amenities being provided by the government. Simultaneously the survey net-work is being extended in Urban areas to collect comparable information pertaining to the people living in townships and municipalities. Additionally specific surveys have been dispensed to collect information on specific subject matters. All these specific subject surveys have, however, been conducted within the context of the NISSP - as special surveys e.g. the Fertility Survey or as specific modules in on-going surveys e.g. the IRS. It is difficult to precisely categorise a survey as pertaining to 'social statistics' per-se. Some of the surveys undertaken which have a bearing on social statistics are detailed below:
- (a) Fertility survey
14. The fertility survey, which is currently in the field was launched in August 1977, with an intended sample size of 10,000 respondents - selected from the National Sample frame constituted for the NISSP. It is hoped that the data collected from the survey, will among other things provide an indication on the reliability of input data obtained from the family planning clinics. The survey is being conducted as a part of the World Fertility Survey Programme.
- (b) The literacy survey
15. During the last quarter of 1976, the Bureau carried out a national literacy survey in all the areas covered by the National Sample. This was the first time a national literacy survey was undertaken in Kenya. The survey was undertaken as a module of the second round of IRS and used a sample of over 2,300 households in rural Kenya covering a population of around 7,000. The target population for the survey was all persons over 15 years not attending school on a full time basis. The sample was a fair representation of nearly the whole of the non-urban population of Kenya.

16. Because of the complicated nature of this subject and there being no accepted definition of what literacy means in the context of a developing country like Kenya, the survey only undertook to investigate the following:

- (i) ability to read and write in the mother tongue
- (ii) ability to read and write in Swahili (for the Swahili speaking section of the population)
- (iii) ability to read and write in English
- (iv) whether or not the respondent had ever attended a literacy course sponsored by the Government or a voluntary organization.

17. The results from this survey are contained in Social Perspectives Vol. 2 No. 3, 1977.

(c) The Nutrition survey

18. This survey was conducted in February and March 1977 as a module in the second round of the IRS. It was a nation-wide survey of children in the rural areas aged 1-4 years and covered about 1400 children within the framework of the CBS's National Sample. Data was collected on growth indicators like height, weight, and mid-arm circumference. In addition to these, information was obtained on age and date of birth, sex, birth order, period of breast feeding, number of meals taken the day prior to enumeration and normally, and the frequency but not quantity of basic food groups consumed. These can be used in conjunction with 'norms' to assess physical development in terms of weight-for-age, height-for-age and weight-for-height co-relations. The results of the survey are in close agreement with other surveys previously conducted in the country. None of these other surveys, however, had so wide a national coverage. The results from this survey are outlined in Social Perspectives Vol. 2 No. 4, 1977.

(d) Survey of non-farm activities

19. The survey of non-farm activities in rural households was conducted as a module in the second round of the IRS. The objective was not to seek detailed analytical data but to provide a descriptive overview of the prevalence of non-farm activities in rural households, the relative importance of major types of activity and comparative data on regional structures of these activities based on provincial aggregations of sample information. The survey was designed as a first step in a long term detailed investigation of the little known rural non-farm sector in Kenya. A total of 2232 households were interviewed and although the household was the basic unit of this survey, it is not the only organizational unit for non-farm activities. Enterprise units are an alternative form of organization. The sample cannot therefore, be construed as covering all organizational types but it undoubtedly covered a large part of the rural non-farm sector of the country. The target population was all persons in the sample households over 15 years not in full time schooling. Responses were sought to the questions:

- (i) Have any activities other than crop production and livestock rearing been carried out in the household for more than a month in the past year?
- (ii) If "Yes", name the activity or activities.

20. The results of this survey were presented in Social Perspectives Vol. 2 No. 2, 1977.

(e) Food forecasting and nutritional surveillance in Kenya

21. Over the last year, Kenya has endeavoured to develop a fairly advanced system of food forecasting based on its recently established national sample. The first attempt to estimate the production of basic foods in the rural areas was undertaken last year during the month of June and was limited to the main food crop which is maize. The data was gathered by means of a simple questionnaire. Although subjective, adequate information was secured to assess harvest prospects with the help of the available meteorological data. This information was used in conjunction with the more objective but less extensive study which the Maize Marketing Board undertakes during each year to estimate crop yields.

22. As a result of this exercise, an inter-ministerial working party was set up in order to formalise and extend the system. Besides the flexible survey capability which Kenya has, it is now developing another approach to this problem by using the extension officers of the Ministry of Agriculture to provide yet another source of information on food crop expectations. This will cover not only maize but all basic food crops which are grown in the country.

23. A further survey was undertaken in December 1976 using a more objective questionnaire and covering not only maize but beans and potatoes. The estimate of harvest expectations turned out to be in very close agreement with that provided by an independent study undertaken by the Maize Board.

24. Of the data which is being collected the meteorological information is the least reliable and instead the local knowledge of IRS's field staff is being used to assess the impact of weather conditions in any particular season. Other informal information sources are also utilised e.g. any unusual increase in the sale of cattle and any reports of disease affecting crops.

25. The intention now is to set up a formalized information system via the inter-ministerial working party, utilising all the available data sources and producing at least twice a year, after the short and long rains, a report on estimated forecast food production for Kenya. This, together with the ability to undertake an emergency study very rapidly, will enable Kenya to plan both the distribution and the storage of food supplies on a more rational basis than has hitherto been possible.

Anticipated future developments

26. Although within the last two years the CBS has endeavoured to develop a system of social statistics, there is still a lot to be done. Future developments are geared towards expanding the scope of social statistics to cover as many areas of community life as possible and over the years to establish a monitoring system.

27. In July 1977 the Bureau launched a national survey on the handicapped. This was the first survey of its kind to be conducted in the country - the target population being all handicapped persons in the household. The survey seeks to quantify the number of people who have problems in seeing, hearing and speaking. For the physically handicapped, the survey will obtain information to help identify the location of the disability and also its origin. It is hoped that this survey will provide valuable information on the handicapped in Kenya.

28. In September 1977 the second phase of the Non-Farm Activities Survey was launched. This is a more detailed survey than the earlier one referred to above and will provide more detailed information on Non-Farm Activities in the country.
29. Both these surveys are being conducted as modules of the third round of IRS. Additionally a separate survey has also been conducted in collaboration with the Ministry of Housing and Social Services on Women's Activities in the country.
30. The CBS is also anticipating, in consultation with other Government departments, to start collecting detailed information on children under care, persons on probation, juveniledelinquency, crime, the urban poor, and housing in the urban areas.

## APPENDIX

Available Documentation on Social Statistics

- I. Social perspectives: General Issues (Blue Series)
1. Social Perspectives Vol. 1, No. 1 June 1976 - Utilization of Social Amenities
  2. Social Perspectives Vol. 1 No. 2 August 1976 - Information System for Vital and Health Statistics
  3. Social Perspectives Vol. 2, No. 1 March 1976 - Accessibility of Social Amenities
  4. Social Perspectives Vol. 2, No. 2, June 1977 - Non-Farm Activities in Rural Kenya Households
  5. Social Perspectives Vol. 2, No. 3, August 1977 - Profile on Literacy
  6. Social Perspectives Vol. 2, No. 4, October 1977 - Profile on Nutrition
- II. Social Perspectives. Technical Bulletins (Orange Series)
1. Social Perspectives Vol. 1, No. 1, June 1977 - Demographic Data Files
  2. Social Perspectives - Data files on Integrated Rural Survey 1 - ~~Forthcoming~~
  3. Social Perspectives - Data files on Literacy and Nutrition Modules - ~~Forthcoming~~
- III. Substantive Reports
1. Integrated Rural Survey, 1974-1975 (Basic Report)
  2. Monograph - Nutritional Status of Rural Population - ~~Forthcoming~~
  3. Monograph - Trends in Education - ~~Forthcoming~~