

Sudan Experience in Conducting Population Censuses

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Abstract

This paper aims to shed lights on Sudan experience in undertaking population censuses, reflects the progress in applying new approaches in undertaking population censuses in Sudan, and identify challenges, by reviewing and analyzing available data and literature on Sudan population censuses.

Sudan has undertaken five population censuses since its independence up to 2008. The first one was in 1956/57, a sample one. The main lesson learnt from that census was the importance of applying full-count censuses in the future.

The second population census took place in 1973; a full-count census. It recommended the periodicity of upcoming censuses.

The third census was undertaken in 1983. There was an observable progress in all aspects of census process; pilot survey, and post census evaluation surveys were conducted.

The fourth population census was conducted in 1993; its recommendations were: to consider the village to be the final dissemination unit and to establish the Civil Register.

The last census was in 2008; challenges faced besides its politicization, were: the vast area of Sudan including the South, and insecurity in some regions (Eastern and Darfur). The 2008 census was a unique lesson learned for post conflict censuses.

Keywords: Census, sample, full-count, periodicity, population.

1. Introduction

Official statistics including censuses play a critical role in evidence-based policy-making, planning and management. Population censuses represent essential sources of universe data for government and different stakeholders at different levels and for various developmental and planning purposes. Hence their quality and value are crucial for reliability of derived estimates and indicators. Population census collecting demographic, social and economic data pertaining to a specified time and areas, the size, growth, composition and distribution of population are the essential parameters for the determination of employment, production and consumption goals and for making sectoral plans for different segments of population such as women, children, youth, working age population and the elderly. Census practices in Sudan have undergone huge progress; different stages and different activities have witnessed the introduction of advanced technological techniques and methods [4].

2.Objectives:

This paper aims to shed lights on Sudan experience in undertaking population censuses, identifying challenges facing the successive population censuses, and it also reflects the progress have been made over time in applying new approaches in accordance with international principles and standards in undertaking population censuses in Sudan.

3Methods:

Reviewing and analyzing the available data and literature on population censuses undertaken in Sudan.

4.Results

Sudan has undertaken five population censuses since its independence up to 2008. The first one was undertaken in 1956/57; immediately after independence, and it adopted the de jure counting method, and was carried out in phases in different parts of the country from 1 July 1955 to 2 September 1956. Inadequate transportation facilities and limited number of enumerators resulted in extending the enumeration period to 14 months. The tabulation was carried out partly manually and partly by unit record equipment. The rural population was enumerated on sample basis, only one-tenth of rural population being included in the sample. Its questionnaire consisted of 28 questions and questions were open-ended ones. The main lesson learned from that census was the importance of applying full-count censuses in the future [4].

The second population census took place in 1973; from 3 to 30 April. It was a full-count census; adopted the de facto method of enumeration and following the development made in census undertaking globally. This census witnesses noticeable improvement in census techniques, introducing new statistical concepts in data collection for full coverage. Short and long questionnaires were applied for the first time. The long questionnaire contained very rich

information; information on sex, age and relationship to the head of the household was collected for the entire population and information covering marital status, nationality, place of birth, education, economic characteristic, orphanhood, children ever born and their survival and housing condition etc. were collected for all urban and ten percent rural population [2]. The processing of census data was carried out by IBM 360/30 computer. The main recommendation raised was the periodicity of upcoming censuses. The third census was undertaken during February 1983 with 14 February 1983 as the reference date. There was observable progress in all aspects of census process; it adhered to the United Nations recommendations for population census undertaking. Pilot survey, and post census evaluation surveys were conducted. Modernized statistical concepts including retrospective inquiries for population estimation was adopted. The 1983 census continued the tradition of the dual questionnaires adopted in the 1973 census. The long questionnaire was canvassed in all urban areas and a five percent sample of the settled rural population. The short questionnaire was used in the remaining 95% of the rural population and for the nomadic, institutional and homeless population. The long questionnaire consisted of 46 questions; included additional questions on fertility, mortality and migration. The data processing was done in a new ICL computer with 37 work station. However due to various problems such as breakdowns in power supply the data entry could be completed in May 1987, four years after the census enumeration and it took another 3 years to complete census tabulations[4].

The fourth population census was carried out during 14 April-30 April 1993 with 14 April 1993 as reference date. The enumeration was done on de facto basis. An intensive advocacy and publicity campaign was implemented [1]. As in the past the two questionnaires-long and short ones were utilized. The long questionnaire was canvassed for all the town councils and 5% of the village councils, while the short one was used for the rest of the country. The long questionnaire minimized to only 28 and information on disability was asked for the first time and a question on ownership of land was also included to provide a frame for carrying out agricultural census. For the first time in 1993 census the enumeration was completed within the 15 days assigned for the purpose. The final tabulations consisting of 115 tables for The Northern states and 82 tables for the Southern states were released in June 1995, just 2 years after the census. The 1993 census utilized microcomputers for the first time and UNFPA assisted in modernizing the computer center of the Central Bureau of Statistics (CBS) by installing a local area network (LAN comprising of 42 computers, 21 UPS, 2 micro server, 2 LaserJet printers and for the first time in Sudan the Integrated Microcomputer Processing System (IMPS) software was utilized for the processing of census data [1] The main recommendations were: to consider the village to be the final dissemination unit and to establish the civil register.

The periodic fifth census of 2003 was postponed to 2008 for political reasons. It was undertaken in a highly politicized environment, received high momentum by the International community (the UN and donors). A technical backstopping was provided by UNFPA, by establishing two census support units at the two statistical offices in the north and south, included high level international and national technical expertise. GIS technology was applied to exactly determine the boundaries and fix the enumeration areas (EAS). The census budget reached USD 107 million, huge procurement from abroad was made. The long and short questionnaires followed closely the UN principles and recommendations for censuses. Scanning via optical mark recognition (OMR) technology for data entry was applied. The challenges facing 2008 census were: politicization of census, the vast area of Sudan including the South, the rainy seasons that started early in some parts of the country, the lack of proper infrastructure, and experienced human resources in the South, and insecurity in some regions (part of Eastern, South Kordofan, and Darfur) [3].

Table (1) presents brief summary of Sudan experiences in conducting population censuses. It demonstrates that population censuses in Sudan presents a rich source of universe official statistics. Table (2) displays selected demographic and socio-economic indicators of Sudan.

5. Conclusion

Sudan has good experience in population censuses undertaking. However, as a vast country with its own peculiarity of a diverse ethnicity, poor infrastructure and insecurity in some of its parts made the implementation of population census a challenging task. Technically wise, Sudan adopted the international principles and standards for censuses undertaking as updated overtime.

The successful experience of the latest census is a unique lesson learned for politicized post conflict censuses. The cessation of the South from Sudan may reduce the workload for the upcoming censuses.

6. Reference

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7. Tables

Table (1) Comparability between population censuses conducted in Sudan, 1955/56-2008

	1955/56	1973	1983	1993	2008
Method of Enumeration	De jure	De facto	De facto	De facto	De facto
Enumeration Period	14 months	28 days	-	14 days	14 days
Type of coverage	Sample-basis	Full-coverage	Full-coverage	Full-coverage	Full-coverage
No. of questionnaire	One	Short & long questionnaires			
No. of questions	28 open-ended	Less than 28	46 pre-coded	29 pre-coded	54
Data Processing	Partly manuals & partly by unit record	IBM 360/30	ICL computers	Microcomputers	Scanning via optical
Dissemination	-	-	7 years later	1996	2011

Table (2) Selected demographic & socio-economic indicators, 5th population census2008

Demographic & Socio-economic indicators	Estimates
Population size	30,894,000
Average family size	5.7
Sex Ratio	104
Dependency Ratio	84.1
Life Expectancy at birth(both sexes)	59.8
Unemployment rate(10yreas+)	15.9
Infant Mortality Rate	79
Under 5 mortality rate	111
Maternal mortality rate	417
Total fertility rate	3.5