

# 1980 Uganda Census of Population and Housing (UCPH)-Some Problems of Organization and Execution\*

## Introduction

CENSUS is one of the major sources of basic data needed for planning for socio economic development. The Census of Population and Housing (CPH) is perhaps the most important census in any country. From a CPH we obtain comprehensive statistics<sup>1</sup> on:

- (i) size, nature and distribution (by age and sex, tribe, etc.) of individuals in a country;
- (ii) size, nature and distribution of the labour force;
- (iii) literacy and illiteracy rates of the population in different age groups and correlated variables;
- (iv) housing status of households with regard to tenure, type and availability of housing facilities; and
- (v) a complete frame of all places and persons, villages and households for the whole country. These frames are used in the organisation of inter-censal survey programmes. Indeed there has been a significant and concomitant increase in large-scale sample survey operations in Africa since

\*Originally prepared for the Regional Popstan Census Workshop held at the Central Agency for Public Mobilization and Statistics (CAPMAS), Cairo (Egypt), June 1981.

1. G. M. K. Kpedekpo. *Essentials of Demographic Analysis with Application to Population Data from African Countries (Monograph)*, Vol. 1, 1975.

the majority of African countries completed their participation in the 1970 round of CPH (UNECA, 1968).

For most countries, the said importance of the CPH is underlined by legal statutes which provide authority for taking population censuses at regular intervals of time, ordinarily every 10 years. The CPH is invariably a huge and expensive undertaking which, if it is not meticulously organized and executed, can be unwieldy and/or a waste of resources which are scarce in many developing countries. It is partly for this reason that CPHs in most developing countries are government sponsored with technical assistance provided by the United Nations through its specialized agencies and other international bodies in the form of expert and resource personnel, equipment, funds, etc.

In Uganda, the conduct of population censuses (in the modern sense) started in 1948 with subsequent censuses in 1958, 1969 and 1980. Before 1948, there were administrative counts, dating as far back as 1911. This paper is a review of the organization and execution of the 1980 Uganda Census of Population and Housing (UCPH) with a focus on some problems encountered in its organization and execution. Some indication is made as to the utility of the data collected in the UCPH. The 1980 UCPH as an example of a CPH was carried out under the most extenuating circumstances.

## **Organization and Execution of the UCPH**

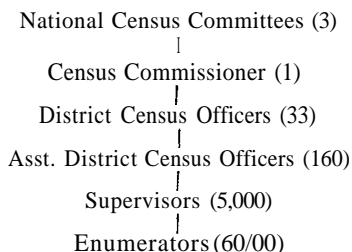
### *Organisation*

STRUCTURE. Three committees appointed by the Uganda Government were responsible for planning and implementing the 1980 UCPH. These were :

- (a) *Inter-Ministerial Committee.* It was composed of Cabinet Ministers, the Census Commissioner and the Chief Government Statistician. This committee was responsible for making broad policies and administrative decisions in respect of the census organisation and implementation.
- (b) *Technical Advisory Committee.* It was essentially composed of technical personnel from different ministries and Makerere University, the Census Commissioner and the Chief Government Statistician. This Committee was responsible for all technical aspects of the UCPH viz. questionnaire design, recruitment and training of enumerators and supervisors, etc.
- (c) *National Publicity and Communications Committee.* It was responsible for the UCPH publicity programme. To implement the decisions of the Inter-Ministerial Committee, the Census Commissioner (a technical demographer by training) was assisted at the National Census Office by a National Census Organiser (a technical man) and Census Officers (Statisticians and Demographers). Lower down, the District Census Offices were headed

by District Census Officers (DCOs) who were selected from top district administrators. In each district there were also District Training Officers (DTOs) who were essentially trained statisticians and demographers. The **DCOs** had their assistants (ADCs) who were selected from among senior district departmental staff and charged with the responsibility of running County Census Offices. In each county, the parish constituted a supervisory area (SA), headed by a supervisor and in turn, the SA was divided into enumeration areas (EAs) of about 500 population.<sup>2</sup> Each EA was canvassed by an enumerator.

The structure of the UCPH hierarchy can best be depicted by the following chart :



SCOPE OF UCPH. The UCPH was a "de facto" census. Only those persons "who would have spent the census night in Uganda with a specified household" or those persons who normally dwell in the household but "were temporarily absent on census day" and were "somewhere in Uganda where they could not have been enumerated, e.g. someone who was out for fishing" all day were to be enumerated.<sup>3</sup> A "household" was for UCPH loosely defined as "a group of persons who normally live and eat together". Separate arrangements were made for the enumeration of inmates or members of institutions, e.g. educational institutions, military and other security forces institutions, medical institutions etc. For purposes of the census, an inmate of "an institution who slept in that particular institution on census night was considered as a member of that Institution and enumerated as such".<sup>4</sup>

However, for security reasons, the enumeration was carried out not on the

2. For purposes of day-to-day administration of the country, the *district* is the first order division of the country. Each district is divided into several *counties* which are in turn divided into *parishes*. The parish is the lowest recognised administrative unit with a chief who draws a regular salary from government.

3. Republic of Uganda, *1980 Population Census Enumerator's Manual*.

4. *Ibid.*

census night but rather on the census day, 18 January 1981 from 6 a.m. to 6 p.m. On this day, movement of persons was restricted and all borders were closed. In order to ensure that enumeration was completed in urban areas on the census day, many enumerators and supervisors were deployed in these areas. In rural domains where transport facilities were inadequate and lacking, the enumeration was continued for a maximum of three days.

**FRAME CREATION.** The importance of building of a frame providing accurate, complete and up-to-date listing of units in a census or sample survey cannot be over-emphasised. For purposes of the UCPH, the frame was necessary for selecting a sample for the Pilot Census and the Built-in-Sample for the main census.

Frames of districts, counties and parishes had to be created. For urban areas, these were shown on census maps which were drawn by the Department of Lands and Surveys. This, however, was not possible with EAs whose boundaries were not sufficiently stable or well defined especially in rural areas. In fact, boundaries of EAs were verbally explained to enumerators by their supervisors.

**BUILT-IN-SAMPLE.** In order to expand the scope and supplement the results of the UCPH, a scheme for selection of sample (Built-in-Sample, BIS) was included in the census programme. This was essentially a 10 per cent single-stage stratified cluster sample, with districts forming natural strata and parishes as clusters. A frame of all parishes was constructed and then stratified by district. Then a sample of parishes was selected by systematic sampling to ensure a good geographical spread of the sampled parishes. Systematic sample selection with varying probabilities considered but was not used to select the BIS because there were a number of parishes (about 200) for which corresponding population size was not available. These were parishes arbitrarily created in the aftermath of the coup detat of 1971.

**PILOT CENSUS.** Originally the 1980 UCPH was planned to take place in August 1979. The choice of the month of August was judicious since it is normally a dry month (which makes travel and communication into villages easier) and the month coincides with school holidays (an important fact given that the bulk of enumerators deployed were students).

A pilot census was planned and executed in August 1978, the choice of the month of August being aimed at simulating as much as possible actual conditions. The purpose of the pilot census was to test the draft census schedule (and other census documents e.g. Enumerator's Manual) as also census methodology. Also it was expected that the pilot census would reveal problems which might not have been anticipated in planning the UCPH.

The pilot census was based on a random sample of parishes (one from each

district) and its results revealed, *inter alia*, defects in the wording of questions on general education and economic activity. The draft schedule was then revised and finalized for use in the main census.

### *Execution*

#### **RECRUITMENT AND TRAINING**

*Recruitment.* The DCOs were recruited through the Ministry of Local Administration and were selected from among top district administrative staff. The DCOs in turn recruited ADCOs. The DCOs together with ADCOs and DTOs recruited supervisors and enumerators.

It ought to be emphasized that in Africa, and indeed in many developing countries, enumerators are a keystone for ensuring high quality of census and survey data. Hence attention should be paid to their recruitment and training and their role, duties and responsibilities must be well defined. However, because of the large number of enumerators required to execute a census programme and the general low levels of education in Africa, it becomes difficult to recruit high calibre enumerators. It is necessary in that case that the enumerators be given adequate training and closely supervised (high supervisor-enumerator ratio). A supervisor-enumerator ratio of 5 : 10 is generally suggested.<sup>5</sup>

For the UCPH, enumerators were selected from among secondary school and University students. The supervisors were selected from among secondary school teachers and extension staff (e.g. agricultural assistants). The choice of supervisors was guided by the fact that teachers and extension staff have reasonable qualifications and are quite conscientious; they also have a regular job and hence draw a regular salary so that any expenditure incurred on them is purely in the form of allowances.

In all, thirty three DCOs, are hundred and sixty ADCOs, five thousand supervisors and sixty thousand enumerators were recruited and deployed in the UCPH. The supervisor-enumerator ratio was 5:12 which was too low.

*Training.* The DCOs were centrally trained for a week. The training course covered all aspects of the census programme. Initially, it had been envisaged that the DCOs would train ADCOs and supervisors, and the supervisors in turn would train enumerators. However, at the end of their training session, it was realized that the DCOs had not grasped most of the essentials of the census and its operations. This necessitated recruitment of statisticians and demographers from the University and government departments as DTOs to train the ADCOs and supervisors, and supervise the training of enumerators. The

5. T. K. de Graft-Johnson. The Statistical Problems of the African Census Program— an Overview. *Proceedings of the 40th Session of the ISI*, Vol. 2, Warsaw, 1975.

ADCOs and supervisors were thus jointly trained at district level by the DTOs. The training comprised classroom sessions and field demonstrations. The training sessions for the DCOs covered among other things, map reading, the understanding of questionnaire, use of enumerator's manual and the historical calendar.

Enumerators were trained at parish level by supervisors using instructions from headquarters. The training, which again comprised classroom sessions and field demonstrations, was supervised by the DTOs. It is to be mentioned that training at all levels was not based on verbatim training guides. It was based on general instructions from the headquarters. Accordingly, the training was not uniform at the national, district and parish level.

PUBLICITY. The census was carried out at a time of tense political atmosphere in the country. In addition, in some communities there is aversion to counting of people, especially children lest they may not survive as a result of being counted. The National Publicity and Communications Committee, therefore, had to carry out a massive publicity campaign aimed at allaying fears of the population and "highlighting the possible benefits of the census to the country's development planning". The committee sponsored radio commercials in major languages; census songs and plays in various languages of Uganda were relayed on radio; also included were talks and discussions both on national radio and television about the census; posters, car stickers, T-shirts, cartoons in newspapers and a pamphlet also served as publicity medium. 'The Census and You' produced by the committee and distributed up-country for district publicity programmes.<sup>6</sup>

The contents of the three posters used are :

- (1) (i) Help the government plan services  
(ii) Stay at home with your family and be counted (family picture included).
- (2) Don't be left out, it is for your own benefit.
- (3) (i) We need you to do your part in the 1980 Population Census,  
(ii) The results help to plan :

Jobs  
Roads  
Housing  
Schools  
Hospitals  
Transportation.

6. J. P. Ntozi and E. J. Kakooza. The Uganda Population Census 1980, *Paper presented at a sub-Regional Workshop on Organization and Conduct of Population Censuses*, Lusaka, Zambia, 1980.

Also the fact that the future political development of the country was pegged on to the census itself was enough to stir up interest among the masses. The publicity was intensified during the census week.

ENUMERATION. As we have already indicated, each enumerator was allocated an EA by a supervisor to canvass, who also explained to the enumerator the boundaries of the EA assigned to him/her. Before enumerators could begin work, they first went round their EAs to ascertain their boundaries and utilised the services of chiefs to locate all dwelling units in their respective EAs.

A schedule was used to enumerate households and as far as possible, information was collected from adult persons. The head of the household provided particulars on children and those who were temporarily absent at the time of the census. Revisits were made in those cases where persons were not-at-homes on the census day. The enumerators' manual provided clear instructions to the enumerator as to what constitutes a household and institution, who should be enumerated, who should give information, what to do if the people are not at home, how to complete the schedules, etc. As mentioned earlier, enumeration was for a day in urban areas partly to avoid errors arising out of high mobility of persons in urban centres and partly because of urban facilities (e.g. transport systems), "greater concentration of settlements together with the possibility of dividing towns into regular blocks and utilizing street names and house numbers" which made enumeration in the domain easier. In the rural areas, the enumeration was for a maximum period of three days since enumeration in this domain is more difficult and time consuming.

### **The Census Schedules**

Two types of schedules were used, viz. Schedule A and Schedule B.

*Schedule A.* This was a "relatively simple schedule which included only questions on the person's names, relationship to head of household, sex, age, marital status, birth place, nationality, education and literacy".<sup>7</sup> This schedule was administered mainly in rural areas.

*Schedule B.* This schedule was longer and more difficult. It included "all questions on schedule A and several additional ones on whether or not the person's father and mother are still alive, certain particulars of adult women concerning the children they have, borne alive and many other socio-economic characteristics"<sup>8</sup> including housing conditions, economic activity, employment, source of power (fuel), source of water, domestic appliances, means of transport, health facilities, etc. This schedule was used on 100% basis in the urban domain and on a 10% BIS in the rural domain.

7. *Enumerator's manual, op. cit.*

8. *ib:d.*

## Some Problems of Organisation and Execution

We have already mentioned about the immense strain a CPH impose on a country's resources. As such, its organisation and execution especially in a developing country is bound to face numerous and diverse problems. Some of the problems we face in respect of the 1980 UCPH will, no doubt, have been experienced elsewhere in Africa.

*Timing.* As we have already indicated, the UCPH was originally planned to take place in August 1979 and accordingly, a Pilot Census was conducted in August 1978. However, in April 1979, following a shooting war, Kampala was liberated from the regime of Idi Amin. Along with the war, there was massive destruction of basic infrastructure—telephone receivers, office equipment, furniture, etc. were looted or destroyed; printing industries (and other industries) were looted and printing materials destroyed, the census vehicles (given by the U.N.) were looted, etc. The looting spree covered Kampala (the capital) and other urban centres of the country.

The liberation of the country was not followed by stability. On the contrary, it was accompanied by insecurity, banditry and thuggery. It was against this background that the incoming administration decided against professional advice (both local and international) to hold the census on 18 January 1981. The complete return of the country democracy through general election was pegged by the politicians on a successful execution of the UCPH.

So, given that the country had not stabilized, the timing for the UCPH was unfortunate. It was the more unfortunate given that it did not even allow the census organizers adequate time to plan, organize and execute the census. The implications for such hurried work will be highlighted in the next sections.

*Census Schedules.* In its hurry to get the census going, badly designed schedules were used. Skip instructions which should have been given on the questionnaire were not given, there was too little space given for writing names of respondents and leading questions which should have been asked were not asked. For instance a question on "How many children have been born alive?" should have been asked before asking the questions in columns 117-119. Also the sections on housing conditions and socio-economic activities (columns 201-306) could easily have been pre-coded. After all, the possible responses are given on the schedule. This lack of pre-coding of the schedule will, no doubt, delay the processing of the census data and introduce errors during manual coding and editing operations.

*United Nations (UN) Participation.* The United Nations (UN) participation in the UCPH was very much curtailed by the state of affairs in Uganda. Two

UN resource personnel (a census methodologist and a cartographer) who had been attached to the UCPH and the UN personnel at the Institute of Statistics and Applied Economics, Makerere University (a computer expert and a demographer) who too had been very closely associated with the preparations for the UCPH left the country in March 1979 when the war of liberation was intensified.

While the cartographer was able to return to the country a few months before the census took place (much too late to be of much use), the other resource personnel did not return. It was also the views of the UN Office in New York and the United Nations Economic Commission for Africa (UNECA) that it was inappropriate for Uganda to carry out the census at the time it did. Accordingly, UN assistance (including commitments made before the war of liberation) was not forthcoming. The Uganda government, therefore, had to foot the whole census bill at a time when the country's foreign exchange position was *really bad*.

*Cartographic Preparation.* As we have already indicated, the cartographical needs for the UCPH were met by the national Department of Lands and Surveys. The updating of the 1969 1:50,000 map series which covered the whole country went as far down as the parish. EAs were not mapped out. Hence their boundaries were not sufficiently stable or well defined and therefore these units could not be used for tabulation and publication (permanent record).

*Census Materials.* As indicated earlier, it became difficult to acquire or print census materials locally. Some of these had to be acquired or printed from abroad. This caused delays. For instance, the schedules couldn't be got in time for training of enumerators and supervisors.

*Recruitment and Training.* Because of the large number of enumerators required, it was not possible to recruit as enumerators persons who are sufficiently responsible. As we have already indicated, enumerators were recruited mainly from among Secondary School and University students. From the Census experience, the University students were disappointing both during training sessions and as enumerators. Their training was made difficult by their pomp and attitude—"I know it all" or "can read for myself". Once deployed, these students wouldn't withstand the hardships involved in the exercise. Accordingly, only one third of the original number of students recruited from the University were deployed. Unlike other countries in Africa, in the case of Uganda, the enumerators did have a good general educational background, but they were not sufficiently responsible and motivated. However, within the time available and given the above background, their training couldn't have been sufficient. Moreover, because of inadequate transport facilities they couldn't have been very closely supervised. The enumerator-supervisor ratio of 12 : 1 was a *little high* to begin

with. All this could have had adverse effect on the reliability of the UCPH data.

*Transport and Communications.* As we have already indicated, time was a great constraint. Bicycles (for enumerators), motor cycles (for supervisors) etc. which had been ordered from abroad to facilitate easy transport and communications arrived in the country when the census was over. Hence, enumerators and supervisors had to face transport problems.

Also, communication between the headquarters and the District Census Offices either by post or telephone was slow and difficult. The headquarters was, therefore, not in a position to know what was going on in each district at any given point of time. On the other hand, it was difficult to transmit materials from the headquarters to districts and from districts to the field and vice versa.

*Funds.* As we have already mentioned, the government was hardpressed to raise foreign currency to buy stationery and equipment needed to carry out the census. It ought to be mentioned that the census organisers had problems of getting local money from the treasury. Because of this, remuneration to the enumerators and other census personnel was very poor. Further, many enumerators and supervisors were not paid until the census fieldwork was over. Some enumerators even withheld the completed census schedules until payment was effected.

With this undue delay in effecting payment to census staff, the National Census Office and the government in general created a bad name for itself. This could adversely affect future recruitment of many persons to carry out census or large-scale survey work.

*Weak Central Statistical Office.* The UCPH was carried out at a time when the Central Statistical Office (CSO) was depleted with both resource personnel and administrators. It had no survey statisticians, no cartographers, no systems analysts, no data processing experts, no substantive head and only one or two demographers. It had no vehicles, no computer and no permanent field organization.

The position of the National Census Office vis-a-vis the CSO was not well defined and this created some administrative confusion both at planning stage and at the stage of implementation of the UCPH.

*Data Analysis.* It does not appear that adequate planning was made for data analysis. Because many questions on the schedule were not pre-coded, lot of manual coding will have to be undertaken. This will greatly delay the processing and analysis of the data.

Currently, there is a paucity of computer facilities in Uganda; in fact the only government rented computer (an IBM) has been in a state of disrepair for a

couple of years now. Attempts should have been made to acquire facilities of a computer at the CSO or Census Office, not only to facilitate the analysis of the census data but also to process data from subsequent surveys.

*Operational Control.* One thing which the census committees did not develop to facilitate efficient management of the census operations was the operational control and reporting system. This created problems of control of flow of materials, production controls, progress reports, cost reports and management reports.

*Post-Enumeration Survey (PES).* It is a well known fact that however elaborate methods and procedures for data collection in a census may be, problems of implementation of a census programme invariably give rise to errors both of content and coverage. These errors should be evaluated for two reasons. One such evaluation guides users in interpreting the results of the census; and the second concerning identification of sources and causes of the said errors facilitates improvement in planning and execution of future censuses and surveys.<sup>8</sup> Indeed, the view of the UN is that "good census practice requires careful consideration and evaluation of the completeness and accuracy of the census results".<sup>9</sup>

One of the practical ways for evaluation of census results is to carry out a Post-Enumeration Survey (PES), essentially as a re-enumeration, taken soon after the census, by taking a sample of EAs to obtain estimates and compare these estimates with census results for errors of coverage; or match census and PES results for errors of content. Needless to say, a PES should never be undertaken as an afterthought; rather it should be planned and budgeted for as an integral part of a census programme. In spite of the problems of organization and implementation of the UCPH, it does not appear that a PES was provided at the stage of planning of the UCPH. On the contrary, it appears to have come up as an afterthought for which the Census Office could not get supplementary funds to execute.

*African National Household Survey Capability Programme (ANHSCP).* We have indicated that a CPH provides, inter alia, information (e.g. frames of EAs, households, etc.) which invariably is used to organise future large-scale survey programmes. One such programme which African statisticians have started, is the *African National Household Survey Capability Programme (ANHSCP)*. The

8. Gomzalez *et al.* Standards for Discussion and Presentation of Errors in Survey and Census Data, *JASA*, Vol. 10, No. 351, Part II, 1975. C. P. Mahalanobis and D. B. Lahiri (1961). Analysis of Errors in Census and Surveys with special reference to experiences in India, *Sankhya*, Series A, Vol. 23, Part, 4, 1961.

9. United Nations Economic Commission for Africa (UNECA). *Technical Report on the Post-enumeration for coverage Evaluation of African Population censuses*. Addis Ababa, Ethiopia, 1975.

ANHSCP aims to facilitate efficient collection of integrated and inter-disciplinary up-to-date and reliable data on a continuing basis and on a "wide spectrum of subjects required for formulating, implementing and monitoring plans and for other policy and administrative purposes"[6]. The programme provides a vehicle for step-by-step experimentation and for testing of concepts, definitions, questionnaires, etc. within the context of country needs and circumstances. This, coupled with experience gained in running a permanent field organization and data processing activity should lead to production of timely and accurate timeliness national statistics.

Uganda has not yet taken steps to implement this programme and one would have hoped that the UCPH would be used as an opportune base to start the said programme. Indeed, one would have hoped that the sample selected for the BIS would be used at a later date to develop a National Sample as the first step towards developing and implementing the programme. Also, one would have hoped that some field staff and census materials (e.g. bicycles, motorcycles, motor cars etc.) would be retained for use in future rounds of the ANHSCP. This was not done.

It therefore appears to us that the planning of the UCPH did not cater in any way for any future effort to develop data collection capabilities and in particular the ANHSCP in Uganda.

### Results of the UCPH

Given the host of problems discussed above, one is justified in wondering how the UCPH could have been implemented. It is likely that no census in modern times has been beset with such a host of problems.

But Uganda is a country of possibilities. In spite of the seemingly charged political atmosphere, people were most co-operative. They observed the census curfew and answered questions well. The need for census maps was greatly reduced where enumerators and supervisors worked closely with local chiefs who ordinarily will know their areas and inhabitants very well. This is an important fact against the background of cost involved in preparing maps and training the census field staff in this regard. The DTOs (professionals) who supervised the census operations did well inspite of deplorable communication problems between the headquarters and the field; they also minimised the amount and need for headquarters staff to travel to districts. Enumerators and supervisors somehow found some means of transport; some borrowed bicycles and motor-cycles hoping to claim allowances later—the money has never been paid.

The political government at the time was happy with the provisional census results. However, the census results which the government wanted badly (total count) could have been obtained easily, cheaply and quickly by administrative count involving local chiefs. Over one year after the completion of the census

field work, coding is still in progress. There is every indication that coding, analysis, and report writing and publication will take many years to complete, and clearly the census data will be out of date by the time the final report is out. This will offset the utility of the UCPH. Further, the reliability of the census results may never be known as no evaluation of the census appears to have been planned.

## **Conclusion**

In conclusion, we can say that while the decision to hold a census of population and housing (CPH) in Uganda was a wise one, its timing was unfortunate given the multitude of problems Uganda faced after the 1979 shooting war of Liberation. The decision to hold the census in 1980 was made out of political considerations and in total disregard for professional advice.

This decision created many problems for census organization and implementation. These problems included, among others : inadequate cartographic preparation, recruitment and training; inadequacy of means of transport and communication; shortage of funds and failure to make adequate provision for analysis and evaluation of census data and failure to make provision for development of the National Household Survey Capability Programme (NHSCP).

However, the field staff did a commendable job and provisional results were available in time to satisfy the desires of the politicians. While the politicians could easily have been satisfied with an administrative count, a census was taken whose reliability will be difficult to determine and whose final results may take many years to be out in a final report. The utility of the census will greatly be compromised by such a delay in data analysis and reporting.

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