

CHAPTER 1

INTRODUCTION

1.1 Geography, History, and the Economy

Geography

The United Republic of Tanzania is the largest country in East Africa, covering 940,000 square kilometres, 60,000 of which is inland water. Tanzania lies south of the Equator and borders eight countries: Kenya and Uganda to the north; Rwanda, Burundi, Zaire, and Zambia to the west; and Malawi and Mozambique to the south.

Tanzania has an abundance of inland water with several lakes and rivers. Lake Tanganyika runs along the western border and is Africa's deepest and longest freshwater lake, and the world's second deepest lake. Lake Victoria is the world's second largest lake and drains into the Nile River. The Rufiji river is Tanzania's largest river and drains into the Indian Ocean south of Dar es Salaam. Although there are many rivers, only the Rufiji and Kagera are navigable by vessels larger than canoes.

One of Tanzania's most distinctive geological features is the Great Rift Valley which was caused by faulting throughout eastern Africa and is associated with volcanic activity in the north-eastern regions of the country. Two branches of the Rift Valley run through Tanzania. The western branch holds Lakes Tanganyika, Rukwa, and Nyasa, while the eastern branch ends in northern Tanzania and includes Lakes Natron, Manyara, and Eyasi.

Except for a narrow belt of 900 square kilometres along the coast, most of Tanzania lies above 200 metres, and much of the country is higher than 1,000 metres above sea level. In the north, Mount Kilimanjaro rises to more than 5,000 metres with the highest peak, Kibo, reaching 5,895 metres above sea level. This is the highest point in Africa. In all, this shows that Tanzania has a diversity of landscape.

The main climatic feature for most of the country is the long dry spell from May to October, followed by a period of rainfall from November to April. The main rainy season along the coast and the areas around Mount Kilimanjaro is from March to May, with short rains between October and December. In the western part of the country, around Lake Victoria, rainfall is well distributed throughout the year, with the peak period between March and May.

Administratively, the mainland of Tanzania is divided into 20 regions and Zanzibar into 5 regions. Each region is subdivided into districts. To estimate geographic differentials for certain demographic characteristics, this report collapsed the administrative regions of mainland Tanzania into six ecological/geographical zones. This strategy allowed the necessary geographical comparisons to be made because it provided relatively large numbers of cases in each zone and thereby reduced sampling error. However, it should be noted that these "zones" do not conform to the administrative zones of the United Republic of Tanzania. The classification of regions into the zones is shown below:

Coastal Zone :	Tanga, Morogoro, Coast, Dar es Salaam, and Zanzibar.
Northern Highland Zone:	Arusha and Kilimanjaro.
Lake Zone:	Tabora, Kigoma, Shinyanga, Kagera, Mwanza, and Mara.
Central Zone:	Dodoma and Singida.
Southern Highland Zone:	Iringa, Mbeya, and Rukwa.
Southern Zone:	Lindi, Mtwara, and Ruvuma.

History

Tanzania the former Tanganyika, became independent of British colonial rule in December 1961. One year later, on December 9, 1962, it became a republic, severing all links with the British crown except for its membership in the Commonwealth. Zanzibar became independent on January 12, 1964, after the overthrow of the rule of the Sultanate. On April 26, 1964, Tanganyika and Zanzibar united to form the United Republic of Tanzania.

Economy

Tanzania has a mixed economy in which agriculture plays a key role. Agriculture which comprises crop, animal husbandry, forestry, fishery and hunting subsectors, contributes the largest share of any sector to the Gross Domestic Product (GDP).

The GDP increased by 3.9 percent in 1995 according to 1985 prices, compared with 3 percent recorded in 1994. However, this growth did not reach the targeted growth of 5 percent that was predicted in the 1995-98 Economic Recovery Programmes. The economic growth rate attained in 1995 is higher than the predicted population growth rate of 3 percent.

1.2 Demographic Statistics

The 1967 population Census of Tanzania reported a total population of 12.3 million. According to the 1988 census, the population had increased to 23.1 million as shown in Table 1.1. Tanzania is still sparsely populated, though the population density is high in some parts of the country and has been increasing over time. In 1967, the average population density was 14 persons per square kilometre; by 1988 it had increased to 26 persons per square kilometre. Although the population is still predominantly rural, the proportion of urban residents has been increasing steadily, increasing from 6 percent in 1967 to 18 percent in 1988. While crude death rates in Tanzania may be decreasing, the total fertility rate—among the highest in Africa—is beginning to decline.

Although many small-scale surveys have been conducted in the country, censuses and the 1991-92 Tanzania Demographic and Health Survey (TDHS) have been the main sources of national-level demographic statistics in Tanzania. Civil registration has never been used as a source of demographic statistics because its coverage is incomplete. Table 1.1 gives the demographic indices as compiled from the censuses since 1967.

Index	Census year		
	1967	1978	1988
Population (millions)	12.3	17.5	23.1
Intercensal growth rate	2.6	3.2	2.8
Sex ratio	95.2	96.2	94.2
Crude birth rate	47	49	46
Total fertility rate	6.6	6.9	6.5
Crude death rate	24	19	15
Infant mortality rate	155	137	115
Percent urban	6.4	13.8	18.3
Density (pop/km ²)	14	20	26

Source: Bureau of Statistics, 1967; 1978; 1988.

1.3 Population and Family Planning Policies and Programmes

Population Policy

The population of Tanzania has trebled from 7.7 million in 1948 to 23.1 million in 1988. It is estimated that the population increase is at present roughly more than 600,000 persons per year. It is, therefore, projected that by the year 2000, the population will be about 33 million on an assumption of a slight decline in fertility offset by the continued decline in mortality. However, the national economy did not grow significantly in the past decade due to various constraints, and therefore the resources available per head increased by 1 percent per annum between 1985 and 1991. During 1988-91, the economy grew at an average of 5.2 percent per year and the per capita income increased by 2 percent. However, in 1992-95, the economy grew at an average of 3.7 percent and the per capita income grew at an average of 0.8 percent per year. On the other hand, the population continued to grow at a high rate, the consequences of which are felt acutely and visibly in the public budgets for health, education, and related fields of human resource development. It is evident, therefore, that improvement in the quality and expansion of these services is unlikely to happen without controlling rapid population growth and strengthening the national economy.

It is against this background that Tanzania adopted the 1992 National Population Policy. The principal objective of the policy is to reinforce national development through developing available resources to improve the quality of life of its people. Special emphasis is placed on regulating the population growth rate, enhancing population quality, and improving the health and welfare of women and children. The primary concerns of the National Population Policy are to safeguard, as much as possible, the satisfaction of the basic needs of vulnerable groups in the population, and to develop human resources for current and future national socioeconomic progress. Since Tanzania was concerned with population and development issues before the adoption of an explicit population policy, the country has the tradition of taking population issues into account in its development plans.

With specific reference to family planning, the goals of the policy are to strengthen family planning services to promote the health and welfare of the family, the community and the nation, and eventually reduce the rate of population growth. Other specific objectives related to population regulation include making family planning services available to all who want them, encouraging every family to space births at least two years apart, and supporting family life education programmes for youth and family planning for men and women.

Family Planning

The Family Planning Association of Tanzania (UMATI) introduced family planning services to Tanzania in 1959. During the early years the services were mostly provided in few urban areas with little support from the government. With the expansion of UMATI in the early 70s, services were extended to cover more areas in the country. The government became actively involved in providing family planning services following the launching of the integrated Maternal and Child Health (MCH) programme in 1974. Currently, family planning services are provided by both governmental and nongovernmental organisations under the coordination of the Family Planning Unit (FPU) in the Ministry of Health. Clinical services are complemented by community-based services. A social marketing programme is being considered.

1.4 Health Priorities and Programmes

The Tanzania government emphasises equity in the distribution of health services and views access to services as a basic human right. To respond to the worldwide efforts to attain the social goal of "Health to All" by the year 2000, Tanzania's health strategy focuses on the delivery of primary health care services. In

1991 a new Primary Health Care (PHC) strategy was developed by the Ministry of Health. The primary objective of the PHC focuses on strengthening district management capacity, multisectoral collaboration, and community involvement.

The government provides more than 60 percent of health services; the remainder is provided by nongovernmental organisations. The top of the extensive network of health facilities consists at the national level of four referral hospitals, one of which is the university teaching hospital. Most regions have a regional hospital and there are 183 hospitals in the country. At the divisional level, there are 291 health centres and at the ward level there are 3,286 dispensaries. At the village level, village health posts have been established, staffed with at least two village health workers. There are more than 5,550 village health workers in Tanzania.

1.5 Objectives and Organisation of the 1996 Tanzania Demographic and Health Survey

The 1996 TDHS is the third national sample survey of its kind to be undertaken. The first survey was done in 1991-92 followed by the Tanzania Knowledge, Attitudes and Practices Survey (TKAPS) in 1994. In addition to most of the same questions included in these two surveys, the 1996 TDHS added more detailed questions on AIDS, maternal mortality, and female circumcision.

The general objectives of the 1996 TDHS are to:

- Provide national-level data that will allow the calculation of demographic rates, particularly fertility and childhood mortality rates
- Analyze the direct and indirect factors which determine the level and trends of fertility
- Measure the level of contraceptive knowledge and practice (of both women and men) by method, by urban-rural residence, and by region
- Collect reliable data on maternal and child health indicators; immunisation, prevalence, and treatment of diarrhoea and other diseases among children under age five; antenatal visits; assistance at delivery; and breastfeeding
- Assess the nutritional status of children under age five and their mothers by means of anthropometric measurements (weight and height), and child feeding practices
- Assess among women and men the prevailing level of specific knowledge and attitudes regarding AIDS and evaluate patterns of recent behaviour regarding condom use
- Measure maternal mortality and collect data on female circumcision.

Survey Organisation

The 1996 TDHS, like the previous similar surveys, involved various institutions and individuals. The Bureau of Statistics in the Planning Commission had the overall responsibility of running the survey while the Ministry of Health provided technical and logistical support.

Financial support was provided by the USAID and administered by Macro International Inc., which also rendered technical advice. The funds were used to meet expenses related to allowances for field personnel, data processing, anthropometric equipment, printing of questionnaires, fuel and maintenance of field vehicles, and dissemination of the survey results. The Government of Tanzania provided local professional staff, accommodation, transport, and other field logistics.

Sample Design

The TDHS sample was a three-stage design consisting of the same 357 enumeration areas (EAs) that were used in the 1991-92 TDHS (262 EAs in rural and 95 EAs in urban areas). The selection of EAs was made in two stages: first, wards/branches and then EAs within wards/branches were selected. Lists of all households were prepared for the selected EAs and, at the third sampling stage, households were selected from these lists. The TDHS was designed to provide estimates (based on the results of the Woman's Questionnaire) for the whole country, for urban and rural areas in the country, and groups of regions (zones). In addition, the sample will provide certain estimates for each of the 20 regions in the mainland and 2 subgroups in Zanzibar: Pemba Island and Unguja. In most regions, one in every four households was selected for the men's survey, and in six regions (Dar es Salaam, Dodoma, Iringa, Kilimanjaro, Morogoro, and Shinyanga), men in every second household were selected for the interview. The sample of men was designed to provide estimates for the country as a whole and for urban and rural areas.

Unlike most other DHS surveys, households in Tanzania were selected from the household listing for each ward (or branch) on the basis of contiguity, beginning with a randomly selected start number. This selection process was used to minimise the difficulty encountered in moving from one selected household to another given the scattered nature of households.

Questionnaires

Three types of questionnaires were used during the survey. The Household Questionnaire was used to list the names of the household members and certain individual characteristics of all usual members of the household and visitors who had spent the previous night in the household. Certain basic information was collected on characteristics of each person listed, including relationship, age, sex, education, and place of residence. Furthermore, the Household Questionnaire collected information on characteristics relating to the household. These included the source of water, type of toilet facilities, materials used for the floor of the house, and ownership of various durable goods. However, the main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview.

The Female Questionnaire was used to collect information from eligible women age 15-49. The topics covered in this questionnaire included the following:

- Background characteristics of the woman including age, education, residential history
- Reproductive history
- Knowledge and use of family planning methods
- Fertility preferences and attitudes about family planning
- Antenatal and delivery care
- Breastfeeding and weaning practices
- Vaccinations and health status of children under age five
- Marriage and sexual activity
- Husband's occupation and education
- Woman's employment, occupation, and earnings
- Awareness and behaviour regarding AIDS and other sexually transmitted diseases
- Maternal mortality
- Female circumcision
- Height and weight of children under five years and their mothers.

The Male Questionnaire was used to collect information from a subsample of men age 15-59, namely, those living in every fourth household except in Dar es Salaam, Dodoma, Kilimanjaro, Morogoro, Shinyanga, and Iringa regions where every second household was selected for the male interview. The Male Questionnaire collected much of the same information found in the Women's Questionnaire, but was shorter because it did

not contain questions on reproductive history and maternal and child health. All questionnaires were translated and printed in Kiswahili. The final versions of the English questionnaires are provided in Appendix F.

Before the design of the questionnaires could be finalised, a pretest was done in May-June, 1996 to assess the viability of the questions, the flow and logical sequence of the skip pattern, and the field organisation. It covered an area outside Dar es Salaam and took about a week to complete. Modifications to the questionnaires were then made based on lessons drawn from the exercise.

Training and Fieldwork

As in the 1991-92 TDHS, the need to find competent interviewers was the guiding factor in recruiting interviewers. The Ministry of Health was again requested to secure the services of trained nurses to be interviewers in the 1996 TDHS. For Zanzibar, a similar request was made to the Zanzibar Ministry of Health to provide nurses for the interview work.

The 1996 TDHS field staff consisted of eight teams, each composed of six female interviewers, one male interviewer, a field editor, a supervisor, and a driver. Sixty female nurses and 12 male nurses were recruited and 8 statisticians were selected as supervisors. After three weeks of intensive training, 50 female and 8 male interviewers were selected for the fieldwork. During training, a series of assessment tests were given to the class. These tests were graded and the results were used to select interviewers. Those who showed extra understanding of the questionnaires and were also able to detect errors in completed questionnaires were later chosen to be field editors. The list of persons who were involved in the survey is presented in Appendix E.

The training of field staff for the main survey was conducted over a three-week period in early July 1996, at the Vocational Training Institute (VETA) in Iringa. Permanent staff from the Bureau of Statistics and staff from Macro International conducted the training with the support of guest lecturers from the UMATI, MCH personnel from the Iringa regional hospital, and staff from the Tanzania Food and Nutrition Centre. Trial interviews were conducted in nearby villages and some parts of the city of Iringa. Computer operators participated in the training to acquaint themselves with the questionnaires. The training course consisted of instructions in interviewing techniques, field procedures, a detailed review of items on the questionnaires, training and practice in weighing and measuring children, mock interviews between participants in the classroom, and practice interviews with real respondents in areas in and around Iringa.

Supervisors and editors were trained exclusively for three days to discuss their duties and responsibilities. Emphasis was given to the importance of ensuring data quality. The supervisor was required to act as the leader of the field team and be responsible for the well-being and safety of team members, completion of the assigned workload, and maintenance of data quality. The duties and responsibilities of the editor were to monitor interviewer performance and take anthropometric measurements of children and women. Close supervision of the interviewers and editing of completed questionnaires were emphasised to ensure that data collection was accurate and complete.

The fieldwork for the main survey began in late July 1996 and lasted until November 1996. Women and men for the individual interviews were identified during the household interview. It was stressed that the household interview had to be done by an interviewer other than the one who would conduct the individual interview. This was intended to reduce the error due to the age shifting particularly among women or men at the youngest or oldest age groups. Team supervisors located the households and assigned them to the interviewers. Completed household and individual questionnaires were handed over to the field editors who checked them to ensure that all relevant questions were properly recorded, that the skip pattern instructions were followed, and that responses were internally consistent. Each team was instructed to complete the editing work and resolve all errors found in the questionnaires before the team left the cluster. Supervisors were required to ensure that all the selected households and eligible women and men in a cluster were interviewed, and that assignment sheets for the interviewers and supervisors were filled out completely and correctly. The questionnaires and the control sheets were dispatched to the head office in Dar es Salaam for data processing.

Data Processing

The data processing staff for the survey initially consisted of four clerks and one supervisor who were staff of the Bureau of Statistics. However, to speed up the data processing work, an additional four data processing staff were recruited.

All questionnaires for the TDHS were returned to the Bureau of Statistics for data processing, which consisted of office editing, coding of open-ended questions, data entry, and editing of computer-identified errors. All data were processed on microcomputers with a software programme developed for DHS surveys, called the Integrated System for Survey Analysis (ISSA). Data entry was 100 percent verified. Office editing and data processing activities were initiated immediately after the beginning of fieldwork and completed in mid-December, 1996.

Response Rates

A summary of response rates from the household and individual interviews is shown in Table 1.2. In all, 8,900 households were selected, out of which 8,141 were occupied. Of the households found, 7,969 were interviewed, representing a response rate of 98 percent. The shortfall between the selected and the interviewed households was largely because many dwellings were either vacant or no competent respondents were present at the time of the visit.

In the interviewed households, 8,501 eligible women (i.e. women age 15-49) were identified for the individual interview, and 8,120 women were actually interviewed, yielding a response rate of 96 percent. In the subsample of households selected for the male interview, 2,658 eligible men (i.e., men age 15-59) were identified, 2,256 were interviewed, representing a response rate of 85 percent. The principal reason for nonresponse among both eligible men and women was the failure to find them at home despite repeated visits to the household. The lower response rates among men than women were due to the more frequent and longer absences of men.

The response rates are lower in urban areas. One-member households are more common in urban areas and are more difficult to interview because they keep their houses locked up most of the time. In urban settings, neighbours often do not know the whereabouts of such people.

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households sampled	2,228	6,672	8,900
Households occupied	1,989	6,152	8,141
Households interviewed	1,912	6,057	7,969
Household response rate	96.1	98.5	97.9
Individual interviews			
Number of eligible women	2,186	6,315	8,501
Number of eligible women interviewed	2,088	6,032	8,120
Eligible women response rate	95.5	95.5	95.5
Number of eligible men	773	1,885	2,658
Number of eligible men interviewed	616	1,640	2,256
Eligible men response rate	79.7	87.0	84.9

