

PREFACE

This report presents the major findings of the analysis of the 1998 Population and Housing Census. It reports, among other things, detailed findings of various socioeconomic and demographic analyses, such as fertility, mortality, population growth during the 1987-98 intercensal period, education and literacy, housing characteristics, etc. The report further describes the logistics of the conduct of the census, including all census preparatory activities, such as update of census field maps and pilot census.

The 1998 Population and Housing Census is the fourth of the censuses that have been conducted in Malawi in the post-independence era. The first census was conducted in 1966 and was on both the de jure and de facto basis. In the de jure census a person is enumerated according to where he/she usually lives. In the de facto census a person is enumerated at a place where he/she was found at the time of the census. The second was in 1977 and the third one was conducted in 1987. The fourth one had been planned for 1997 but because of funding problems the census had to be postponed until 1998. Both the 1987 and 1998 Censuses collected data on population and housing characteristics and were de facto censuses.

In the three previous censuses the majority of the census field staff were seconded from other government departments, notably the Ministry of Education and Culture and Office of the President and Cabinet (District Administration). The majority of those recruited to work as enumerators or supervisors in the 1998 Population and Housing Census were recruited from the open market and were deployed to work in the areas where they were usually residing.

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CHARLES MACHINJILI
COMMISSIONER FOR CENSUS AND STATISTICS

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CHAPTER 1

CENSUS METHODOLOGY AND SUMMARY OF RESULTS

Jameson S. Ndawala
and
Ladislav R. S. Mpando

1.0 Introduction

The history of Census taking in Malawi goes back to the pre-independence era when a total of eight censuses were conducted. The first census in Nyasaland was in 1891 and the last one was in 1956. The methods for data collection in these censuses varied largely from one census to the other.

After attaining independence status in 1964, Malawi has conducted four censuses: the first was conducted in 1966 and the latest has been concluded. Besides collecting data on the population, the last two censuses collected information on the stock and condition of housing as well as ownership of some durable goods as well as access to facilities. In the 1998 Population and Housing Census was conducted from 1st to 21st September 1998. In addition to the traditional data population censuses collect, the 1998 Population and Housing Census also collected information on Religion and Orphanhood status of children aged twenty or younger.

Control centre supervisors field supervisors and enumerators were recruited from the areas where they normally lived and were trained before they were deployed into the field. District supervisors were NSO permanent staff or members of staff from other government departments, namely; Department of Housing and Physical Planning, Mzuzu ADD, Office of the President and Cabinet (District Administration) and Department of Surveys. This arrangement differs from that of the 1987 Population and Housing Census where most of the field staff was seconded from the Ministry of Education and Culture. This was due to the fact that there was a change in school year and as such the schoolteachers could not be available for the census.

1.1 PRE-CENSUS PREPARATORY ACTIVITIES

1.1.1 Updating of Census Maps

In order to ensure a complete canvassing during the census enumeration NSO updated all the maps that were used during the 1987 Population and Housing Census. The exercise started in April 1996 and by May 1998 all the areas in the country had been updated. Fieldwork started in rural areas of Mangochi, Machinga and Zomba Districts and updating for major urban areas were done after all the rural areas were completed. To accomplish this task, twelve teams each comprising a team leader, a driver and five mapping assistants were deployed into the field. Each team was assigned to update the map(s) for an entire TA or STA or City Ward. During the exercise major features, villages, etc. that existed on the ground but were not shown on the map were plotted. Similarly, major features that were depicted on the map but were no longer existing were deleted from the maps. Furthermore, mapping assistants were instructed to collect information on number of persons who usually slept in dwelling units in a particular village or locality. This information enabled the mapping teams to demarcate the enumeration areas (EAs) of more or less equal sizes with respect to population. Each EA in rural areas was demarcated to have between 800 to 1,200 persons (an average of 1000 persons) whereas an EA in major urban areas contained between 1,000 and 1,500 persons, or an average of 1,250 persons. At the end of the exercise 9,213 EAs were demarcated throughout the country. Mapping assistants were drawn from various sections of the NSO. These numbers were, however, supplemented by other staff recruited on temporary basis. Training of team leaders was conducted at NSO from 21st August to 8th September 1995 and that of mapping assistants was conducted at Chilema Ecumenical and Conference Centre from 11th September to 22nd September 1995. Classroom training was followed by field practicals.

In addition to the mapping assistants ten cartographic assistants/tracers were recruited to trace updated maps. The exercise involved largely the transferring of information from base maps to produce new negatives from where new EAs were demarcated.

1.1.2 Pilot Census

A pilot census was conducted in purposively selected areas in rural and urban areas from 11th August to 1st September 1997. Five EAs were selected from each of the following areas: TA Nsabwe (Thyolo), TA Katuli

(Mangochi), TA Phambala (Ntcheu), TA Mkumbira and part of Nkhata Bay Boma (Nkhata Bay), Lilongwe and Blantyre Cities. Census Maps for TA Nsabwe, TA Katuli and TA Phambala were already updated and maps for the other pilot areas were not yet updated at the time of the pilot census.

The pilot census was aimed at testing the data collection instruments, computer programs as well as logistics for recruiting field census staff and other field procedures for the 1998 Population and Housing Census. It also tested if the updated maps were usable in the census enumeration. Furthermore, the pilot enabled NSO to evaluate the anticipated problems unique to each area and hence develop appropriate strategies to circumvent the problems before the onset of the main census.

Prior to the pilot census there was a training of district and field supervisors at NSO from 21st to 25th July 1997. Recruitment of enumerators was done between 28th July and 1st August 1997 and their training took place from 4th to 8th August 1997 at selected centres within the pilot areas. Field enumeration was done between 11th August and 1st September 1997. Two officers (one district supervisor and one field supervisor) from NSO were deployed into each of the six pilot areas. In each pilot district, the district supervisor, assisted by the field supervisor recruited and trained enumerators from five adjacent EAs. This arrangement allowed NSO to review the feasibility of recruiting field staff locally.

Various experiences gathered from the pilot census were later reviewed in the office. The review enabled NSO to finalize all the Census documents, computer programs, and field procedures and other logistics in readiness for the main census field operation.

1.2 CENSUS METHODOLOGY AND PREPARATORY ACTIVITIES

1.2.1 Identification of Control Centres and Training Centres

NSO senior officers made field trips to all areas in the country in May 1998 to identify offices that were consequently used as census control centers and training centers. This was so because the school calendar has changed and, as such, most school could not be used for this purpose due to the fact that they could still be in session during the time of the census. A total of 33 centres (one in each census district) and a further 140 centres throughout Malawi were identified for the training of field supervisors and enumerators respectively. The number of training centres for enumerators in each district depended upon the number of control centres in the district.

During the 1987 Population and Housing Census all the control centre supervisors were headmasters seconded from the Ministry of Education and Culture and were all drawn from government primary schools. This setting provided an advantage in that primary schools were used as census control centres and in some cases training centres for the training of enumerators at no charge. Training of field supervisors and control centre supervisors was done at district and regional levels respectively.

1.2.2 Recruitment of Field Staff

During the 1998 Population and Housing Census it was not possible to utilize the services of teachers as enumerators or supervisors because schools were still in session. Furthermore, it was not practicable to defer the census operation until school closed because the impending rains in October or November would have hampered the progress of census enumeration. In view of these problems it was imperative to recruit field staff on temporal basis. These were recruited from the areas they usually lived. This arrangement substantially reduced census operation costs, as subsistence allowances were not paid to enumerators and supervisors who were deployed to work in their home areas.

Control centre and field supervisors as well as enumerators were recruited at several centres within each control centre area. The major problem with this arrangement was that most of the candidates were able to attend several interviews at different venues within the control centres in order to maximize their chances of selection. NSO had not anticipated this problem and as such had not put any mechanism in place to curb this form of cheating. Furthermore, the majority of those recruited were school leavers and their behaviour especially towards the end of the enumeration period was that of insubordination and disrespectful to senior supervisors.

A total of 9,633 enumerators, including 420 enumerators on reserve were recruited throughout the country. The reserved enumerators were either assigned office work at control centre or deployed to assist other enumerators in the field. Further to this a total of 1,843 field supervisors and 140 control centre supervisors were also recruited.

Enumerators were holders of at least Malawi Junior Certificate of Education and were to be usual residents of the area they enumerated. Field and control centre supervisors were in addition required to have administrative and management skills.

In addition to the locally recruited staff, 74 enumerators were seconded from other government departments and were deployed to work in the special areas where they came from as follows: State Residencies (7), Army Barracks and Camps (22), Police Colleges/ Camps (18) and Prisons (27). These special enumerators also worked under the supervision of the civilian field supervisors and control centre supervisors.

1.2.3 Training of Census Staff

Before the recruitment and training of the staff, NSO with assistance from USAID organized a workshop on questionnaire design and a training course on census data processing. The workshop on questionnaire design, which was conducted at Liwonde in April 1997, included training on the application of Formflow software package for questionnaire design. The training on census data processing was provided to data processing staff on the application of the Integrated Microcomputer Processing System (IMPS 4.1). IMPS is a versatile tool for data entry, editing, tabulation and management of census data. An expert from US Bureau of Census and a senior officer from NSO who was trained on the IMPS software package in the USA conducted the training. The training attracted a total of thirteen participants from within the NSO.

Two other officers were also trained at the US Bureau of Census in Sampling and Statistical Methods and Geographical Information System (GIS) respectively.

All census field staff underwent training on the administration of the data collection instruments as well as the procedure of enumeration before the data collection.

Four levels of training were conducted: first, the district supervisors' training at Chilema Ecumenical and Conference Centre, Zomba from 22nd to 26th June 1998. The training stressed the understanding of the questionnaire and all other instruction manuals that were used in the census. NSO senior officers conducted the training course. Second, the training of control centre supervisors at three regional centres at Ekwendeni Lay Training Centre (Mzimba) in Northern Region, Malawi Entrepreneurs and Development Institute (MEDI) at Mponela (Dowa) in the Central Region, and Chilema Ecumenical and Conference Centre (Zomba) in the Southern Region. The Training was conducted by the NSO senior officers and were assisted by district supervisors. Third, field supervisors were trained from 17th to 21st August 1998 at district level. District supervisors assisted by control centre supervisors provided the training. There was one training centre in each district. Fourth, enumerators were trained from 24th to 28th August 1998 at control centre level within each census district. The control centre supervisors and the field supervisors conducted the training.

Training sessions for the district supervisors and control centre supervisors were on residential basis where food and accommodation were provided to all participants. During the training sessions of the field supervisors and of enumerators food and accommodation were not provided but participants received subsistence allowances to enable them purchase their own food and accommodation within the vicinity of the training centre.

1.2.4 Publicity

Since the census recruitment campaign, NSO undertook an intensive publicity campaign to educate, bring awareness to the public about the nature, timing and the usefulness of the census and solicit the cooperation of the general public during the census enumeration. The NSO publicized the census through various channels of the mass media including MBC pa '*Majiga*' and '*sewero la sabata ino*' radio plays. Census slots, jingles, stickers, posters, press releases, etc were also other media of census publicity. Radio interviews during MBCs' radio programs were also conducted where a number of issues related to the census were discussed.

1.2.5 Printing of Census Documents

The volumes of the census documents warranted printing to be contracted to several outside printing organisations. This was to ensure that the census documents were available at least three months before the commencement of the census enumeration.

1.2.6 Census Vehicles

Nine vehicles were used during the identification of census control centre and training centres. During the training of the district supervisors at Chilema Ecumenical and Conference Centre in Zomba two vehicles were used while six vehicles were used during the training of control centre supervisors.

Forty vehicles were used during the training of field supervisors and enumerators. Each census district and each of the seven census headquarters supervisors had a vehicle.

During the census enumeration period a total of 200 vehicles were used throughout the country. The distribution of the vehicles were as follows:

- 7 vehicles: One for each census headquarters supervisors.
- 33 vehicles: One for each of the census district supervisors.
- 140 vehicles: One for each of the control centre supervisors
- 15 vehicles: Used by the Accounts Section for the payments of allowances, etc to census field staff.
- 5 trucks: for distribution and collection of census materials.

Of the 200 vehicles used during the census operation, eleven were drawn from NSO's own fleet and the rest were hired from various car hire organizations and car rentals.

The hired vehicles were off-hired as soon as the collection of census materials from each control centre was completed.

1.2.7 Delivery and Collection of Census Materials

a. Delivery of Census Materials

Soon after the training of the control centre supervisors and district supervisors at regional level all the district supervisors returned to census headquarters to collect materials for the training of field supervisors and enumerators. Later, trucks were hired to deliver enumeration materials to all the districts.

The district supervisors distributed the census materials to each control centre in his/her district. A vehicle was allocated to each of the district supervisors and control centre supervisors and each one of these supervisors was periodically issued with fuel coupons. The vehicles facilitated both the delivery of census materials to control centres in a district and the supervision of census fieldwork.

b. Collection of Census Materials

Five trucks were hired specifically to collect census materials from the districts. Unfortunately, it was not possible to collect all the census materials immediately after enumeration in most districts, as enumerators demanded their remuneration before surrendering the satchels for their EAs. It was planned that all satchels from the field be collected and delivered to Census Headquarters by mid-October 1998 but the last consignment of satchels was collected during the first week of December 1998. This had inevitably resulted in the delay in the production of the 1998 Population and Housing Census Report of Preliminary Results and consequently this report.

1.2.8 Enumeration

a. Supervision

To ensure that data of acceptable quality was collected there were four levels of supervision which were setup during the period of data collection. The census headquarters, district, control centre and field supervisors were deployed to achieve this goal. There were seven headquarters supervisors during the census and were responsible for the entire country. The district supervisors were responsible for the quality of census work in their districts where as the control centre supervisors were deployed to ensure that quality of census work in their control centre zones was of high quality. The field supervisors were deployed to monitor the quality of work performed by each of the five or six enumerators under his/her charge.

b. Data Collection

Field enumeration started on schedule in most of the areas in the country; that is, 1st September 1998. However, delays in paying subsistence allowances to some of the enumerators resulted in late starting of the data collection.

During the enumeration period enumerators collected information of all persons, dwelling units and all other structures in their EAs. The unit of enumeration was the *'Household'* which was defined as *consisting of one or more persons, related or unrelated, who make common provision for food and regularly take their food from the same pot and /or share the same grain store (nkhokwe) or pool incomes for the purpose of purchasing food.* Members of the households may live in one or more dwelling units.

Enumeration was done on de-facto basis. In this enumeration procedure, enumerators collected information on all those who had spent the reference period; that is, the previous night, in the dwelling units belonging to particular households prior to the enumerators' visit. It should be noted that the enumeration in a few areas that were not completed by 21st September 1998 due to unforeseeable circumstances continued until the areas were fully enumerated. Field supervisors were required to check enumerators' work with respect to the quality and coverage before accepting that the EA has been completed. The Enumerators were also required to complete Form CE/98/3 'Daily Records of Enumeration' and Field Supervisors were required to complete Form CE/98/4 'Summary of Persons Enumerated by Pad' These summaries were necessary for the production of this preliminary report.

The field supervisors were required to collect all the census materials for the EAs under their charge for onward transmission to the control centre. The control centre supervisor was responsible for delivering all the materials for his or her entire area under his/her control to the district supervisor.

Aside the enumeration of persons living in normal households, the census also covered persons in institutions, such as hospitals, hotels and rest houses, prisons and detention camps, army barracks, police colleges/camps, as well as people travelling on passenger vessels on Lake Malawi. However, enumeration of residents in boarding institutions, such as secondary schools etc was done at households where they would have otherwise been enumerated at had they been on holiday.

In the case of areas designated as special areas (state residents, Army Barracks, camps, Police camps, and Prisons) persons from these institutions were deployed to enumerate their institution.

All the control centre supervisors, field supervisors and enumerators were offered remuneration of K1,500, K1,200 and K1,000 each respectively. The remuneration was paid after each person finished his/her assignment and after his/her supervisor has endorsed ones work as of acceptable quality.

1.2.9 Data Processing and Dissemination of Census Preliminary Results

The preliminary processing of the 1998 Population and Housing Census consisted of data entry and editing of the errors found by computer programs. Data entry and editing was accomplished on personal computers using IMPS (4.1) software package. Eight machines were used to process the data. Data Processing started on the 10th October and was completed on 9th December 1998.

The census preliminary results, compiled by December 1998, were presented to Government for approval and in March 1999, the results were approved. The Commissioner for Census and Statistics briefed the Cabinet Committee on the Economy, explaining the results and their implications. There was a general feeling among the public that the population of 9.8 million was rather too low for Malawi as compared to the projections that NSO had earlier prepared based on the 1987 Population and Housing Census. It was later made clear that the projections had assumed that Mozambican civil war refugees who were enumerated in the country in 1987 would not return to their country. However, by 1998 virtually all the refugees had returned to Mozambique. Thus the assumption on net international migration, which is one of three components of population growth of a country, was not correct.

After the printing of the Report of Preliminary Results, the NSO disseminated the preliminary findings of the census at three regional workshops in Blantyre, Lilongwe and Mzuzu. The participants to these workshops were members of District Executive Committees in all the districts including the Chief Executive (District Commissioner). Members of the media, the donor community, representative s from Government Ministries and Departments also attended.

1.2.10 Data Processing

NSO received 12 computers from the US Bureau of Census in July 1998. These were basically for use by senior officers working on the census. Data processing equipment for the census was provided by USAID with technical

assistance from the US Bureau of the Census (BUCEN). It was originally planned that the computers would be delivered and installed by October 1998 so as to commence data processing immediately after data collection. The equipment was, however, delivered only in February 1999 and installation was completed by March 1999. The census network and programs were ready by April 1999. Thus the late delivery of the data processing equipment delayed census data entry.

Data processing personnel was recruited in May 1999. A total of about 250 temporary data processing clerks recruited together with about 80 permanent staff members from NSO composed a team to process the census data. Of those recruited 55 percent were females. The temporary clerks could not have been deployed earlier because the Government did not have funds for their salaries. This inevitably resulted in substantial delays in the completion of census data processing.

a. Manual Editing and Coding

Manual editing and coding of census questionnaires started immediately the questionnaires were delivered to the office. The exercise was started by permanent statistical clerks of NSO and was completed in March 2000 after temporary data processing clerks had started working in May 1999.

As part of training, all data processing clerks underwent an editing and coding training. Those who performed exceptionally well were trained as data entry operators for two weeks. About 180 clerks trained as data entry operators and around 110 were data editors and coders. About 10 clerks worked in the census registry and were responsible for registering and monitoring the movement of census documents.

b. Data Entry

Data entry was done in three shifts per day. Each shift comprised about 60 persons including shift supervisors. The total workforce for data entry was about 180. Training of data entry clerks was done for two weeks. The training covered basic computer skills as well as applications of the Integrated Microcomputer Processing System (IMPS) that was used for data entry, verification and validation.

Each of the three shifts was about five hours long. The first shift worked from 7.30 am to 1.00 pm; the second from 1.00 pm to 5.00 pm and the last shift worked from 5.00 pm to 10.00 pm. There were short breaks in between. Forty eight microcomputers were used for keying and 6 supervisory machines were used for running consistency and editing programs. All the machines were connected on the Local Area Network (LAN). Each operator had a unique identification code. Two computer servers were used for storage of the data. Two computers with servers, one a primary domain and the other a backup were also used to keep all keyed/processed data as well as keeping all the software and programs used for data processing. Apart from the servers, tapes were also used for backup for the data after every two days. An electricity generator was also available and provided electricity backup in the cases where there was no power.

Each microcomputer was assigned to one of the following applications: Entry Application and Verifying Application. At each particular time an operator was assigned to do one of the applications. One operator was assigned to key one EA until it was completed. The keying was done in a systematic order, doing one TA at a time within the district. By June 2000 data entry was completed in all the districts in the country.

c. Data Verification

When a sufficiently large number of EAs was keyed, the verification process started. At the onset of the data verification operation, 100% verification was done. When the quality of data entry seemed satisfactory as evidenced by reduced numbers of data entry errors, sample verification was resorted to. About one third of the keyers were assigned to independently verify the keyed data. The verification exercise continued during the year and was also completed in June 2000.

d. Data Validation

After data verification, checking the inconsistencies and checked codes was performed. This was done by computer program and not manually. All errors flagged by the computer program were then corrected. This process was completed in July 2000.

e. Tabulation Programs

The tabulation programs that had been developed were used to produce tables from census clean data file. The tables followed the UN recommendations. The lowest level that the tables were produced was the village/place. The initial tables were produced in August 2000 and checking of the tables started immediately.

1.2.11 Finances and Accounting

The 1998 Population and Housing Census was funded by Malawi Government. The Government contributed MK50 million for the census project. However, other financial and technical assistance was provided by the following:

- (a) The United Nations Population Fund (UNFPA)- provided 12 vehicles for the Census Mapping Project as well as technical assistance through its Country Support team based in Harare, Zimbabwe. UNFPA also provided US \$1,1 million for the main census operation;
- (b) The Department for International Development (DfID) contributed Us \$0.8 million ;
- (c) The United States Agency for International Development (USAID) provided US \$1.2 million in technical assistance and equipment;
- (d) The United Nations Development Programme (UNDP) contributed MK2.1 million towards the census project.

1.3 SUMMARY OF RESULTS

1.3.1 Population Growth

The 1998 Population and Housing Census enumerated a total population of 9.9 million. Of this total, 4.9 million or 49 percent were males and 5.0 million were females. The 1998 population grew from about 8.0 million in 1987 and represents a population growth rate of 2.0 percent per annum and an increase of 1.9 million persons or 24 percent.

At regional level, the population in the Northern Region grew the fastest from around 900,000 in 1987 to about 1.2 million in 1998, depicting an annual intercensal population growth rate of 2.8 percent. The population in the Central Region grew from 3.1 million in 1987 to 4.1 million in 1998 and that in the Southern Region grew from around 4.0 million in 1987 to about 4.6 million in 1998. The annual population growth rates in the Central and Southern Regions were 2.4 and 1.4 percent respectively during the 1987-98 intercensal period.

TABLE 1.1: TOTAL POPULATION: 1901-1998 CENSUSES

YEAR OF CENSUS	TOTAL POPULATION	AVERAGE ANNUAL INTERCENSAL GROWTH RATE (%)
1901	737153*	-
1911	970430*	2.8
1921	1201983*	2.2
1926	1,263,291	1.5
1931	1,573,454	4.4
1945	2,049,914	2.2
1966	4,039,583	3.3
1977	5,547,460	2.9
1987	7,988,507	3.7
1998	9,933,868	2.0

Note: * De jure population

Table 1.1 shows the population growth in Malawi since 1901. In the last century population in Malawi grew from an estimated 737,000 in 1901 to about 970,000 in 1911, representing an annual growth rate of 2.8 percent. The population further grew to about 1.6 million in 1931, 2.0 million in 1945 and up to about 4.0 million in 1966. It should, however, be noted that there is evidence of gross underenumeration of population in pre-independence censuses. This becomes clearer when we examine the average intercensal growth rates in Table 1.1 above.

During the 1966-77 intercensal period the population grew by 2.9 percent per annum from 4.0 million in 1966 to around 5.5 million in 1977. With the influx of the war refugees from Mozambique, the population further grew to about 8.0 million in 1987 at an annual growth rate of 3.7 percent.

Annual population growth rates at district level show that population in the districts that lie along the border with Mozambique grew with the slowest rates. This suggests that the repatriation of Mozambican war refugees who were concentrated in these districts during the 1987-1998 intercensal period had an impact on the growth of the population. Most of these districts are in the Southern Region and some, such as Ntcheu and Dedza Districts, are in the Central Region.

1.3.2 Sex Ratio

The Sex Ratio defined as the number of males per 100 females shows that more females than males lived in Malawi in 1998.

The final results show that about 51 percent of the total population enumerated in 1998 were females. This implies that the overall sex ratio at national level was 96 males per 100 females.

It is also worth noting that sex ratios in the four major urban areas of Lilongwe, Blantyre and Mzuzu Cities and the Municipality of Zomba and Kasungu, Mchinji and Nkhosokota Districts indicate that more males than females lived in these areas. This may probably be a result of the influence of internal migration which is generally selective and in favour of males. The highest sex ratio (110.8) is observed in Lilongwe City whereas Likoma District (85.9), Mulanje District (88.3), Phalombe (89.0), Chiradzulu (89.3), Dedza (89.8), Ntcheu (90.2) and Thyolo (90.8) exhibit the lowest sex ratios.

However, on the overall sex ratios in 1998 were higher than the corresponding sex ratios in 1987 (Table 1.2).

Table 1.2: Selected Socio-economic and Demographic Indicators by District: 1998

Region/ District	Average								
	Density	Sex Ratio	Percent Distribution	Literacy Rate	Intercensal Growth Rate	Total Fertility Rate	Crude Birth Rate	Crude Death Rate	Infant Mortality Rate
MALAWI	105	96.1	100.0	57.6	2.0	6.5	50.0	20.9	125
RURAL	91	94.3	85.6	53.8	1.6	6.7	50.4	21.9	131
URBAN	1415	107.3	14.4	79.4	4.7	5.4	47.5	15.5	93
NORTHERN REGION	46	95.2	12.4	71.7	2.7	6.5	49.2	17.5	103
Chitipa	30	91.8	1.3	67.3	2.5	7.2	52.5	15.4	95
Karonga	58	92.8	2.0	75.4	2.5	6.4	50.6	18.5	104
Nkhata Bay	40	94.6	1.7	74.5	2.7	6.0	46.9	30.6	103
Rumphi	27	97.2	1.3	77.8	2.1	6.6	51.3	18.4	91
Mzimba	59	96.6	6.2	69.5	3.1	6.5	49.2	13.9	105
Likoma *	449	85.9	0.1	69.7	-0.1	6.1	46.1	20.9	59
CENTRAL REGION	114	98.3	40.9	54.5	2.4	7.1	52.3	18.4	131
Kasungu	61	106.5	4.8	58.3	3.6	7.4	53.4	17.9	134
Nkhotakota	54	100.2	2.3	53.7	3.4	7.5	54.0	19.4	136
Ntchisi	101	99.2	1.7	52.7	3.0	8.0	40.4	14.1	145
Dowa	135	98.2	4.1	52.7	2.2	7.5	54.1	15.9	129
Salima	113	96.7	2.5	45.8	2.5	7.0	51.1	18.2	126
Lilongwe	219	100.2	13.6	59.9	2.9	7.0	53.1	18.1	129
Mchinji	97	102.0	3.3	52.7	2.4	7.6	55.0	17.3	131
Dedza	134	89.8	4.9	42.4	1.5	6.9	50.6	21.6	130
Ntcheu	108	90.2	3.7	56.9	0.3	6.7	49.2	21.1	125
SOUTHERN REGION	146	94.0	46.6	56.5	1.4	6.1	48.6	24.1	126
Mangochi	97	92.5	6.1	41.3	1.9	6.3	48.0	24.7	123
Machinga	98	91.7	3.7	44.9	1.8	6.4	48.8	30.6	124
Zomba	212	94.7	5.5	59.7	1.9	5.9	47.0	28.6	124
Chiradzulu	308	89.3	2.4	65.7	1.0	5.9	46.5	26.3	131
Blantyre	402	104.4	8.1	76.6	2.9	5.4	46.2	19.9	99
Mwanza	60	94.6	1.4	54.9	1.2	6.6	49.5	22.6	123
Thyolo	268	90.8	4.6	58.5	0.6	6.1	49.6	21.3	133
Mulanje	208	88.3	4.3	52.7	0.2	5.9	49.6	30.6	148
Phalombe	166	89.0	2.3	52.0	0.6	6.0	48.5	24.1	136
Chikwawa	75	99.9	3.6	43.5	1.1	6.8	49.5	19.3	131
Nsanje	100	94.0	2.0	42.3	-0.4	7.0	50.1	15.8	145
Balaka	115	91.2	2.5	65.1	1.6	6.3	48.2	22.4	123

* based on a base population of only about 8,000 persons

The results further show that the distribution of the population by sex and age in the Northern Region was the same as that for Malawi as a whole. In the case of Central Region, approximately half of the population were females and the sex ratio was 98 while in the Southern Region the proportion of females was 52 percent and the corresponding sex ratio was 94. In each of the regions at least half of the population was aged 18 or older and between 16 and 17 percent were under-five children.

At district level Mulanje, Phalombe, Chiradzulu, Dedza, Ntcheu (53 percent each) and Thyolo (52 percent) had the highest proportions of females. Thus these districts had the least sex ratios ranging from 88.3 in Mulanje to 90.8 in Thyolo.

In the case of each of the four major urban areas of Mzuzu, Lilongwe and Blantyre Cities and the Municipality of Zomba about 48 percent were females and the sex ratio was at least 106.

1.3.3 Age-Sex Distribution

The final results of the 1998 Population and Housing Census further show that in Malawi 1.7 million were under-five children and about 4.9 million were aged 18 years or more.

Both at national and regional levels the census results reveal that about one in every six persons were under-five children and 44 percent were aged less than 15 years. Further, approximately half of the population enumerated were aged 18 years or older. Thus the median age of the population in Malawi was 18 years. Furthermore, about 4 percent of the total Malawi population were infants aged less than 1 year while a further 4 percent were elderly persons aged 65 years or older. In 1987, 46 percent of the population were aged under 15 years, 50 percent were aged 15-64 years and a further 4 percent were 65 years or older. This shows that Malawi has a young population.

In rural areas, male and female infants aged less than 1 year each constituted about 4 percent of the total population while under-five female and male children each contributed about 17 percent to the total population. The proportions of infants and under-five children in urban areas are similar to those in the rural areas although in general they are slightly lower.

The population distribution by age and sex in each of the three regions is similar to that of Malawi as a whole. At district level, however, Zomba Municipality had the least proportion of infants aged less than 1 year (2.8 percent) as well as children aged less than 5 years (14.3 percent). Other districts with low proportions of infants aged under one include Blantyre City (3.3 percent), Mzuzu City (3.4 percent), Chiradzulu and Thyolo (3.6 percent each), Phalombe (3.7 percent) and Lilongwe City (3.8 percent). The proportions of under-five children in each of these districts, regardless of sex, are between 14 and 16 percent.

1.3.4 Spatial Distribution and Population Density

About 47 percent of the total population in 1998 lived in the Southern Region. The corresponding figures for the Central and Northern Regions were 41 and 12 percent respectively (Table 1.2). In 1987 50, 39 and 11 percent of the total population were enumerated in the Southern, Central and Northern Regions respectively. Thus the regional population distribution pattern in 1998 appears to have remained the same as that of 1987.

The final results further reveal that 14 percent of the population lived in the urban areas of the country compared with 11 percent in 1987 and 8.5 percent in 1977. However, in 1998, 11 percent of the total population lived in the four major urban areas and only 3 percent lived in the other urban areas, which mostly consist of Bomas and gazetted townships. Furthermore, urban population in Malawi had grown from about 850,000 in 1987 to around 1.4 million in 1998. This represents an annual growth rate of 4.7 percent during the 1987-1998 intercensal period. The urban population in Malawi had increased by 68 percent during the intercensal period. In 1987, 11 percent of the population lived in the urban areas.

At district level, Table 1.2 shows that the largest population was enumerated in Lilongwe (1,346,000 or 13.6 percent), Blantyre (809,000 or 8.1 percent), Mzimba (611,000 or 6.2 percent), Mangochi (610,000 or 6.1 percent) and Zomba (547,000 or 5.5 percent). On the other hand, the least populated districts were Likoma (8,000 or 0.1 percent), Chitipa (127,000 or 1.3 percent), Rumphi (128,000 or 1.3 percent), Mwanza (138,000 or 1.4 percent) and Ntchisi (168,000 or 1.7 percent). At regional level, the Northern Region (46) was the least densely populated whereas the Southern Region (146) was the most densely populated. The population density in the Central Region stood at 114 persons per square kilometre. At district level, Rumphi (27) was the least densely populated and Likoma (449), Blantyre (402) and Chiradzulu (308) were the most densely populated districts in Malawi.

1.3.5 Intercensal Population Increase and Annual Growth Rates

As already noted, the population of Malawi grew from about 8.0 million in 1987 to around 9.9 million in 1998. This shows that the population of Malawi increased by 24 percent during the 1987-98 intercensal period. Further, the population is noted to have been growing at the rate of 2.0 percent per annum during the same intercensal period. The results, furthermore, reveal that the population of the Northern Region increased by 35 percent while that of the Central and Southern Regions rose by 31 and 17 percent respectively between 1987 and 1998. It is, however, noted that the average intercensal annual growth rate was lowest in the Southern Region (1.4 percent per annum) compared to the annual growth rates of 2.7 and 2.4 percent in the Northern and Central Regions respectively. The low intercensal growth rate in the Southern Region may in part be explained by the repatriation of the Mozambican war refugees who had been counted in the 1987 Population and Housing census. This presumption is further

evidenced by the observed low annual growth rates of the population in the districts that lie along the Mozambican border.

The final results also show that the districts with the highest annual intercensal growth rates were Kasungu (3.6 percent), Nkhhotakota (3.4 percent), Mzimba (3.1 percent), Ntchisi (3.0 percent), Lilongwe and Blantyre (2.9 percent each), Nkhata Bay (2.7 percent). Districts with lowest annual intercensal growth rates were Thyolo and Phalombe (0.6 percent each), Ntcheu (0.3 percent), Mulanje (0.2 percent), while Nsanje and Likoma Districts had negative intercensal annual growth rates of -0.4 and -0.1 percent respectively (Table 2).

Of the four major urban centres, Mzuzu and Lilongwe Cities with annual intercensal growth rates of 6.2 and 6.1 percent respectively grew the fastest whereas Blantyre City (3.3 percent per annum) and the Municipality of Zomba (3.6 percent per annum) grew at rather slower rates. Furthermore, Mzuzu and Lilongwe Cities had the highest population increases of 97 and 95 percent respectively. As for Blantyre City and Zomba Municipality, population had increased by about 44 and 48 percent respectively between 1987 and 1998.

1.3.6 Nationality, Language and Religion

The final census results show that about 99 percent of the total population enumerated in Malawi were Malawians. The majority of the foreign-born population were Mozambicans who though contributed only 0.3 percent of the total population.

The census results further reveal that around 5.7 million or 57 percent of the total population in Malawi used Chichewa as their language of communication in their households. The other languages most commonly used for communication within households were Chinyanja (13 percent), Chiyao (10 percent) and Chitumbuka (9 percent).

In the Northern Region, the most popular language used in households was Chitumbuka (65 percent), followed by Chitonga (11 percent) and Chichewa was used as a medium of communication in households by only 5 percent of the total population enumerated in the Region. On the other hand, in the Central Region 91 percent of the population enumerated in the Region used Chichewa as their language of communication within their households. Chitumbuka and Chiyao (about 3 percent each) were the other languages that were commonly used for communication in households in the Region. In the Southern Region, the most commonly used language for communication in households was Chichewa (42 percent) followed by Chinyanja (26 percent). Chiyao was used for communication within households by 19 percent of the population in the Region.

It is also noted that of the 9.9 million people enumerated in the 1998 Population and Housing Census, about 7.9 million or 80 percent were Christians and a further 1.3 million or 13 percent were Moslems. The proportions of Christians in the Northern, Central and Southern Regions were 96, 83 and 73 percent respectively while about 1, 7 and 21 percent of the populations in the three respective regions were Moslems.

1.3.7 Education and Literacy

The census enumerated about 8.3 million persons aged 5 years or older. Of this total, 4.8 million or 58 percent were literate; that is, they were able to read and write at least one particular language. The results reveal that literacy rate for Malawi as a whole increased from 42 percent in 1987 by about 38 percent. Literacy rates among males and females in 1998 stood at 64 and 51 percent respectively. In 1987 the corresponding literacy rates were 52 and 32 percent for males and females respectively.

At regional level, the results show that literacy rates were highest in the Northern region (72 percent) compared to 55 percent in the Central Region and 57 percent in the Southern Region.

A marked variation in literacy rates also exists between rural and urban populations in Malawi. In urban areas 79 percent of the population aged 5 years or over were literate as opposed to only 54 percent in the rural areas.

The results further show that of the total population aged 5 years or older, around 4.9 million (59 percent) had attended primary school and a further 700,000 (8 percent) had been to secondary school and only 28,000 (less than 0.3 percent) had attended tertiary education. Sex differences in school attendance are evident from the results. About 1.1 million (26 percent) males had never attended school as compared to 1.6 million (39 percent) females while about 20,000 males (0.5 percent) as opposed to 8,000 females (0.2 percent) had attended higher education.

It is also noted that of the 5.2 million persons aged 5-29 years, about 2.4 million (43 percent) were attending primary, secondary or university education during the one-month period prior to the census; that is, in August 1998. Of those attending formal education, the majority of them, that is 2.2 million persons (90 percent) were attending

primary school education, 230,000 (9.6 percent) and only 3,000 (0.1 percent) were attending secondary and university education respectively.

1.3.8 Survival Status of Parents

The census results also show that there were about 5.7 million persons aged 20 years or younger. Of these around 5.1 million (90 percent) reported that their both parents were alive and about 88,000 (1.5 percent) reported that their both parents were dead. Furthermore, there were about 480,000 persons aged 20 years or less with only one parent alive. About 333,000 persons (69 percent) reported that their fathers were dead and about 147,000 reported that their mothers were dead at the time of the census.

In rural areas, about 467,000 persons (9.6 percent) aged 20 years or less reported that either their mother or father was dead or both their parents were dead as opposed to about 100,000 persons (12.5 percent) in urban areas. In general, the proportion of children with one parent or both parents dead in rural areas is lower than that in urban areas.

At regional level, the highest proportions of persons aged 20 years or younger with dead parents is observed in the Southern Region where around 11.7 percent had either one parent or both parents dead. The corresponding proportions in the Northern and Central Regions were 9.7 and 8.3 percent respectively.

A further examination at district level shows that the highest proportions of children with dead parents lived in Likoma District where 16 percent of the persons aged 20 years or less reported that one of their parents or both parents were dead at the time of the census. Other districts with high proportions of orphans were Chiradzulu (15.4 percent), Mulanje (13.8 percent), Blantyre (13.4 percent) and Zomba (12.1 percent). The districts with the least proportions of persons aged 20 years or less with one parent or both parents dead were observed in Ntchisi (6.3 percent), Mchinji (6.6 percent), Dowa (6.8 percent) and Kasungu (6.9 percent). In general, it is noted that more children were orphaned as a result of their fathers being dead rather than their mothers' deaths.

1.3.9 Marital Status

The census results also show that of the 6.8 million persons aged 10 years or older enumerated in Malawi in 1998, about 3.7 million persons (55 percent) were then currently married and 2.5 million (37 percent) had never been married. The results further show that marriage is universal in Malawi. In 1998, about 99 percent of all females were already ever married compared to 98 percent of their male counterparts. Furthermore, the singulate mean age at marriage, defined as the mean age at first marriage among those who will ever marry in Malawi, was 23.4 for males and 19.0 years females.

In urban areas about 534,000 (52 percent) were then currently married as opposed to 55 percent of their rural counterparts. Furthermore, of the 3.3 million males aged 10 years or older about 1.8 million (54 percent) were currently married in 1998 as compared to 2.0 million females (56 percent of their female counterparts).

At regional level, the proportions of persons aged 10 years or over who were currently married were almost the same where 53, 56 and 54 percent of them enumerated in the Northern, Central and Southern Regions respectively were currently married in 1998. However, the proportions of those divorced or separated were highest in the Southern Region where about 6 percent of the population eligible for marriage aged 10 years or over were either divorced or separated as compared to 3.9 percent and 3.2 percent of their counterparts in the Central and Northern Regions respectively.

1.3.10 Fertility and Mortality

a) Fertility

The final results further reveal that there were around 2.4 million females in the childbearing ages; that is, between 15–49 years.

The census results show evidence of a modest fertility decline during the past two decades. The Total Fertility Rate (TFR) is the indicator that is often used to give an indication of the level of fertility in a population. It is defined as the average number of children that would be born alive to a woman (or a group of women) during her lifetime if she were to pass through all her childbearing years conforming to the current rates of fertility. The 1998 Population and Housing Census gave a TFR of 6.5 in Malawi, 6.7 in rural areas and 5.4 in urban areas. Comparatively, the adjusted TFR in Malawi around 1987 was 7.4 in Malawi. The TFRs in rural and urban areas around 1987 were 7.4 and 7.0 respectively. Thus the fertility decline in urban areas of about 23 percent was more rapid than in rural areas (9 percent) or Malawi as a whole (12 percent). The crude birth rate (CBR), defined as the number of live births per 1,000 mid-year population in a given year, is also used as a rough indicator of fertility in a population. The census results indicate that in Malawi, the CBR was 50.0 births per 1000 population,

a decline from 52 births per 1000 in 1987. CBRs in rural and urban areas around 1998 were 50 and 48 births per 1000 mid-year population respectively.

The Gross Reproduction Rate (GRR) in Malawi around 1998 was around 3.4. This shows that at the time of the 1998 Population and Housing Census, a Malawian woman would on average give birth to 3.4 daughters by the time she completes her childbearing. The corresponding rate in 1987 was 3.6.

When GRR is adjusted for mortality, the Net Reproduction Rate (NRR) results. The NRR for Malawi around 1998 was 2.2, implying that a Malawian woman would be replaced by 2.2 mothers 28 years later. The large difference between the GRR (3.4) and the NRR (2.2) is largely a reflection of heavy mortality in Malawi.

b) Mortality

The 1998 Population and Housing Census in addition collected information about deaths that took place in Malawi during the 12-month period prior to the census. However, as with fertility data, mortality data are also prone to errors principally due to underreporting. Thus it is necessary to adjust the death data to estimate the levels of mortality in an area more accurately.

The mortality data were adjusted for various errors using several indirect demographic techniques. This resulted into a crude death rate (CDR) of 20.9 deaths per 1000 mid year population. The CDR is defined as the number of deaths per 1000 mid-year population. The infant mortality rate (IMR), defined as the number of deaths to infants under one year of age per 1000 live births in a given year, is often considered as a good indicator of the health status of a given area. In Malawi, the IMR was estimated at 125 deaths per 1000 live births. The IMR for males stood at 134 compared to 114 deaths per 1000 live births for their female counterparts. The corresponding IMRs in 1987 were 173 and 158 for males and females respectively. Thus there is evidence of decline in infant mortality in Malawi.

The expectation of life at birth, (e_0), defined as the average number of years a newly born baby is expected to live, is higher for females (43.2 years) than for males (40.1 years). The corresponding rates for males and females in 1987 were 47 and 49 years respectively are however, higher than the estimated life expectancies at birth around 1998. The drop in the expectation of life at birth is also evidence of worsening mortality conditions in the country, especially among the adults speculatively due to the HIV/AIDS epidemic.

c) Crude Rate of Natural Increase

The crude rate of natural increase (RNI) is the difference between the crude birth rate and the crude death rate. The RNI thus suffers all the disadvantages of CBR or CDR, in particular varying age distributions. The estimated CBR and CDR for Malawi around 1998 were 50.0 and 20.9 pr 1000 population respectively thus the RNI was estimated at 2.9 percent per annum. It is worth noting that the intercensal annual growth rate differs from the crude rate of natural increase basically in that growth of the population is influenced by the interplay of not only births or deaths, but by migration as well. RNI is free of the influence of migration.

At regional level, RNI was highest in the Central Region (3.4 percent) followed by the Northern Region (3.2 percent) and was the lowest in the Southern Region (2.4 percent).

1.3.11 Economic Activity

Of the about 6.8 million persons aged 10 years or older around 4.5 million or 66 percent were economically active. Of the economically active population, the majority of them (79 percent) were subsistence farmers (*Mlimi*) and a further 13 percent were employees.

In urban areas, about 47 percent of the population aged 10 years or older were economically active as opposed to 70 percent of their rural counterparts.

At regional level, the proportions of economically active populations in the Northern, Central and Southern Regions were 57, 68 and 67 percent respectively.

A further investigation of the proportions of economically active populations by sex reveals that the proportions of economically active males in urban areas (63 percent) were substantially higher than that of economically active females (28 percent). In rural areas, a slightly larger proportion of females (71 percent) were economically active compared to 68 percent of their male counterparts.

The census further reveals that of the 4.5 million persons aged 10 years or over about 3.7 million (83 percent) were in the Agriculture, Animal Husbandry or Forestry sector while only around 7,000 (0.2 percent) were in Administrative and Managerial sector. Similar patterns are also noted for males and females in Malawi as a whole

as well as in each of the three regions. In urban areas, however, the majority of the persons aged 10 years or over, or 112,000 persons (23 percent) were in the sales sector whereas in the rural areas the pattern is similar to that for Malawi as a whole.

1.3.12 Dwelling Unit and Household Characteristics

The census results show that the average number of persons per household or the average size of the household increased from 4.0 in 1987 to 4.3 in 1998. At regional level, the Northern Region (5.1) had the largest households compared to the Central Region (4.5) or the Southern Region (4.1).

The results further reveal that the majority of households in Malawi were male headed. Of the 2.3 million households enumerated in the country about 69 percent were headed by males. In urban areas one fifth of the households were headed by females as compared to about a third in the rural areas.

Of the 9.9 million household-based population, 6.5 million (66 percent) lived in dwelling units that had thatched roofs with mud walls, or walls made of mud and wattle; that is, traditional structures. About 1.6 million (16 percent) lived in structures that had roofs constructed with iron sheets, tiles, concrete or asbestos and walls made of burnt bricks, concrete or stones (permanent structures). The results also show that about 3.3 million or around a third of the population lived in two-room houses and 8.5 million or 86 percent of the total population lived in their own structures.

It is also worth noting that in Malawi about 2.6 million or around 27 percent had access to boreholes as their main source of drinking water while 2.5 million or 25 percent drew their drinking water from unprotected wells. A further 21 percent used either piped water or communal standpipes as their main sources of drinking water.

The final results also indicate that around 7.2 million or 73 percent of the total population had access to traditional pit latrines while 2.2 million or 22 percent had no access to any toilet facility.

It is also noted that the majority of Malawians (94 percent) used firewood and only 2 percent used electricity as their main source of energy for cooking and 90 percent of them used paraffin while 5 percent used electricity for lighting. Furthermore, about 4.9 million or roughly half of the total population had access to at least one radio and 4.0 million or 41 percent had access to at least one bicycle.

Table 1.3: Average Household Size and Possession of Household Assets by District: 1998

Region/ District	Average Household Size	Safe Drinking Water	Access to Toilet	Access to Radio	Availa- bility of Bicycle	Availa- bility of Ox cart	Permanent Structures	Traditional Structures
MALAWI	4.3	49.2	78.2	49.9	40.7	5.2	15.8	65.8
RURAL	4.4	42.6	75.1	45.6	42.4	5.6	12.3	72.8
URBAN	4.3	88.6	96.6	75.7	30.7	2.5	36.8	23.6
NORTHERN REGION	5.1	47.2	81.5	51.1	36.8	7.5	16.1	65.9
Chitipa	4.9	37.0	93.4	39.6	30.9	2.6	9.7	84.0
Karonga	4.9	64.5	81.2	46.7	44.2	5.7	17.6	59.5
Nkhata Bay	4.9	37.5	82.5	50.5	21.3	3.2	15.7	53.8
Rumphi	5.0	53.0	90.5	60.5	40.1	7.3	16.5	63.6
Mzimba	5.2	45.5	76.9	52.9	39.6	10.4	17.1	67.9
Likoma	5.2	13.3	84.9	57.3	4.2	1.6	6.8	71.6
CENTRAL REGION	4.5	44.9	76.5	47.6	42.7	7.3	14.7	71.3
Kasungu	4.9	28.0	78.6	56.3	52.3	11.8	14.4	76.5
Nkhotakota	4.6	43.2	63.8	52.5	38.6	1.5	18.0	58.6
Ntchisi	4.7	30.8	78.0	44.7	37.6	9.0	7.6	88.1
Dowa	4.5	25.2	70.3	44.3	42.4	10.0	12.0	80.4
Salima	4.2	50.8	61.3	41.3	44.2	3.3	11.8	78.2
Lilongwe	4.3	52.9	79.4	52.3	41.4	5.5	18.9	59.8
Mchinji	4.6	46.9	67.0	46.1	56.0	11.5	13.8	76.3
Dedza	4.3	41.4	83.9	35.6	40.4	9.0	9.6	84.0
Ntcheu	4.3	64.9	86.0	42.4	30.6	4.6	13.5	71.1
SOUTHERN REGION	4.1	53.5	78.8	51.6	40.0	2.6	16.7	60.9
Mangochi	4.0	39.1	82.3	42.2	41.4	2.5	10.7	69.2
Machinga	4.1	48.6	76.3	48.2	55.8	3.7	9.5	75.6
Zomba	4.0	55.2	86.3	53.0	46.3	2.8	18.4	65.3
Chiradzulu	4.0	50.0	88.6	46.9	35.1	1.6	16.9	64.9
Blantyre	4.1	76.9	91.9	68.2	23.1	2.0	27.1	29.6
Mwanza	4.3	40.7	76.0	47.4	32.6	5.1	12.2	77.8
Thyolo	4.1	26.8	86.6	49.8	27.0	1.6	17.0	62.5
Mulanje	4.1	49.0	79.3	46.3	45.6	1.6	19.6	52.9
Phalombe	3.9	48.6	68.4	44.6	55.5	3.2	10.8	77.0
Chikwawa	4.5	55.1	42.4	52.2	53.9	3.4	14.1	75.9
Nsanje	4.5	72.0	45.7	46.7	39.3	5.6	14.3	74.5
Balaka	4.2	70.8	79.2	51.1	44.1	2.6	13.1	60.5

CHAPTER 2

EVALUATION OF AGE AND SEX DATA

George Mandere

2.1 Appraisal of the Quality of Age and Sex Data by Graphic Methods

In the absence of any historical disturbing factors such as wars, plagues etc, the age and sex distribution of a population observed at a given point in time is generated as the result of the interplay of the past levels and trends in fertility, mortality and migration. If the data has been accurately reported and recorded, the age distribution of the population should show a high concentration of people in younger ages or age groups than at subsequent ages or age groups. In other words, the number of people reported on a particular age should gradually decrease from one younger age to the next older age. A departure from this trend is a reflection of errors in the data.

The graphical presentation of the distribution of the reported single year ages in the 1998 census for males and females at the national and sub-national levels are given in Figures 1-6. The age distributions at both the national and sub-geographical divisions of the country show undulations. The observed peaks and troughs indicate that, in reporting or recording of ages, some ages were preferred while certain ages were avoided respectively. At both the national and sub-national levels and for both sexes, the peaks are observed on ages ending with digits 0, 2, 5 and 8. The troughs, which show the avoided ages, are noted on ages ending with the remaining digits.

Figure 2.1: Population by Single Age Distribution for Male Malawi, 1998

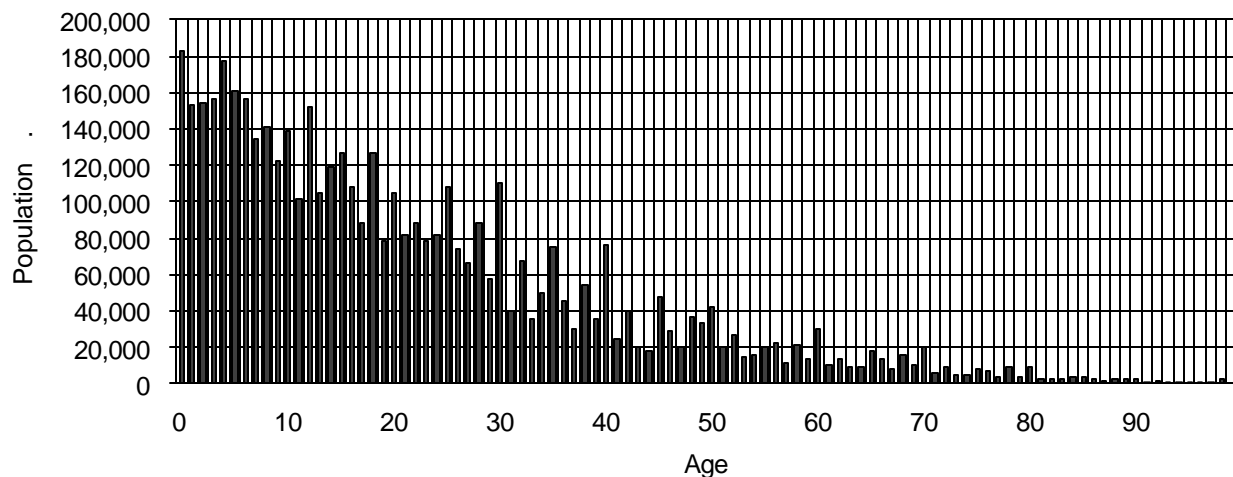


Figure 2.2: Population by Single year Age Distribution for Female, Malawi 1998

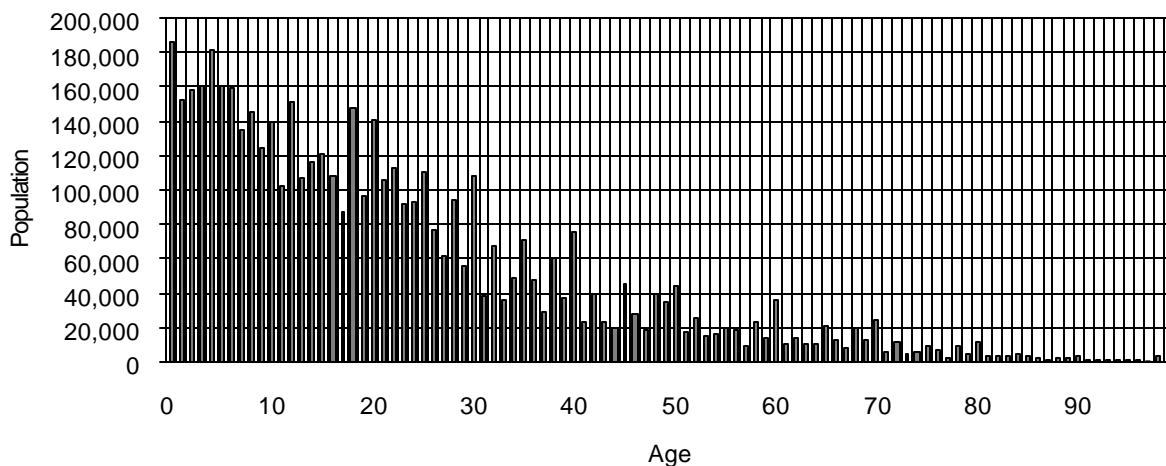


Figure 2.3: Population by Single Year Age Distribution for Male, Rural Area, 1998

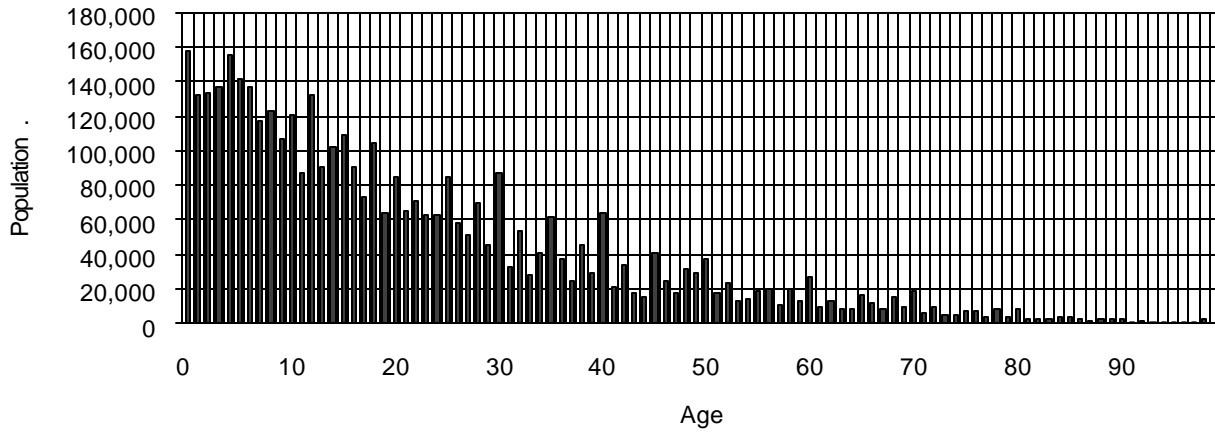


Figure 2.4: Population by Single Year Age Distribution for Female, Rural Area,

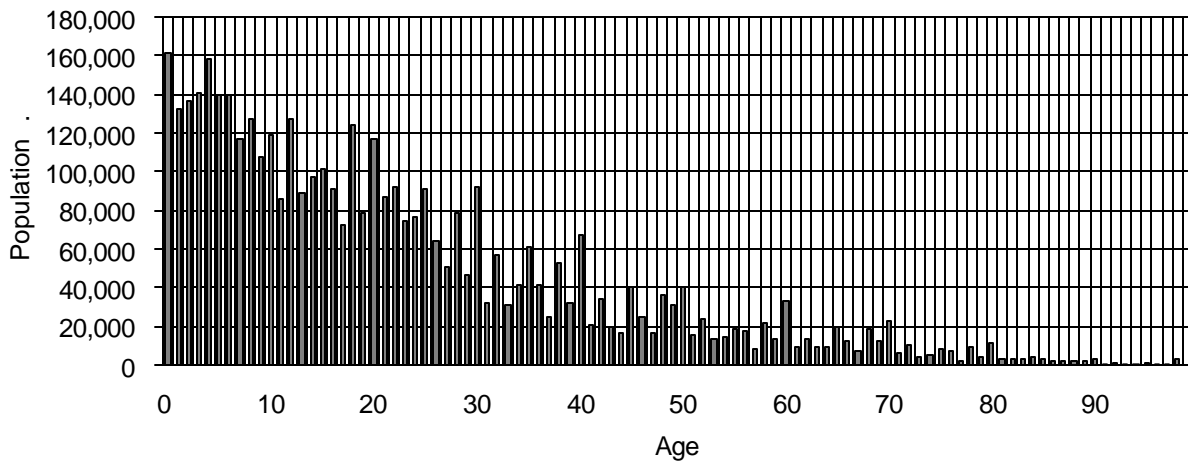


Figure 2.5: Population by Single Year Age Distribution for Male, Urban Area,

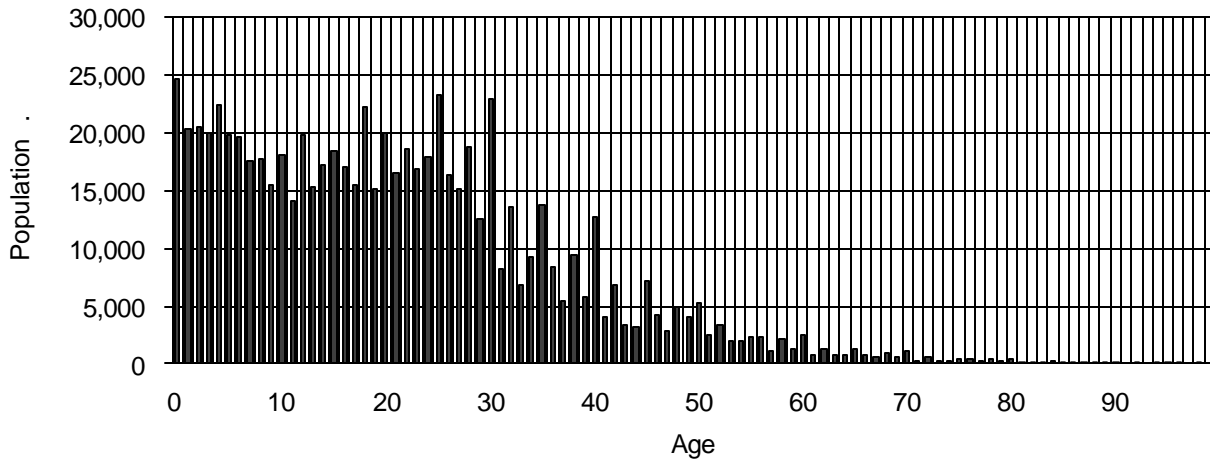
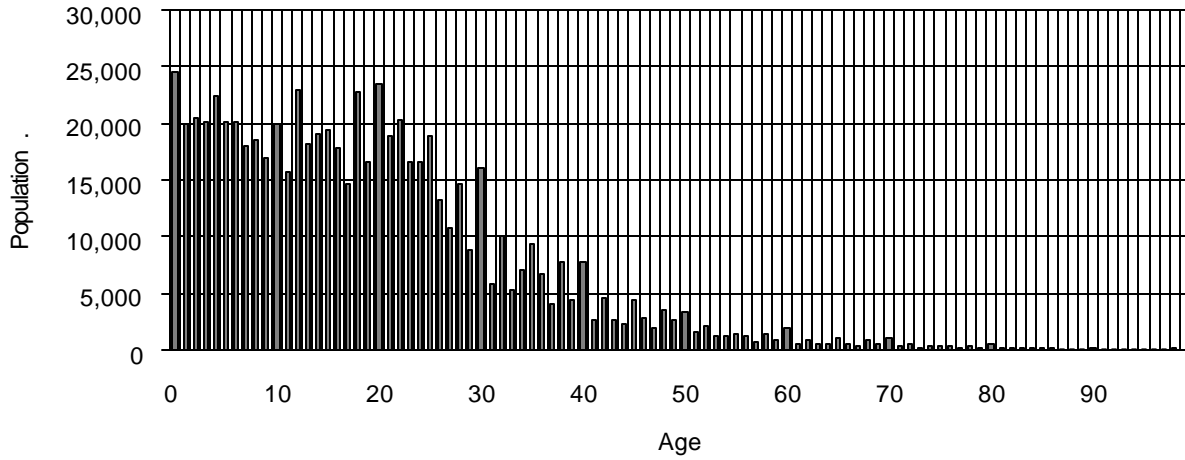


Figure 2.6: Population by Single Year Age Distribution for Female, Urban Area, 1998



When the single year age distribution is presented in five-year age groups most of the distortions inherent in single year age data are smoothed. However, certain fluctuations still exist for a number of reasons. Some of the people that belong to a given age group may be omitted. In certain situations, ages are misreported and/or recorded across critical age boundaries.

As was the case with single year age distribution, the age distribution of the population in five year age groups at the national and sub-national levels are presented in Figures 7.9. The inspection of all the Figures shows most of peaks and troughs, which were noted in the single year age data, have been smoothed. However, the lack of a smooth and progressive decrease of the age distribution from the youngest age group to the oldest age group suggests that errors still exist in the data. For example, Figure 6 indicates a high concentration of females in the age group 20-24 compared to the preceding younger age group, 15-19.

Figure 2.7: Population by 5 Year Age Group and Sex: Malawi, 1998

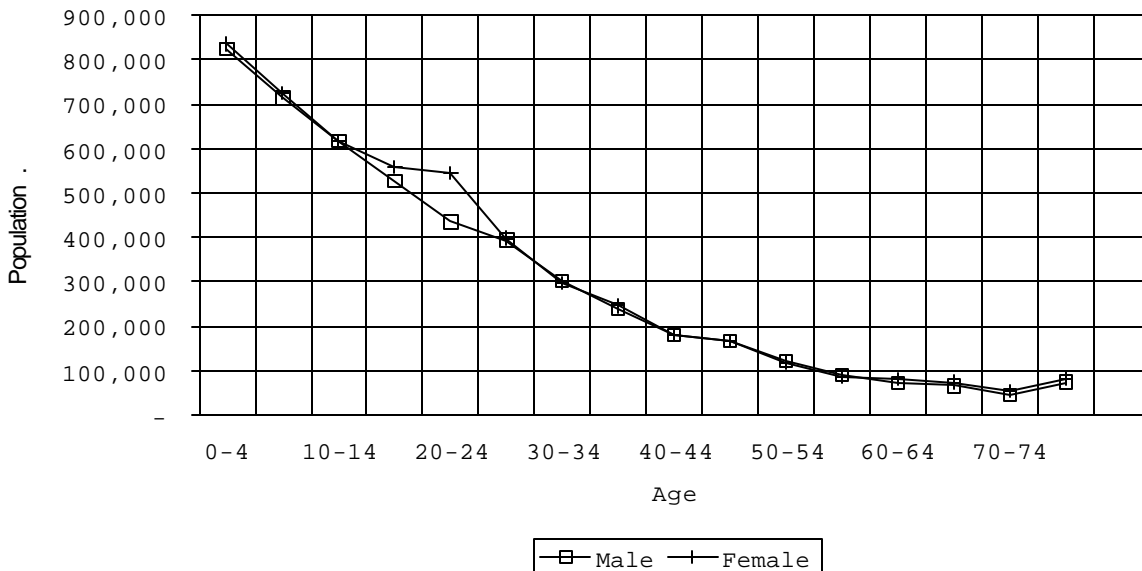


Figure 2.8: Population by 5 Year Age Group and Sex: Rural Area, 1998

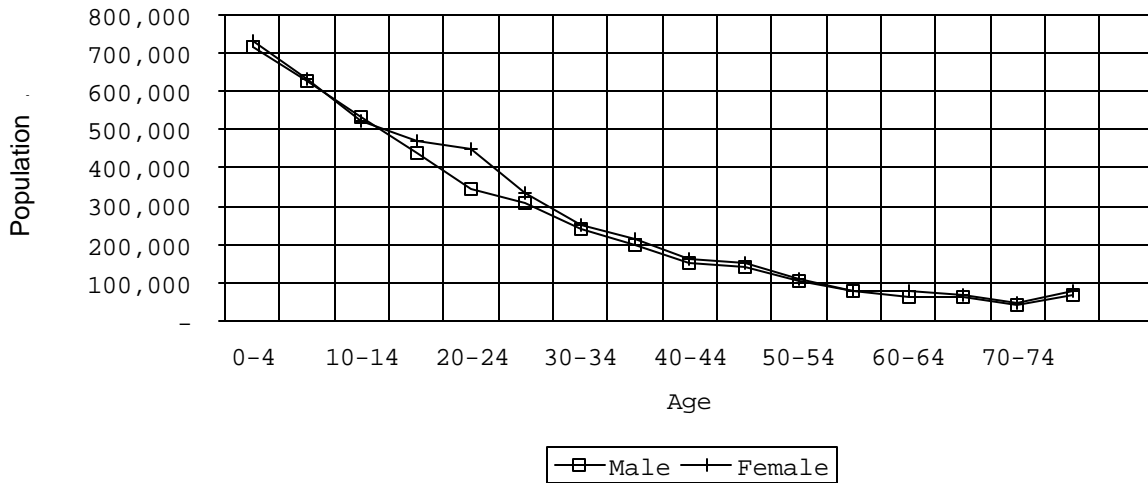
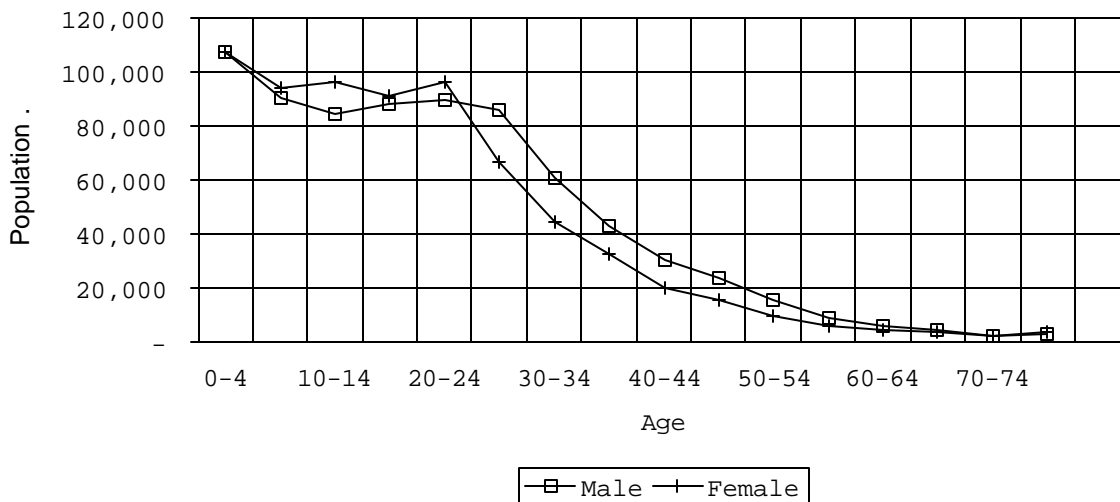


Figure 2.9: Population by 5 Year Age Group and Sex: Urban Area ,



2.2 Evaluation of the Quality of Age and Sex Data using Indices

In order to gauge the magnitude of errors in the age and sex distribution, a number of techniques were developed to assess the quality of single year age and five-year grouped data. Selected methods have been used to appraise the quality of the reporting of age in the 1998 Population and Housing Census.

2.2.1 Whipple's Index

One of the indices used to evaluate the quality of single year data is called the Whipple's Index (WI). The WI is a summary index that gives the extent of age heaping as a result of preference for ages with terminal digits 0 and 5. The index is acquired by calculating the percentage of the total reported on ages ending with 0 and 5 in the 23-62 age range divided by one fifth of the total population in the same age range. The index is obtained using the following relationship:

$$WI = \frac{(P_{25} + P_{30} + P_{35} + \dots + P_{55} + P_{60})}{1/5(P_{23} + P_{24} + P_{25} + \dots + P_{60} + P_{61} + P_{63})}$$

The WI assumes any value between 100 and 500, with a value of 100 indicating no or zero preference and a value of 500 signifying that ages of all people were reported and recorded only on ages with terminal digits 0 and 5.

Table 2.1 presents a summary of the Whipple's indices for males and females both at the national and sub-national levels for the 1998 and 1987 Malawi Population and Housing Censuses.

Table 2.1 Summary of Whipple's Indices for Malawi: 1998 and 1987 Population Censuses

Census Year		1998	1987
Malawi	Male	149	138
	Female	146	146
Southern Region	Male	156	141
	Female	151	140
Central Region	Male	144	133
	Female	142	138
Northern Region	Male	140	135
	Female	140	138
Rural Area	Male	150	+
	Female	148	+
Urban Area	Male	146	+
	Female	137	+

+ Not calculated

The results in Table 2.1 indicate that there was age heaping of the population on ages ending with digits 0 and 5. In general, there was a strong tendency among males to report their ages on those ages with terminal digits 0 and 5 compared to their female counterparts. At region level, the quality of age data both males and females in the Northern Region was of more acceptable quality than for the other two regions. The results by rural and urban areas suggest that there was less digit preference among both males and females in the urban area than by their counterparts in the rural areas. The Whipples indices for 1987 are smaller than the corresponding values for 1998. This indicates a growing tendency of the population to report their ages on those ages with terminal digits 0 and 5. By the United Nation's criteria, the reported single year age distribution obtained in the 1998 Malawi Population and Housing Census is, on the overall, classified as rough necessitating smoothing or graduation before its use.

2.2.2 Myers Index

Another index for appraising the quality of single year age data was developed by Myers. Unlike the Whipple's index which looks at preference for ages with end digits 0 and 5, the Myers Index (MI) examines the preference or avoidance of reporting of ages ending with each of the ten digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. The index is secured by first calculating the weighted population reported on ages ending with each of the ten digits and then expressing the blended population on each digit as a percentage of the total blended population. In the absence of any irregularities in the reporting of ages, the sum of the blended population on each digit is expected to be equal to 10 percent of the total blended population. A percentage in excess of 10 percent indicates preference of ages ending with such digit and vice versa.

Figures 10-15 show the digit preference or avoidance of each of the ten digits for the age distributions of males and females calculated from the 1998 Population and Housing Census data. For both males and females, the Figures 13-18 indicates over-selection of ages ending with digits 0, 2, 5 and 8 while ages with terminal digits 1, 3, 4, 6, 7 and 9 were underreported. This pattern of age reporting is observed at the national level as well as within sub-population groups in Malawi.

Figure 2.10: Digit Preference in Age Reporting Using Myers Index by Sex for Malawi, 1998

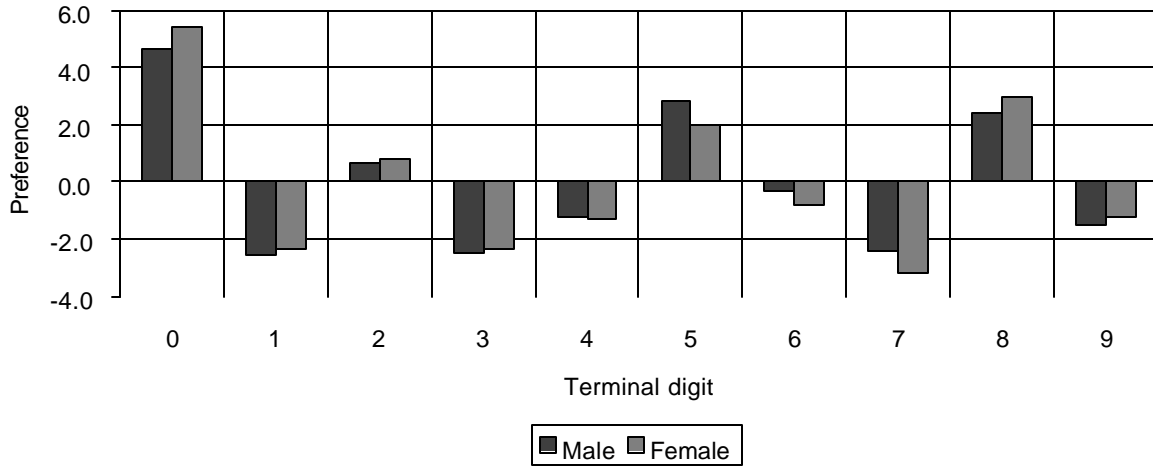


Figure 2.11. Digit Preference in Age Reporting Using Myers Index by Sex for Rural, 1998

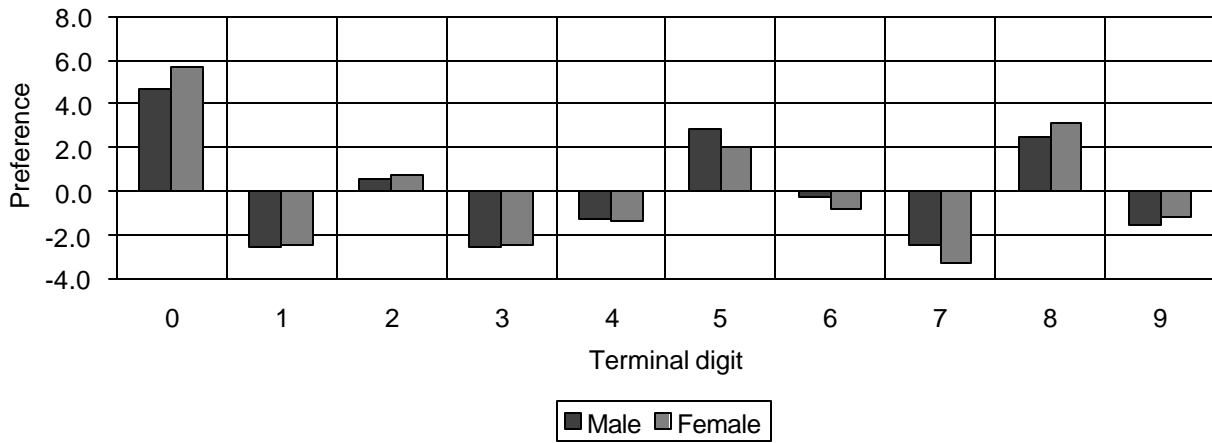


Figure 2.12: Digit Preference in Age Reporting Using Myers Index by Sex for Urban, 1998

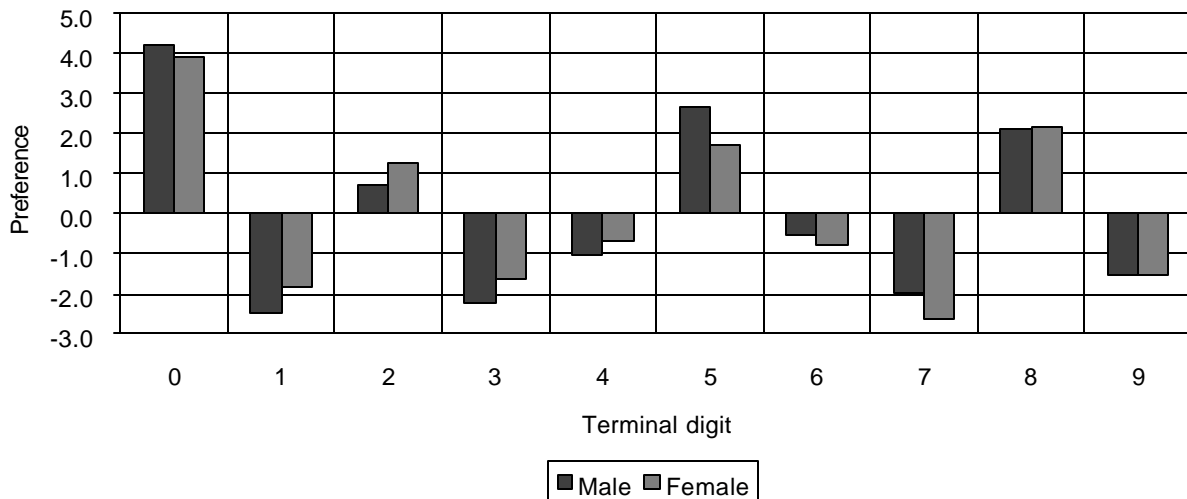


Figure 2.13: Digit Preference in Age Reporting Using Myers Index by Sex for Northern Region, 1998

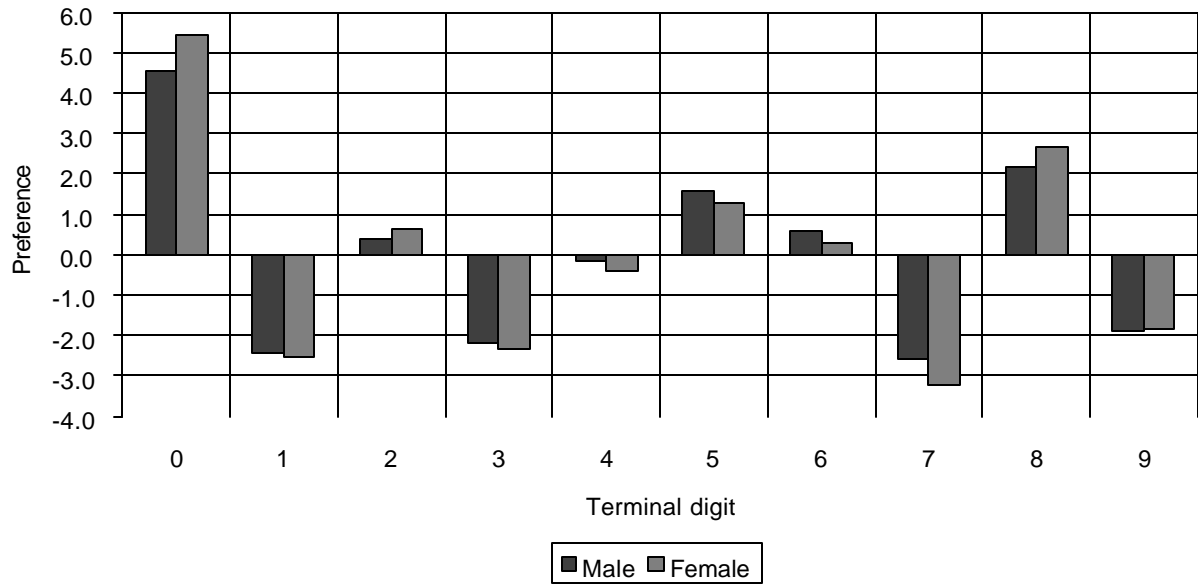


Figure 2.14: Digit Preference in Age Reporting Using Myers Index by Sex for Central Region, 1998

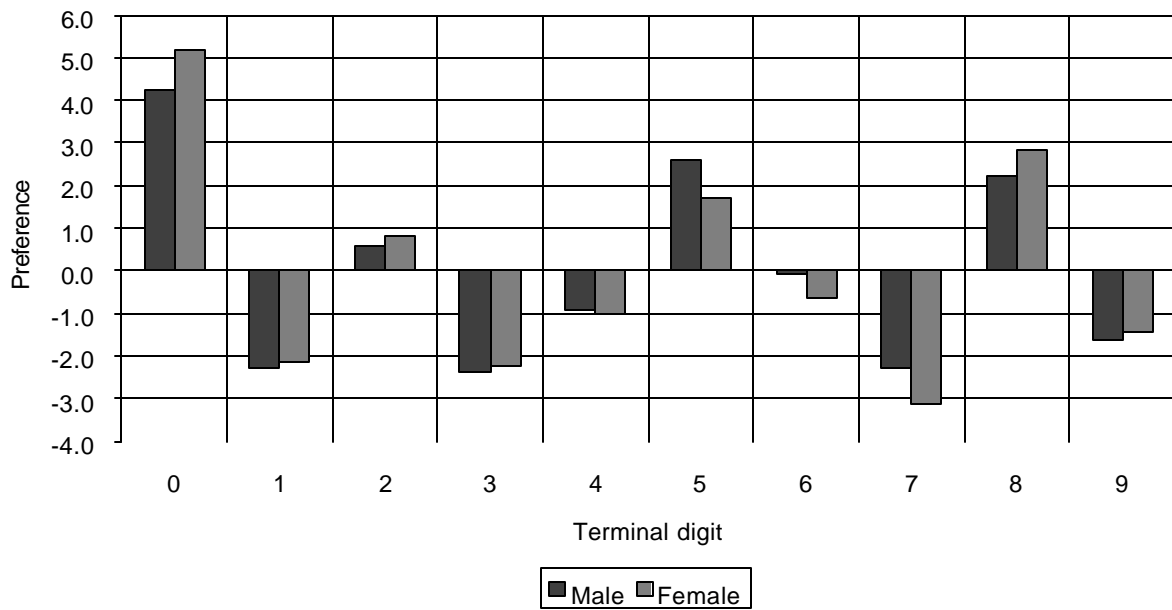


Figure 2.15 Digit Preference in Age Reporting Using Myers Index by Sex for Southern Region, 1998

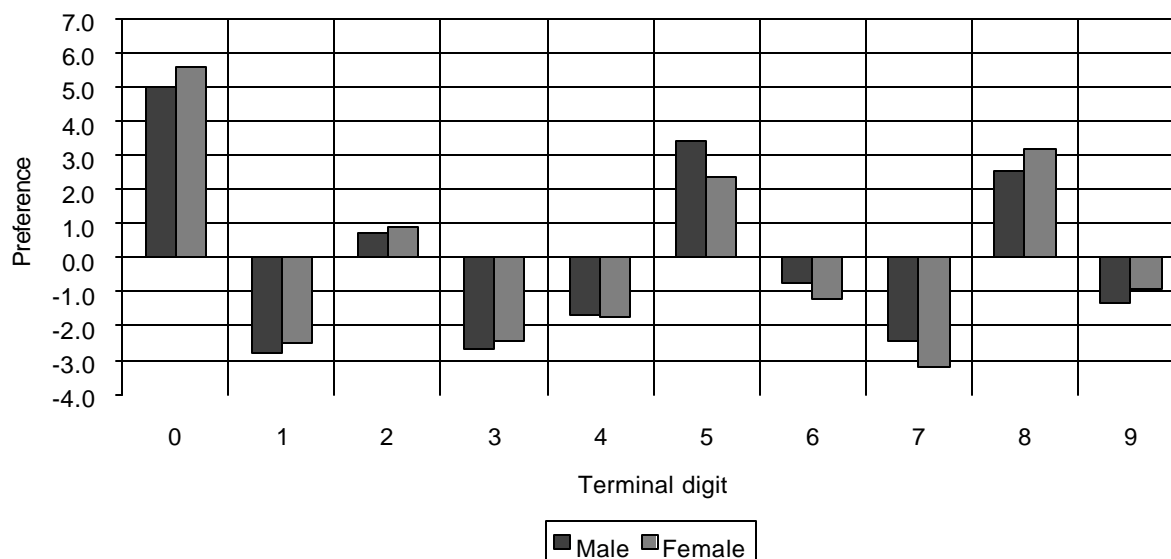


Table 2.2 presents indices summarizing the extent of preference or avoidance of all the ten digits for both sexes for Malawi and sub-national areas derived from the 1998 and 1987 Population and Housing Censuses.

**Table 2.2 Summary of Myers Indices for Malawi:
1998 and 1987 Population Censuses**

Census Year		1998	1987
Malawi	Males	21.0	12.4
	Females	22.4	15.1
Southern Region	Males	23.4	14.5
	Females	24.0	16.9
Central Region	Males	19.2	12.8
	Females	21.1	15.0
Northern Region	Males	18.5	10.8
	Females	20.6	13.4
Rural Area	Males	21.3	+
	Females	23.0	+
Urban Area	Males	19.5	+
	Females	18.1	+

+ Not calculated

The results show that, except for the urban area, the reporting of age by males was more acceptable than by females. Again, the age distribution of males and females enumerated in the Northern Region was more reliable than for both the Central and Southern Regions. The evaluation of age reporting by place of residence reveals that there were fewer irregularities in the reported age distribution for both males and females in the urban area than in the rural area. The results also suggest that there was stronger digit preference in the reporting of ages in 1998 than in 1987.

2.2.3 Sex Ratios and Sex Ratio Score

Sex ratio is the number of males per 100 females. It is employed as an evaluative tool for assessing the acceptability of grouped data. In a situation when the age distribution of a population has been correctly recorded, the sex ratio is expected to progressively and gradually decline from a young age group to the next older age group until the lowest sex ratio is recorded in the oldest age group. At birth, more males than females are born. However, due to sex differentials in mortality, more males than females die off as they grow old leading to a deficit of males with advancing age. In the absence of any genuine historical factors that affected the population, deviations from this expected pattern suggest the presence of errors in the data.

The sex ratios presented in Table 2.3 do not show the expected gradual decline with advancing age. High sex ratios are observed in some older age groups than in young age groups that are suggestive of errors in the absence of selective mortality and migration. The common phenomenon of the presence of more males than females in urban area is clear in the Table.

The sex ratio score, that is, the mean value of the absolute differences of the sex ratios for age groups for Malawi and sub-national area were calculated for 1998 and 1987 census and are presented in Table 2.4.

**Table 2.3 Summary of Sex Ratio Scores for Malawi:
1998 and 1987 Population Censuses**

Census Year	1998	1987
Malawi	5.4	6.4
Southern Region	9.1	6.6
Central Region	5.8	7.1
Northern Region	6.4	6.8
Rural Area*	5.4 (5.6)	5.8
Urban Area*	8.9 (11.7)	12.4

**Index calculated based on age groups from 0-4 to 65+
Note: Scores in brackets based on 0-4 to 75+ age groups*

It is noted from the Table that the highest sex ratio score is found in the urban area followed by the Southern Region. The high sex ratio score in the urban area is due to the fact that there is an excess of males over females in most age groups in urban area. Except for Southern Region, the results indicate an improvement in the reporting of sex data over time.

2.2.4 Age Ratios and Age Ratio Score

Another technique used to appraise the quality of data in five-year age groups is to calculate the age ratios and age ratio score for males and females separately. The age ratio is calculated as a percentage of the population reported in an age group to the average of the population reported in the adjacent two age groups. In the population that has experience normal changes in the three components of population change and when the age data has been accurately reported and recorded, the age ratios should be equal to 100. Any departure of the age ratio from 100 is indicative of errors. The mean of the absolute deviations of the age ratios from 100 measures the accuracy of the age distribution and is called the Age Ratio Score. When the age distribution is nearly accurately reported the Age Ratio Score is close to zero.

Tables 2.4- 2.7 give the age ratios calculated from the 1998 five-year age distribution for Malawi and sub-national areas. The discrepancies of the age ratios from 100 at each age group are evident in Table 2.4. At the national level, the excess of age ratios over 100 are observed at age groups: 15-19, 25-29, 45-49 and 65-69 for males while a similar pattern for females is noted in age groups 20-24, 35-39, 45-49, 60-64 and 65-69. The excess of the age ratios in the above age groups could be due to over counting or age misreporting, which resulted in the inclusion of population that belong to other age groups. The factors working in the opposite direction could explain the age ratios less than 100 observed in the other age groups.

In Table 2.7 the age ratio scores for males and female at both the national and sub-national levels derived from the 1998 and 1987 Census data are presented.

**Table 2.4 Summary of Age Ratio Scores for Malawi:
1998 and 1987 Population Censuses**

Census Year		1998	1987
Malawi	Males	5.6	12.4
	Females	7.1	8.2
Southern Region	Males	9.4	13.0
	Females	7.7	8.9
Central Region	Males	5.9	13.1
	Females	7.3	8.6
Northern Region	Males	3.3	8.4
	Females	5.1	4.7
Rural Area*	Males	4.0 (5.5)	9.8
	Females	6.2 (7.2)	7.1
Urban Area*	Males	5.5 (6.4)	7.4
	Females	7.7 (8.4)	8.2

**Index calculated based on age groups from 0-4 to 65+
Note: Scores in brackets based on 0-4 to 75+ age groups*

The Table shows that, except for Southern Region, the reporting of age in 1998 by males was more acceptable than by females. The age ratio scores from the age distribution of males and females in the Northern Region are smaller than the corresponding scores for their counterparts in the Central and Southern Regions. This confirms an earlier observation. Age distribution for males in the urban area was more accurate than the data on males in the rural area. The results also suggest that quality of age data had improved from 1987 to 1998.

2.2.5 The United Nations Joint Score

The United Nations proposed a composite measure of the age and sex accuracy called the United Nations Joint Score. The Joint score is obtained as the sum of male and female age ratio scores plus three times the sex ratio score.

**Table 2.5 Summary of United Nations Joint Scores for Malawi:
1998 and 1987 Population Censuses**

Census Year	1998	1987
Malawi	28.9	39.9
Southern Region	44.5	41.7
Central Region	30.5	43.0
Northern Region	27.6	33.5
Rural Area *	36.4 (29.5)	34.4
Urban Area *	39.9 (49.9)	52.9

**Index calculated based on age groups from 0-4 to 65+
Note: Scores in brackets based on 0-4 to 75+ age groups*

It is noted from the Table that the accuracy index for Northern Region is the lowest among the three regions. This indicates that, on the overall, the quality of age data collected in the Northern Region contained fewer errors than the data gathered from the other two regions. The observed UN Joint score suggests that the reporting of age data by people in the rural area was more accurate than by their counterparts in the urban area. Considering that urban

residents are more literate than the rural people, it is difficult to accept that age data from the rural area was of higher quality than that from the urban area. The higher accuracy index for the urban area is probably affected by the high sex ratio score which, in turn, influenced by the dominance of males in the urban area. The results in the Table also suggest an improvement in the reporting of age sex data over time.

2.3 Comparison of the Reported and Smoothed Age Distributions

The indices and graphical methods used in the preceding sections have revealed that there were irregularities in the reported age structure in the 1998 census. Smoothing techniques, smoothing without modifying the totals, were applied to the enumerated age distribution in order to correct the data for age misreporting and digit preference. The reported age structure and smoothed age distribution by the Arriaga smoothing technique are presented in Table 2.5.

Table: 2.6 Comparison of the Reported and Smoothed Age Distributions, Malawi: 1998

Age Group	Male Age Distribution		Female Age Distribution	
	Reported	Smoothed	Reported	Smoothed
All Ages	4, 902, 292	4, 902, 292	5, 096, 605	5, 096, 605
0-4	823,625	821,783	836,765	835,780
5-9	714,830	716,672	725,540	726,525
10-14	616,445	614,849	616,055	623,625
15-19	527,865	529,461	560,071	552,501
20-24	435,138	451,572	543,922	514,183
25-29	393,913	377,479	398,552	428,291
30-34	303,080	299,325	298,161	304,987
35-39	239,043	242,798	245,784	238,958
40-44	180,167	192,727	180,542	193,647
45-49	166,258	153,698	166,498	153,393
50-54	120,193	116,747	118,653	112,069
55-59	89,909	93,355	85,317	91,901
60-64	72,251	73,521	80,833	80,856
65-69	65,655	64,385	73,665	73,642
70-74	45,310	59,707	52,739	69,004
75+	73,881	59,485	83,208	66,943

A glance at the reported and smoothed male and female age distributions shows under-reporting of the population in certain age groups and over-reporting in other age groups. In the case of males, under-reporting is noted in age groups 5-9, 15-19, 20-24, 35-39, 40-44, 55-59, 70-74 and for females, cases of under count are evident in age groups 5-9, 10-14, 25-29, 30-34, 35-39, 55-59 and 70-74.

2.4 Evaluation of the Age Distribution by Intercensal Survival Ratio Method

The age and sex distributions of the population recorded in 1998 and 1987 Population and Housing Censuses were used to determine the ratio of persons of various age groups in 1987 that survived to 1998. The survival ratio is obtained by relating the size of a cohort at a given census date to the size of the same cohort at the next census date. When the length of the intercensal period is not a multiple of 5, the population enumerated in one 5 year conventional age group at an earlier census date would not be counted in corresponding 5 year conventional age group at the next census date. Since the intercensal period was 11 years, the 1988 age distribution was interpolated to create a 10-year intercensal period. The Survival Ratios were derived as

$$SR = \frac{P(x+10, x+14: 1998)}{P(x, x+4: 1988)}$$

The intercensal survival ratios obtained by dividing the enumerated populations for 1998 by the interpolated population for 1988 are shown in Table 2.7.

Table 2.7: Ten-year Intercensal Survival Ratios by Sex for Malawi, 1988-1998

Age	Male Survival Ratios	Female Survival Ratios
0	0.8809	0.8607
5	0.8082	0.8376
10	0.8628	1.1030
15	1.0355	0.9608
20	0.9742	0.7778
25	0.8232	0.7777
30	0.8377	0.7690
35	0.8071	0.7440
40	0.8296	0.7740
45	0.6674	0.6151
50	0.7687	0.7514
55	0.7629	0.8223
60	0.7169	0.6774
65	0.5205	0.4926

If the observed intercensal survival ratios are acceptable, the calculated values of survival ratios should gradually decline with increasing age. The results show a departure of the survival ratios from the expected trend. Wide fluctuations of the survival ratios are observed from one younger age group to the next adjacent and older age group for both males and females. In some instances, survival ratios in excess of 1 are noted for age group 15-19 for males and 10-14 for females.

CHAPTER 3

SOCIAL ECONOMIC CHARACTERISTICS

3.1 Nationality

Blazio M. Haleke

3.1.0 Introduction

For the first time in the history of censuses in Malawi, the 1998 Population and Housing Census collected data on nationality. This term refers to a person's country of origin. The data was collected by asking of household members their country of origin. This report presents the findings of the census in the following areas: Population composition of both Malawi and foreign nationality by sex and age, the distribution of the same by region and district and also by rural/urban areas. It also presents data on the formal educational status of the foreign population. It will be noted in this report that the data presented are only for nationals from seven selected countries i.e. Malawi, Mozambique, Zimbabwe, Zambia, Tanzania, Republic of South Africa and India. The reason is that the rest of all other countries showed very small figures that could not be used for meaningful analysis, and as such were grouped together in the category of "Other Places"

3.1.1 Nationality by Sex

Table 3.1 shows the final census results by sex and nationality. The table indicates that about 99 percent (around 9.9 million) of the total population enumerated in Malawi in 1998 were Malawians. The majority of the foreign-born population were Mozambicans though they contributed only about 0.3 percent of the total population. On sex composition, Malawian males and females were the highest in their respective sex categories with a contribution of about 99 percent and slightly over 99 percent respectively.

Table 3.1: Percentage Distribution of Population by Sex and Nationality

Country	Total	Males	Females
Total	100.0	100	100
Malawi	99.4	99.4	99.5
Mozambique	0.3	0.4	0.3
Zimbabwe	0.0	0.0	0.0
Zambia	0.0	0.0	0.1
Tanzania	0.0	0.0	0.0
Republic of South Africa	0.0	0.0	0.0
India	0.0	0.0	0.0
Other place	0.1	0.1	0.1

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.1.2 Age-Sex Composition

Table 3.2 presents the age-sex structures of both Malawi and foreign population. It is noted that the highest Malawian origin population was in the age group of 5 to 9 years (about 15 percent) while the lowest population (about 1 percent) was in the age group of 85 years and over. On the other hand, the highest foreign population (about 18 percent) was registered in the age group of 20 to 24 years while the lowest (about 1 percent) was recorded in the age group of 85 years and over. On the sex composition the Malawian and foreign males recorded their highest population in the age groups of 5 to 9 years (about 15 percent) and 20 to 24 years (about 11 percent)

respectively. The highest Malawian female population was in the age group of 59 years (about 14 percent) while that of female foreigners was in the age group of 20-24 years (about 12 percent).

3.1.3 Sex Ratio

Sex ratio is defined as the number of males per 100 females and it is a quantitative reflection of the numerical balance between the two sexes in different age groups. The overall sex ratio for Malawians was 96 while that of the foreigners was 115.

Table 3.2: Age -Sex Distribution and Sex Ratio by Nationality

Age	Both Sexes		Males		Females		Sex Ratio	
	Malawians	Foreigners	Malawians	Foreigners	Malawians	Foreigners	Malawians	Foreigners
Total All Ages	100.0	100.0	100.0	100.0	100.0	100.0	96	115
Less than 1 year	3.7	1.9	3.8	1.8	3.7	2.0	98	108
1-4	13.0	6.6	13.2	6.1	12.9	7.2	98	98
5-9	14.5	8.0	14.7	7.5	14.4	8.6	99	101
10-14	12.4	8.6	12.7	8.4	12.2	8.7	100	111
15-19	11.0	9.9	10.8	10.9	11.1	8.6	94	146
20-24	9.8	11.7	8.9	11.4	10.7	12.0	80	109
25-29	8.0	10.5	8.1	11.1	7.9	9.9	99	129
30-34	6.0	8.9	6.2	9.4	5.9	8.4	101	130
35-39	4.9	7.1	4.9	7.2	4.8	6.9	97	121
40-44	3.6	5.4	3.7	5.5	3.6	5.3	100	120
45-49	3.3	4.6	3.4	4.5	3.3	4.7	100	111
50-54	2.4	3.8	2.5	3.8	2.3	3.8	101	116
55-64	3.3	5.2	3.3	4.8	3.3	5.5	98	100
65-74	2.4	4.1	2.3	3.8	2.5	4.6	88	95
75-84	1.1	2.4	1.1	2.3	1.1	2.5	90	106
85 and Over	0.5	1.4	0.4	1.5	0.5	1.4	85	123

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.1.4 Population Distribution by Nationality

Table 3.3 shows the region/district population distribution by nationality. The highest foreign population enumerated in the Northern region was that of Zambians (about 44 percent); they dominated all non-Malawians in three of the six districts in the region. In the Central Region, the Mozambicans registered the highest population of about 53 percent of total foreigners, dominating their fellow non-Malawians in seven of the region's nine districts. In the South, about 70 percent of foreigners were Mozambicans who spread across all twelve districts.

**Table 3.3: Percentage Distribution of Foreign Born Population by Region/District
Population by Foreign Nationality 1998**

Region/District	Total	Mozambique	Zim babwe	Zambia	Tanzania	Republic of South Africa	India	Other places
Malawi	100	58.0	5.7	8.4	4.9	1.9	2.0	19.0
Northern Region	100	3.9	3.2	43.6	41.1	1.4	0.5	6.4
Chitipa	100	0.0	0.3	58.7	40.2	0.1	0.0	0.7
Karonga	100	0.3	0.9	3.3	92.6	0.3	0.0	2.6
Nkhata Bay	100	12.3	12.5	15.3	41.4	6.3	0.0	12.1
Rumphi	100	4.9	2.3	77.8	8.2	2.3	0.2	4.4
Mzimba	100	5.0	5.4	68.6	5.3	1.5	1.8	12.4
Likoma	100	44.9	0.0	0.0	18.0	1.1	0.0	36.0
Central Region	100	52.6	5.4	10.0	1.5	1.9	2.4	26.2
Kasungu	100	65.1	4.5	18.2	1.4	0.7	0.2	10.0
Nkhotakota	100	52.5	6.5	5.9	9.1	2.8	0.0	23.3
Ntchisi	100	61.2	11.9	0.7	0.0	1.1	0.0	25.2
Dowa	100	22.2	1.3	1.1	0.2	0.2	0.0	75.0
Salima	100	56.4	8.0	5.2	5.8	2.5	0.1	21.9
Lilongwe	100	30.9	5.9	8.5	1.9	3.7	6.9	42.3
Mchinji	100	39.1	3.5	42.9	0.6	0.3	0.1	13.5
Dedza	100	76.4	4.7	1.8	0.1	0.9	0.0	16.0
Ntcheu	100	85.1	6.4	1.3	0.2	1.1	0.1	5.8
Southern Region	100	70.0	6.4	1.6	0.7	2.0	2.1	17.2
Mangochi	100	76.0	7.3	2.8	0.6	2.2	0.1	11.1
Machinga	100	71.1	12.0	1.4	0.5	0.8	0.1	14.1
Zomba	100	46.5	8.4	1.9	2.0	1.7	2.6	36.8
Chiradzulu	100	24.7	22.8	3.5	0.5	3.3	0.0	45.2
Blantyre	100	22.8	6.6	3.4	1.9	6.6	11.3	47.6
Mwanza	100	91.8	4.7	0.3	0.0	0.4	0.0	2.8
Thyolo	100	77.5	5.6	1.2	0.3	1.1	0.0	14.2
Mulanje	100	82.7	6.0	0.5	0.1	0.3	0.0	10.4
Phalombe	100	81.1	6.8	1.1	0.2	0.2	0.1	10.5
Chikwawa	100	90.4	2.4	0.5	0.1	1.2	0.1	5.3
Nsanje	100	92.8	2.5	0.2	0.1	0.2	0.0	4.1
Balaka	100	57.3	22.8	4.1	1.5	1.3	0.3	12.6

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.1.5 Population Distribution of Foreign Nationals by District

Table 3.4 shows data of foreign nationals by district. It is revealed in this table that the highest non-Malawian population (about 11 percent) was enumerated in Lilongwe district. The data also show that the majority of Mozambicans (about 17 percent), Zimbabweans (about 11 percent), Zambians (about 21 percent), Tanzanians (about 49 percent) lived in Chikwawa, Lilongwe, Mzimba and Karonga districts respectively. It is also noted that the highest number of South Africans (about 33 percent) and Indians (about 53 percent) lived in Blantyre district.

Table 3.4: Percentage Distribution of Foreign Born Population by Country of Origin: 1998

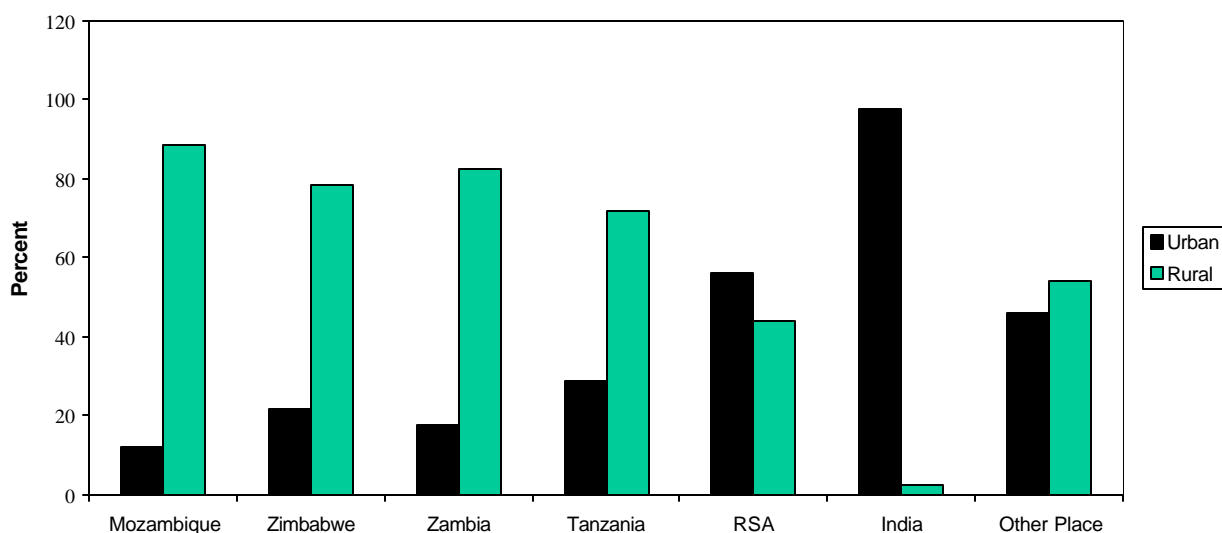
District	All Non-Malawians	Country of Origin						
		Mozambique	Zimbabwe	Zambia	Tanzania	Republic of South Africa	India	Other Places
Malawi	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chitipa	2.4	0.0	0.1	16.6	19.5	0.2	0.0	0.1
Karonga	2.6	0.0	0.4	1.0	49.3	0.5	0.0	0.4
Nkhata Bay	0.9	0.2	2.0	1.7	7.9	3.1	0.0	0.6
Rumphi	1.1	0.1	0.4	9.8	1.8	1.3	0.1	0.2
Mzimba	2.6	0.2	2.5	21.4	2.9	2.0	2.4	1.7
Likoma	0.2	0.1	0.0	0.0	0.6	0.1	0.0	0.3
Kasungu	4.5	5.0	3.5	9.7	1.3	1.6	0.4	2.4
Nkhotakota	1.2	1.1	1.3	0.8	2.2	1.7	0.0	1.4
Ntchisi	0.5	0.5	1.0	0.0	0.0	0.3	0.0	0.6
Dowa	1.9	0.7	0.4	0.2	0.1	0.2	0.0	7.5
Salima	1.3	1.2	1.7	0.8	1.5	1.6	0.1	1.4
Lilongwe	11.0	5.9	11.2	11.1	4.2	21.1	37.2	24.3
Mchinji	2.8	1.9	1.7	14.2	0.4	0.5	0.1	2.0
Dedza	3.3	4.3	2.7	0.7	0.1	1.6	0.0	2.8
Ntcheu	5.9	8.6	6.5	0.9	0.2	3.5	0.3	1.8
Mangochi	8.1	10.6	10.2	2.7	1.0	9.3	0.4	4.7
Machinga	3.3	4.1	6.9	0.6	0.3	1.5	0.2	2.4
Zomba	4.2	3.4	6.1	1.0	1.7	3.8	5.4	8.1
Chiradzulu	0.7	0.3	3.0	0.3	0.1	1.3	0.0	1.8
Blantyre	9.5	3.7	10.8	3.8	3.6	32.6	52.5	23.7
Mwanza	4.1	6.4	3.3	0.2	0.0	0.8	0.0	0.6
Thyolo	3.5	4.7	3.4	0.5	0.2	2.1	0.0	2.6
Mulanje	3.6	5.1	3.7	0.2	0.1	0.6	0.1	2.0
Phalombe	1.5	2.1	1.7	0.2	0.1	0.2	0.1	0.8
Chikwawa	10.6	16.6	4.5	0.6	0.3	6.5	0.5	3.0
Nsanje	7.1	11.3	3.1	0.2	0.2	0.7	0.0	1.5
Balaka	1.9	1.9	7.7	0.9	0.6	1.4	0.3	1.3

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.1.6 Population Distribution of Foreign Nationals by Rural/Urban Areas

Figure 3.1 shows the distribution of the population of each nationality by rural/urban areas. It is noted in this chart that the majority of Mozambicans (about 88 percent), Zimbabweans (about 79 percent), Zambians (about 82 percent) and Tanzanians (about 72 percent) were enumerated in rural areas, whereas the majority of the South Africans (about 56 percent) and Indians (about 98 percent) lived in the urban areas of Malawi.

Figure 3.1: Percentage Distribution of Foreign Nationality by Urban/Rural Areas by Country of Origin



3.1.7 Educational Attainment

Table 3.5 shows data on the highest formal education attained by non-Malawians aged 5 years and over. It is observed in this table that the majority of Mozambicans (about 60 percent) who lived in this country never attained any formal education. In the other categories of education, the majority of Tanzanians (about 64 percent), the Indians (about 49 percent) and the South Africans (about 23 percent) attained primary school, secondary school and university education respectively.

Table 3.5: Percentage Distribution of Non-Malawians by Highest Educational Attainment

Nationality (5 years and over)	Total	Educational Attainment			
		None	Primary School	Secondary School	University
Mozambique	100	60.1	37.2	2.6	0.2
Zimbabwe	100	22.2	50.7	24.2	2.8
Zambia	100	20.9	59.7	18.2	1.2
Tanzania	100	24.1	64.4	10.0	1.5
Republic of South Africa	100	10.9	37.7	28.0	23.3
India	100	6.1	28.0	48.8	17.0
Other nationalities	100	19.5	38.7	21.2	20.6

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.2 Language

Ricky D. Nkata

For the first time in Malawi, the 1998 Population and Housing Census collected data on language commonly used for communication in the households in Malawi.

Respondents (either heads of the household or any other knowledgeable member of the household) were asked the language commonly used for communication among the members of the household. The language commonly used should not be confused with tribe; for example, a household might be Yao by tribe but the language commonly used for communication in that household could be Chichewa.

From the 1998 Population and Housing Census it is revealed that the following languages were commonly used for communication in the households in Malawi; Chichewa, Chinyanja, Chiyao, Chitumbuka, Chilomwe, Chinkhonde, Chingoni, Chisena, Chitonga, Chinyakyusa, Chilambya, Chisenga, English, Portuguese and other languages not specified here. The result reveal that 57percent (5.7million) of the total population in Malawi used Chichewa as their language of communication in the households. The other languages mostly used for communication within the households in Malawi were Chinyanja (13 percent), Chiyao (10 percent), Chitumbuka (9 percent, Chisena (3 percent), Chilomwe (2 percent) (Table 3.7)

Table 3.7 and Table 3.8 show that in the Northern Region, the most common language used for communication in the households was Chitumbuka which was used by 67percent of the total population in the Northern Region. The other languages commonly used for communication in households were Chitonga (10percent), Chinkhonde (6 percent), Chichewa (5 percent), Chilambya (3 percent). It is as well revealed that there is a big percentage for "OTHER" languages in the Region, this is due to 51percent of the Population in Chitipa District used other languages which are not specified.

Table 3.6 Percentage Distribution of Population by type of language Mostly used for Communication: Malawi, 1998

Language and Sex	Malawi			Northern			Central			Southern		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Total	100	100	100	100	100	100	100	100	100	100	100	100
Chichewa	57.2	70.8	54.9	5.4	15.9	3.9	90.9	84.2	92.0	41.3	72.4	35.7
Chinyanja	12.8	6.6	13.9	0.9	2.3	0.7	0.8	2.3	0.6	26.5	11.0	29.3
Chiyao	10.1	5.4	10.8	0.8	2.1	0.6	2.8	5.3	2.4	18.9	6.2	21.2
Chitumbuka	9.5	8.8	9.6	64.3	57.3	65.4	3.0	3.6	2.9	0.5	2.0	0.3
Chilomwe	2.4	1.2	2.6	0.2	0.2	0.2	0.3	0.7	0.2	4.9	1.8	5.5
Chinkhonde	0.8	1.2	0.8	6.2	9.5	5.7	0.1	0.3	0.1	0.1	0.2	0.1
Chingoni	0.7	1.2	0.7	0.3	0.2	0.4	0.5	1.3	0.3	1.1	1.4	1.1
Chisena	2.7	1.5	2.9	0.0	0.1	0.0	0.1	0.3	0.1	5.6	2.8	6.1
Chitonga	1.7	1.2	1.7	10.4	6.5	11.0	0.7	0.6	0.7	0.2	0.5	0.1
Chinyakyusa	0.2	0.1	0.3	1.4	0.4	1.5	0.1	0.1	0.1	0.1	0.1	0.1
Chilambya	0.4	0.4	0.5	3.2	2.3	3.4	0.1	0.1	0.1	0.0	0.1	0.0
Chisenga	0.2	0.1	0.2	0.0	0.1	0.0	0.4	0.1	0.5	0.1	0.1	0.0
English	0.2	0.8	0.1	0.1	0.3	0.0	0.2	0.8	0.1	0.2	0.9	0.1
Portuguese	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Other	1.1	0.7	1.1	6.7	2.9	7.3	0.1	0.4	0.0	0.4	0.4	0.4

Source: National Statistical Office, 1998 Malawi Population and Housing Census

NOTE: For persons in institutions, information on language was not collected. In this table, these people have been included by redistributing them proportionately.

Table 3.9 shows that in the Central Region, the most popular language commonly used in households for communication was Chichewa which was used by 91percent (3.5 million) of the total population in the Central Region. This one was followed by Chitumbuka (3percent), Chiyao (3 percent) and other languages.

From Table 3.11 shows that 42 percent (1.9 million) of the population in the Southern Region used Chichewa as their common language of communication in households. This was followed by Chinyanja (26 percent), Chiyao (19 percent), Chisena (6 percent), Chilomwe (5 percent) and other languages.

Table 3.7 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Northern Region

Language and Sex	Malawi	Northern Region	Chitipa	Karonga	Nkhata Bay	Rumphi	Mzimba	Likoma
Chichewa	100.0	1.2	0.0	0.1	0.2	0.1	0.8	0.0
Chinyanja	100.0	0.8	0.1	0.1	0.1	0.1	0.7	0.3
Chiyao	100.0	1.0	0.0	0.0	0.1	0.2	0.7	0.0
Chitumbuka	100.0	84.5	3.1	8.6	3.4	12.3	57.1	0.0
Chilomwe	100.0	0.9	0.0	0.1	0.1	0.1	0.6	0.0
Chinkhonde	100.0	90.7	0.6	84.5	1.4	0.9	3.2	0.0
Chingoni	100.0	5.6	0.1	0.2	0.2	0.2	4.9	0.0
Chisena	100.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Chitonga	100.0	77.4	0.1	0.3	71.3	0.2	4.2	1.4
Chinyakyusa	100.0	69.5	0.6	66.2	1.2	0.5	1.0	0.0
Chilambya	100.0	89.8	65.6	12.3	1.2	3.9	6.8	0.0
Chisenga	100.0	1.6	0.1	0.4	0.0	0.3	0.7	0.0
English	100.0	4.8	0.2	0.4	0.7	0.8	2.8	0.0
Portuguese	100.0	10.2	1.1	0.0	0.8	0.7	7.7	0.0
Other	100.0	78.4	62.0	13.4	1.4	0.7	0.9	0.0

Table 3.8 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Northern Region

Language and Sex	Malawi	Northern Region	Chitipa	Karonga	Nkhata Bay	Rumphi	Mzimba	Likoma
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chichewa	57.2	5.4	0.9	2.1	5.4	4.8	7.4	17.6
Chinyanja	12.8	0.9	0.6	0.4	0.6	0.7	0.5	51.7
Chiyao	10.1	0.8	0.0	0.3	0.4	1.3	1.2	0.3
Chitumbuka	9.5	64.3	23.3	41.6	19.3	89.8	87.7	1.6
Chilomwe	2.4	0.2	0.0	0.1	0.1	0.2	0.2	0.0
Chinkhonde	0.8	6.2	0.4	36.5	0.7	0.6	0.4	0.1
Chingoni	0.7	0.3	0.0	0.1	0.1	0.1	0.6	0.0
Chisena	2.7	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Chitonga	1.7	10.4	0.1	0.3	71.7	0.3	1.1	28.5
Chinyakyusa	0.2	1.4	0.1	8.4	0.2	0.1	0.0	0.0
Chilambya	0.4	3.2	23.0	2.8	0.3	1.3	0.5	0.0
Chisenga	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
English	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1
Portuguese	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	1.1	6.7	51.5	7.3	0.9	0.6	0.2	0.1

Table 3.9 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Central Region

Language and Sex	Malawi	Central Region	Kasungu	Nkhota kota	Ntchis	Dowa	Salima
Chichewa	100.0	65.1	6.6	3.2	2.9	13.0	3.8
Chinyanja	100.0	2.7	0.3	0.2	0.1	0.1	0.4
Chiyao	100.0	11.2	0.9	0.3	0.0	0.0	2.5
Chitumbuka	100.0	12.8	9.4	1.0	0.0	0.2	0.1
Chilomwe	100.0	4.5	1.4	0.6	0.0	0.1	0.2
Chinkhonde	100.0	3.9	0.3	1.3	0.0	0.0	0.1
Chingoni	100.0	25.0	1.7	1.7	0.0	0.0	0.7
Chisena	100.0	2.2	0.1	1.1	0.0	0.0	0.1
Chitonga	100.0	17.3	0.1	14.4	0.0	0.1	0.4
Chinyakyusa	100.0	15.6	1.4	0.9	0.5	0.3	0.8
Chilambya	100.0	6.2	0.5	1.5	0.1	0.3	0.4
Chisenga	100.0	86.7	0.4	0.4	0.0	0.1	0.3
English	100.0	41.1	1.5	0.8	0.3	1.9	0.6
Portuguese	100.0	28.4	5.4	2.2	0.3	0.0	0.9
Other	100.0	3.4	0.3	0.2	0.0	0.0	0.1

Table 3.9 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Central Region (continued)

Language and Sex	Lilongwe	Mchinji	Dedza	Ntcheu
Chichewa	22.2	5.3	7.8	6.3
Chinyanja	0.9	0.1	0.3	0.3
Chiyao	2.9	0.5	3.6	0.3
Chitumbuka	1.9	0.1	0.1	0.1
Chilomwe	1.6	0.2	0.1	0.3
Chinkhonde	1.7	0.1	0.2	0.1
Chingoni	9.6	0.6	3.6	6.6
Chisena	0.5	0.1	0.1	0.1
Chitonga	2.0	0.2	0.1	0.0
Chinyakyusa	5.1	1.6	2.7	1.2
Chilambya	2.4	0.3	0.5	0.3
Chisenga	2.8	81.3	0.9	0.3
English	27.3	2.8	3.5	2.9
Portuguese	10.1	2.0	3.2	3.7
Other	2.0	0.1	0.1	0.1

Table 3.10 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Central Region

Language and Sex	Malawi	Central Region	Kasungu	Nkhotakota	Ntchis	Dowa	Salima
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chichewa	57.2	90.9	77.5	79.6	98.8	98.6	86.4
Chinyanja	12.8	0.8	0.8	0.9	0.5	0.4	2.0
Chiyao	10.2	2.8	2.0	1.5	0.2	0.3	10.1
Chitumbuka	9.5	3.0	18.4	4.0	0.3	0.2	0.4
Chilomwe	2.4	0.3	0.7	0.7	0.0	0.0	0.2
Chinkhonde	0.8	0.1	0.1	0.5	0.0	0.0	0.1
Chingoni	0.7	0.5	0.3	1.3	0.0	0.1	0.2
Chisena	2.7	0.1	0.1	10.4	0.0	0.0	0.1
Chitonga	1.7	0.7	0.0	14.4	0.0	0.0	0.3
Chinyakyusa	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Chilambya	0.4	0.1	0.0	0.3	0.0	0.0	0.1
Chisenga	0.2	0.4	0.0	0.0	0.0	0.0	0.0
English	0.2	0.2	0.1	0.1	0.0	0.1	0.0
Portuguese	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	1.1	0.1	0.1	0.1	0.0	0.2	0.0

Table 3.10 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Central Region (continued)

Language and Sex	Lilongwe	Mchinji	Dedza	Ntcheu
Total	100.0	100.0	100.0	100.0
Chichewa	93.6	92.0	90.6	96.0
Chinyanja	0.9	0.5	0.8	1.0
Chiyao	2.2	1.5	7.3	0.8
Chitumbuka	1.3	0.2	0.2	0.1
Chilomwe	0.3	0.1	0.0	0.2
Chinkhonde	0.1	0.0	0.0	0.0
Chingoni	0.5	0.1	0.5	1.3
Chisena	0.1	0.1	0.0	0.1
Chitonga	0.2	0.1	0.0	0.0
Chinyakyusa	0.1	0.1	0.1	0.1
Chilambya	0.1	0.0	0.0	0.0
Chisenga	0.0	5.0	0.0	0.0
English	0.4	0.2	0.1	0.1
Portuguese	0.0	0.0	0.0	0.0
Other	0.2	0.0	0.0	0.0

Table 3.10 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Southern region

Language and Sex	Malawi	Southern Region	Mangochi	Machinga	Zomba	Chiradzulu	Blantyre	Mwanza
Chichewa	100.0	33.7	1.7	1.4	3.3	2.1	11.6	2.2
Chinyanja	100.0	96.5	4.5	4.2	19.3	6.7	3.7	0.4
Chiyao	100.0	87.8	42.5	20.5	9.0	2.4	4.4	0.1
Chitumbuka	100.0	2.7	0.6	0.1	0.3	0.0	1.3	0.0
Chilomwe	100.0	94.6	5.6	11.4	5.1	2.4	6.0	0.5
Chinkhonde	100.0	5.5	0.8	0.3	0.7	0.1	1.4	0.1
Chingoni	100.0	69.4	10.1	1.0	4.2	3.8	17.9	6.8
Chisena	100.0	97.6	0.4	0.3	0.4	0.1	2.2	0.2
Chitonga	100.0	5.2	1.9	0.1	0.3	0.0	1.8	0.0
Chinyakyusa	100.0	14.9	0.7	0.7	1.8	0.8	4.2	1.0
Chilambya	100.0	4.0	0.3	0.1	0.8	0.1	1.8	0.2
Chisenga	100.0	11.7	0.6	0.7	1.3	0.7	4.0	0.3
English	100.0	54.1	2.2	1.7	5.0	0.9	35.3	0.9
Portuguese	100.0	61.4	4.8	2.1	2.8	1.0	19.2	2.2
Other	100.0	18.2	0.5	0.2	0.5	0.0	2.2	0.0

Table 3.10 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Southern region (continued)

Language and Sex	Thyolo	Mulanje	Phalombe	Chikwawa	Nsanje	Balaka
Chichewa	1.3	4.0	0.6	2.8	0.4	2.3
Chinyanja	24.8	11.3	12.1	6.3	1.1	2.1
Chiyao	0.6	1.0	0.2	0.3	0.1	6.8
Chitumbuka	0.1	0.1	0.0	0.1	0.0	0.1
Chilomwe	19.4	18.2	16.4	2.7	3.7	3.1
Chinkhonde	0.4	0.5	0.2	0.5	0.2	0.2
Chingoni	3.6	0.6	0.2	1.6	0.2	19.4
Chisena	0.5	0.2	0.0	36.7	55.6	1.0
Chitonga	0.1	0.1	0.1	0.5	0.1	0.1
Chinyakyusa	1.0	1.6	0.5	1.5	0.3	0.9
Chilambya	0.1	0.3	0.0	0.2	0.1	0.1
Chisenga	1.2	1.3	0.3	0.7	0.1	0.6
English	1.9	2.3	0.3	1.9	0.4	1.1
Portuguese	6.9	2.6	1.2	12.2	4.2	2.4
Other	7.0	1.2	0.1	6.2	0.1	0.2

Table 3.11 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Southern Region

Language and Sex	Malawi	Southern Region	Mangochi	Machinga	Zomba	Chiradzulu	Blantyre	Mwanza
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chichewa	57.2	41.3	15.8	21.8	34.3	49.6	81.2	90.3
Chinyanja	12.8	26.5	9.3	14.4	45.0	36.1	5.8	3.7
Chiyao	10.1	18.9	69.6	55.4	16.5	10.1	5.5	0.5
Chitumbuka	9.5	0.5	0.9	0.2	0.5	0.2	1.5	0.2
Chilomwe	2.4	4.9	2.2	7.5	2.2	2.5	1.8	0.8
Chinkhonde	0.8	0.1	0.1	0.1	0.1	0.0	0.1	0.0
Chingoni	0.7	1.1	1.2	0.2	0.6	1.2	1.6	3.7
Chisena	2.7	5.6	0.2	0.2	0.2	0.1	0.7	0.4
Chitonga	1.7	0.2	0.5	0.0	0.1	0.0	0.4	0.0
Chinyakyusa	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2
Chilambya	0.4	0.0	0.0	0.0	0.1	0.0	0.1	0.1
Chisenga	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0
English	0.2	0.2	0.1	0.1	0.2	0.1	0.8	0.1
Portuguese	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Other	1.1	0.4	0.1	0.1	0.1	0.0	0.3	0.0

Table 3.11 Percentage Distribution of Population by Type of Language Mostly Used for Communication in Households for Southern Region (Continued)

Language and Sex	Thyolo	Mulanje	Phalombe	Chikwawa	Nsanje	Balaka
Total	100.0	100.0	100.0	100.0	100.0	100.0
Chichewa	16.7	52.6	15.3	44.7	11.4	52.5
Chinyanja	68.8	33.6	66.4	22.4	7.5	10.4
Chiyao	1.3	2.3	0.7	0.7	0.6	26.7
Chitumbuka	0.2	0.2	0.1	0.2	0.1	0.3
Chilomwe	10.2	10.3	17.1	1.9	4.5	3.0
Chinkhonde	0.1	0.1	0.1	0.1	0.1	0.1
Chingoni	0.6	0.1	0.1	0.3	0.1	5.7
Chisena	0.3	0.1	0.1	27.2	75.4	1.0
Chitonga	0.0	0.0	0.0	0.2	0.1	0.1
Chinyakyusa	0.1	0.1	0.0	0.1	0.0	0.1
Chilambya	0.0	0.0	0.0	0.0	0.0	0.0
Chisenga	0.1	0.1	0.0	0.0	0.0	0.0
English	0.1	0.1	0.0	0.1	0.0	0.1
Portuguese	0.0	0.0	0.0	0.1	0.1	0.0
Other	1.6	0.3	0.0	1.8	0.0	0.1

3.3 Religion

Jameson Ndawala

The 1998 Malawi Population and Housing Census enumerated 9.9 million people. Of these, 7.9 million or 80 percent were Christians, 1.3 or 13 percent were Moslems, 305,000 or 3 percent belong to other religions and the rest 423,000 or 4 percent had no religion (Table 3.12).

The proportion of the population of different religions in the Northern, Central and Southern Regions were 96, 83 and 73 percent for Christians; 1, 7 and 21 percent of the population were Moslems, while 2, 3 and 4 percent belonged to other religions and 1, 7 and 3 percent had no religion respectively.

This pattern of distribution applies to all districts in the country except Mangochi and Machinga districts where 70 and 63 percent respectively of the population were Moslems.

The urban population registered 1.4 persons in the 1998 Population and Housing Census. Of these 1.2 or 80 percent were Christians, 172,000 persons or 12 percent were Moslems, 35,000 persons or 2 percent belonged to other religions and 22,000 persons or approximately 2 percent had no religion.

The Rural areas registered 8.5 persons of these 6.7 or 79 percent were Christians, 1.1 persons or 13 percent were Moslems, 270,000 or 3 percent for other religions and 400,000 or 5 percent belonged to no religion.

Among all religion categories of the population of Malawi, there were more females than males in each, except the category that had no religion. This category had more males than females starting from the national to district levels. The percentage distribution of Malawi female population by religion shows that 52 percent went to Christians and Islam religions, 51 percent for the other religions and 38 percent for those who had no religion. At regional and district levels the pattern has a slight change on the Islam in the Northern and Central Regions where the distribution shows more males than females as opposed to the other region.

Table 3.12 Percent Distribution of Population by Religion at National, Regional and District Level

Area	Total	Christian	Islam	Other	No Religion
Malawi	100.0	79.9	12.8	3.1	4.3
Northern	100.0	96.3	1.4	1.5	0.8
Chitipa	100.0	96.7	1.3	1.5	0.5
Karonga	100.0	97.9	0.1	1.5	0.7
NkhataBay	100.0	96.2	1.5	1.2	1.0
Rumphi	100.0	98.4	0.7	0.6	0.3
Mzimba	100.0	95.9	1.8	1.9	0.4
Likoma	100.0	96.4	1.5	1.8	0.4
Central	100.0	83.3	7.0	2.7	7.0
Kasungu	100.0	92.5	3.6	1.9	2.0
Nkhotakota	100.0	74.4	23.4	0.9	1.3
Ntchisi	100.0	93.4	0.7	1.3	4.6
Dowa	100.0	91.7	0.9	2.2	5.2
Salima	100.0	63.5	30.4	1.7	4.5
Lilongwe	100.0	80.0	5.0	3.2	11.7
Mchinji	100.0	91.7	2.9	30.	24
Dedza	100.0	74.4	9.9	4.4	11.0
Ntcheu	100.0	92.5	1.8	2.7	3.0
Southern	100.0	72.5	20.9	3.8	2.8
Mangochi	100.0	28.7	70.3	0.6	0.4
Machinga	100.0	34.7	62.7	2.1	0.5
Zomba	100.0	76.8	18.0	4.4	0.8
Chiradzulu	100.0	84.8	10.2	4.0	1.0
Blantyre	100.0	86.0	8.9	3.8	1.3
Mwanza	100.0	89.0	1.1	3.6	6.3
Thyolo	100.0	90.7	2.0	5.4	1.9
Mulanje	100.0	88.9	4.9	5.1	1.1
Phalombe	100.0	93.6	1.3	4.0	1.0
Chikwawa	100.0	82.6	1.4	4.6	11.5
Nsanje	100.0	73.9	1.6	3.7	20.7
Balaka	100.0	64.4	28.7	6.0	0.8

3.4 Survival Status of Parents

Louis Magombo

The 1998 Malawi Population and Housing Census collected information on survival status of parents for persons ages 20 years and less. The Census results show that about 58% (5.7 million) of total of Malawi population were aged 20 years or less. Of the 5.7 million persons, 2.8 million were males and 2.9 million were females. About 4.9 million and 0.8 million of these young persons lived in rural and urban areas respectively.

At national level, 90 percent of the population aged 20 years or less reported that they had both parents alive, 3 percent that their mothers were dead, 6 percent had their fathers dead and 2 percent had both parents dead.

In urban areas the results show that 88 percent had both parents alive, 3 percent had their mothers dead, 7 percent had their fathers dead and 2 percent had both parents dead.

In rural areas the results show that 90 percent had both parents alive, 3 percent had their mothers dead, 6 percent had their fathers dead and 1 percent had both parents dead. This shows that there was a lower parental survival status in urban areas.

At regional level, the lowest proportion of persons aged 20 years or less with both parents alive was observed in the Southern region with 88.3 percent. The corresponding proportions in the Northern and Central regions were

90.3 and 91.7 percent respectively. The distribution of deaths of fathers of persons aged 20 years or less was higher in all regions than of mothers as follows: 6.8, 6.1 and 4.8 percent reported to have their fathers dead in the Southern, Central and Northern Regions respectively while 1.9, 1.3 and 1.2 percent reported to have both parents dead in the Southern, Central and Northern regions respectively.

Results at district level show that the highest proportions of children with dead parents lived in Likoma district where 16 percent of persons aged 20 years or less reported that one of their parents or both parents were dead at the time of census. Other districts with high proportions of children with dead parents were Chiradzulu (14.4 percent), Mulanje (13.8 percent), Blantyre (13.4 percent), Ntcheu (12.5 percent), Phalombe and Zomba (12.1 percent each), Thyolo (12.0 percent) and Balaka (11.8 percent). The district with the lowest proportions of persons aged 20 years or younger who reported that one or both parents died were observed in Ntchisi (6.3 percent), Mchinji (6.6 percent), Dowa and Nkhotakota (6.8 percent each) and Kasungu (6.9 percent). It is noted from the results that more children were orphaned as a result of deaths of their fathers than their mothers.

Table 3.13 Percent Distribution of Malawi Population Age d 20 years or Less by Parent Survival Status at National Regional and District Level

Region/District	Total	Both parents Living	Mother dead Father living	Father dead Mother living	Both parents dead
Malawi	100.0	90.0	2.6	5.9	1.5
Urban	100.0	87.5	3.3	6.9	2.3
Rural	100.0	90.4	2.5	5.7	1.4
Northern	100.0	90.3	2.3	6.1	1.3
Chitipa	100.0	91.2	1.8	5.9	1.0
Karonga	100.0	88.1	2.9	7.7	1.4
Nkhatabay	100.0	87.8	2.9	7.6	1.7
Rumphi	100.0	90.7	2.4	5.7	1.2
Mzimba	100.0	91.5	2.1	5.3	1.2
Likoma	100.0	84.0	2.3	11.5	2.3
Central	100.0	91.7	2.3	4.8	1.2
Kasungu	100.0	93.1	2.1	3.6	1.1
Nkhotakota	100.0	93.2	2.0	3.7	1.1
Ntchisi	100.0	93.7	1.9	3.6	0.9
Dowa	100.0	93.2	1.9	3.9	0.9
Salima	100.0	90.2	2.5	5.5	1.3
Lilongwe	100.0	91.6	2.5	4.7	1.2
Mchinji	100.0	93.4	1.9	3.7	1.0
Dedza	100.0	91.5	2.2	5.2	1.1
Ntcheu	100.0	87.5	2.7	7.8	2.0
Southern	100.0	88.3	3.0	6.8	1.9
Mangochi	100.0	90.4	2.6	5.6	1.4
Machinga	100.0	91.1	2.5	5.2	1.2
Zomba	100.0	87.9	2.9	7.1	2.0
Chiradzulu	100.0	84.6	3.6	9.3	2.6
Blantyre	100.0	86.6	3.4	7.4	2.6
Mwanza	100.0	88.9	2.6	6.9	1.6
Thyolo	100.0	88.0	3.2	6.7	2.1
Mulanje	100.0	86.2	3.6	7.9	2.3
Phalombe	100.0	87.9	3.1	7.0	1.9
Chikwawa	100.0	90.8	2.4	5.5	1.3
Nsanje	100.0	89.6	2.2	6.8	1.4
Balaka	100.0	88.2	2.7	7.1	1.9

Table 3.14 Percent Distribution of Persons Aged 20 Years or Less by Parent Survival Status and Sex for Urban and Rural Areas at National and Regional Levels.

Area	Total Living	Both Parents Living	One Parent	Father Living (Mother dead)	Mother Living (Father dead)	Both Parents Dead
Malawi	100.0	90.0	8.5	2.6	5.9	1.5
Urban	100.0	87.5	10.2	3.3	6.9	2.3
Rural	100.0	90.4	8.2	2.5	5.7	1.4
Males	100.0	90.1	8.4	2.6	5.8	1.5
Urban	100.0	87.7	10.0	3.2	6.8	2.3
Rural	100.0	90.5	8.1	2.5	5.7	1.4
Females	100.0	89.9	8.6	2.6	5.9	1.6
Urban	100.0	87.3	10.3	3.3	7.0	2.4
Rural	100.0	90.3	8.3	2.5	5.7	1.5
Northern	100.0	90.3	8.4	2.3	6.1	1.3
Urban	100.0	88.0	10.2	2.7	7.4	1.8
Rural	100.0	90.6	8.2	2.3	5.9	1.2
Males	100.0	90.5	8.3	2.3	6.0	1.2
Urban	100.0	88.3	10.1	2.7	7.4	1.7
Rural	100.0	90.8	8.1	2.2	5.8	1.1
Females	100.0	90.1	8.5	2.4	6.2	1.3
Urban	100.0	87.8	10.3	2.8	7.5	1.9
Rural	100.0	90.5	8.3	2.3	6.0	1.3
Central	100.0	91.7	7.0	2.3	4.8	1.2
Urban	100.0	88.5	9.4	3.1	6.3	2.1
Rural	100.0	92.3	6.7	2.1	4.5	1.1
Males	100.0	91.9	6.9	2.2	4.7	1.2
Urban	100.0	88.6	9.3	3.0	6.3	2.1
Rural	100.0	92.4	6.6	2.1	4.5	1.0
Females	100.0	91.6	7.1	2.3	4.8	1.2
Urban	100.0	88.4	9.5	3.2	6.3	2.1
Rural	100.0	92.1	6.8	2.2	4.6	1.1
Southern	100.0	88.3	9.8	3.0	6.8	1.9
Urban	100.0	86.5	10.8	3.6	7.3	2.6
Rural	100.0	88.6	9.6	2.9	6.7	1.8
Males	100.0	88.4	9.7	2.9	6.8	1.9
Urban	100.0	86.8	10.7	3.5	7.1	2.6
Rural	100.0	88.7	9.5	2.8	6.7	1.8
Females	100.0	88.2	9.8	3.0	6.8	2.0
Urban	100.0	86.3	11.0	3.6	7.4	2.7
Rural	100.0	88.6	9.6	2.9	6.7	1.8

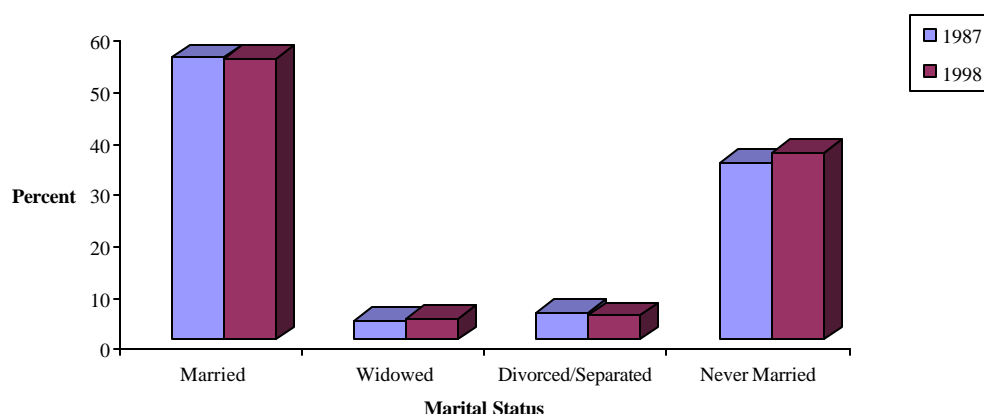
3.5 Marital Status

Sophie Kang'oma

3.5.1 Marital Status of Population Aged 10 Years and Over

The 1998 Malawi Population and Housing Censuses collected, among other data, information on marital status of the population aged 10 years and over. Table 3.15 shows marital status of Malawi population by sex and area. In Malawi more than half (55 percent) of the population aged 10 years and over were married, 5 percent were divorced/separated, 4 percent were widowed and 36 percent were never married. Figure 3.2 shows that marital status pattern in Malawi had been the same in the recent two consecutive censuses (1987 and 1998) except for the never married proportion, which had increased with 3 percent within these 11 years.

Fig 3.2 Percent Distribution of Population Aged 10 Years and Over by Marital Status: 1987-1998



The 1998 as well as 1987 censuses results show that large proportion of female was married, widowed and divorced/separated as compared to male. According to 1998 census 56 percent of female population aged 10 years and above was married, 7 percent was widowed and divorced/separated respectively while 54 percent of male population was married, 1 percent was widowed and 2 percent was divorced.

It has also been noted that at regional level Central Region had the highest proportion of married persons (56 percent) as compared to the Southern Region (54 percent) and Northern Region (54 percent) each. Proportion of married population was 1 percent less in the Northern and Central region respectively as compared to 1987 data while in the Southern region it remained constant. Widowhood was high in the Northern and Southern regions (4.3 percent respectively). The divorce/separation proportion was high in the Southern region (5.8 percent) while in the Northern and Central regions it was 3.2 and 3.9 percent respectively.

3.5.2 Marital Status by District

In the Northern Region the highest proportion of married persons was in Mzimba district (56 percent) and Likoma had the least (37 percent). In the Central region the highest proportion was in Dedza (58 percent) and the lowest was in Ntcheu (51 percent). While in the Southern region Machinga had the highest proportion of married persons (59 percent) and Chiradzulu had the least (49 percent). In 1987 Nkhata Bay had the lowest proportion in the northern region and at that time Likoma was part of Nkhatabay district. In the Central region Kasungu, Ntchisi, Dowa and Lilongwe were the districts with the highest proportion and for the lowest it was the same Ntcheu district as in 1998. While in the Southern region the highest proportion was in Mangochi and the lowest was the same district that had shown the lowest proportion in 1998 census results.

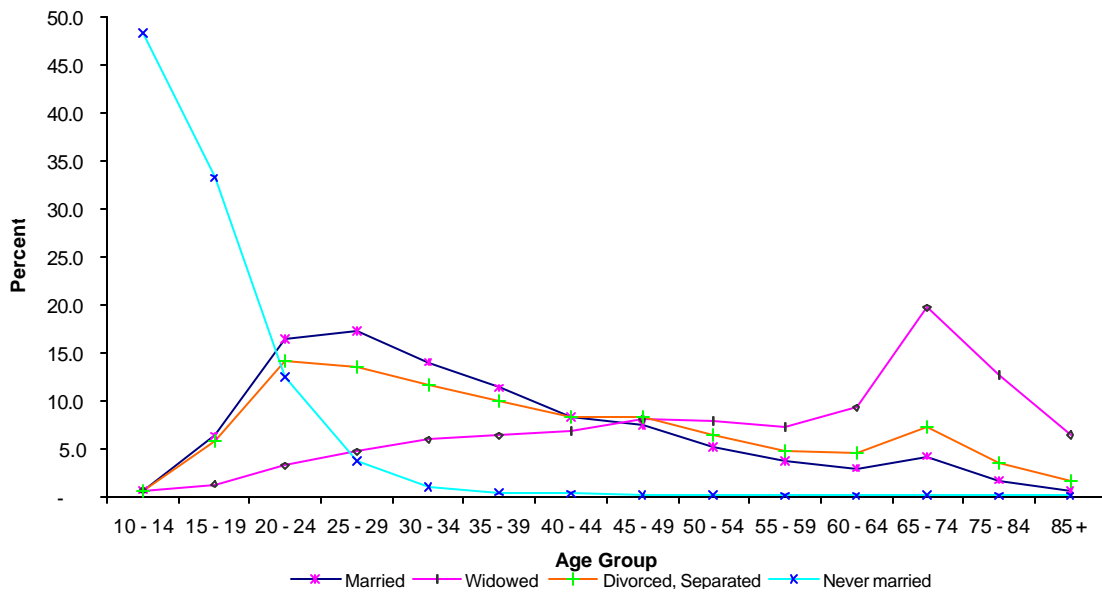
Table 3.15: Percentage Distribution of Population Aged 10 Years and over by Marital Status and Sex at Regional and District Level

Area and Sex	Married			Widowed			Divorced/separated			Never Married		
	Total	Males	Females	Total	Male	Females	Both Sexes	Males	Females	Both sexes	Males	Females
Malawi	54.8	53.6	55.9	4.0	1.1	6.7	4.7	2.3	7.0	36.5	43.0	30.4
Urban	51.5	50.2	53.1	2.7	1.2	4.5	3.0	2.0	4.1	42.7	46.7	38.4
Rural	55.3	54.2	56.4	4.2	1.1	7.1	5.0	2.4	7.4	35.4	42.3	29.1
Northern	53.3	50.0	56.4	4.3	1.1	7.3	3.2	1.8	4.5	39.2	47.0	31.9
Chitipa	50.7	47.5	53.6	4.1	1.0	6.8	3.2	1.4	4.7	42.0	50.1	34.9
Karonga	51.1	47.8	54.2	4.6	1.1	7.9	4.4	2.6	6.1	39.8	48.6	31.8
Nkhata Bay	50.5	48.3	52.6	5.2	1.4	8.7	5.2	3.1	7.1	39.1	47.2	31.5
Rumphi	53.1	49.8	56.3	3.5	0.9	6.0	3.5	1.9	5.2	39.8	47.5	32.5
Mzimba	55.6	51.9	59.1	4.1	1.1	6.9	2.2	1.4	2.9	38.1	45.6	31.0
Likoma	36.9	37.0	36.9	7.5	1.9	12.1	5.9	2.6	8.6	49.6	58.5	42.3
Central	56.0	54.4	57.5	3.6	1.1	6.0	3.9	2.2	5.5	36.6	42.3	31.0
Kasungu	56.9	52.8	61.3	2.6	1.0	4.3	3.4	2.9	3.9	37.2	43.3	30.4
Nkhotakota	54.2	51.8	56.6	3.3	1.1	5.6	4.5	2.9	6.2	38.0	44.2	31.7
Ntchisi	55.4	53.4	57.4	3.2	0.9	5.4	3.3	2.0	4.6	38.2	43.8	32.7
Dowa	56.9	54.9	58.9	3.3	1.1	5.4	3.4	2.1	4.8	36.4	41.9	30.9
Salima	57.0	56.3	57.7	4.1	1.2	6.9	4.3	2.3	6.2	34.5	40.2	29.1
Lilongwe	56.3	54.7	57.9	3.1	1.0	5.1	3.5	2.0	4.9	37.2	42.3	32.0
Mchinji	56.3	54.1	58.6	3.1	1.1	5.1	4.1	2.6	5.7	36.5	42.3	30.6
Dedza	57.8	58.7	57.0	4.6	1.1	7.6	4.3	1.8	6.6	33.3	38.4	28.8
Ntcheu	50.7	50.8	50.6	5.9	1.4	9.9	5.3	2.1	8.0	38.2	45.7	31.6
Southern	54.1	53.7	54.5	4.3	1.2	7.1	5.8	2.5	2.9	35.8	42.5	29.5
Mangochi	57.3	57.0	57.5	4.0	1.0	6.7	6.6	2.9	9.9	32.2	39.1	25.8
Machinga	58.6	58.3	58.8	3.5	0.8	5.9	6.2	2.5	9.5	31.7	38.5	25.7
Zomba	53.0	53.3	52.7	4.4	1.3	7.2	6.7	3.0	10.1	36.0	42.4	29.9
Chiradzulu	49.1	49.7	48.6	5.9	1.4	9.7	7.5	2.9	11.4	37.5	46.0	30.3
Blantyre	51.3	50.6	52.1	3.5	1.3	5.8	4.0	2.4	5.8	41.1	45.8	36.2
Mwanza	53.0	52.8	53.2	4.4	1.1	7.5	5.0	2.1	7.8	37.5	44.0	31.5
Thyolo	53.0	53.0	52.9	4.5	1.3	7.4	6.5	2.7	9.8	36.0	43.0	30.0
Mulanje	52.7	53.5	52.0	4.9	1.3	8.0	7.3	2.6	11.2	35.1	42.5	28.8
Phalombe	56.6	57.3	56.0	4.5	1.0	7.6	6.4	2.0	10.1	32.5	39.7	26.3
Chikwawa	58.2	55.6	60.9	3.8	1.0	6.6	3.6	1.9	5.4	34.3	41.5	27.2
Nsanje	57.5	54.6	60.1	5.0	1.2	8.4	4.0	1.8	6.0	33.6	42.5	25.5
Balaka	51.6	51.7	51.6	5.0	1.3	8.3	6.5	2.9	9.6	36.9	44.2	30.5

Source: National Statistical Office, 1998 Malawi Population and Housing Census

Overall Machinga district had the highest proportion (59 percent) of married population as compared to other districts followed by Chikwawa, Nsanje, Dedza (58 percent respectively), Mangochi, Phalombe, Salima, Dowa, Kasungu (57 percent) Chikwawa, Nsanje, Dedza (58 percent respectively), Mangochi, Phalombe, Salima, Dowa, Kasungu (57 percent respectively), and Mchinji, Lilongwe, Nkhotakota and Mzimba (56 percent respectively). Whilst in Likoma and Chiradzulu less than half of the population aged 10 years and over was married.

Figure 3.3: Marital Status for Malawi by Age



Likoma had a high proportion of widowed and never married persons while divorce/separation was high in Chiradzulu followed by Zomba, Mangochi, Thyolo and Balaka and it was very low in Mzimba.

In rural areas 55 percent of the population aged 10 years and over was married while in urban areas 52 percent was married. Widowed and divorced proportion was 4 and 5 percent respectively for rural areas and in urban areas was 3 percent respectively. Thirty five (35) percent of the rural population was never married while in urban the never married proportion was 43 percent. In rural areas majority of females was married, widowed, and divorced and the few were never married as compared to the males.

3.5.3 Marital Status by Age

Figure 3.3 shows the percent distribution of the population aged 10 years and over by marital status and age. In Malawi more than half of the married persons were aged 20-39 years. It has been noted that population in the age group 25-29 years had high proportion of married persons (17.3 percent) followed by population aged 20-24 years (16.4 percent) and 30-34 years (14.0 percent). Married proportion declines with the increasing age group from age group 30-34. This was the same with the divorced/separated population except that the majority of the divorced/separated population was in age group 20-24 and the decline started from the same age group. Widow proportion increased with the increasing age group. Age group 65-74 had high proportion of widowed persons although it is the combination of two age groups. In Malawi majority of the never married population was of age 10-19 years. As the age group increases there is a decline of the proportion of the never married. Thus, there were few unmarried persons by age 75 years and over.

Males in Malawi get married some years older than females. According to 1998 census marriage was at a peak for males aged 25-29 and females aged 20-24. Large proportion of married males was high among the ones in age group 25-39 while for female was among those aged 20-34. Divorce/separation among males and females was high for the ones aged 25-29 and 20-24 years respectively. Both males and females had high proportion of widowed at age group 64-75 (Table 3.3).

Table 3.16 Proportion Never Married by Age and Sex and Singulate Mean Age at Marriage

Age Group	Male	Female
10 – 14	98.0	97.7
15 – 19	91.7	61.8
20 – 24	53.0	14.6
25 – 29	18.0	4.8
30 – 34	6.0	2.1
35 – 39	3.4	1.3
40 – 44	2.6	1.1
45 – 49	1.9	0.9
50 – 54	1.7	1.0
SMAM	23.4	19.0

Table 3.16 shows the proportion of never married population by sex and age. Majority of the population in the young age groups was never married. Ninety eight percent and 92 percent of male population were never married in age groups 10-14 and 15-19 respectively. While for females 98 percent of female population in age group 10-14 and 61 percent in age group 15-19 were never married. It is shown that marriage in Malawi is almost universal from age 20 and above for females and 25 and above for males.

The singulate mean age at marriage (SMAM), is the mean age at first marriage among those who ever marry (Manual X, UN). According to 1998 census, in Malawi males marry at almost 4 years older than females. The singulate mean age at marriage for males was 23 years while that for females was 19 years.

3.5.4 Marital Status by Economic Activity

It has been observed that majority of the married (78 percent), widowed (87 percent), divorced or separated (81 percent) and never married (72 percent) population aged 10 years and over were engaged in subsistence farming activity (Table 3.17). Among the employees there was a large proportion of the never married population. Widowed persons were less likely to be in family business or self employed as compared to the married, never married and divorced population. Never married and widowed population was also more likely to be unemployed. Majority of both males and females (married, never married, widowed and divorced) was engaged in subsistence farming but proportion of females was slightly higher than males. Married, widowed and divorced males were more likely to be employees, self-employed and employers as compared to females. Females were more unlikely to be employers.

Table 3.17 Marital Status by Economic Activity, Sex and Area

	Total				Male				Female			
	Married	Widowed	Divorced/ Separated	Never Married	Married	Widowed	Divorced/ Separated	Never Married	Married	Widowed	Divorced/S eparated	Never Married
Malawi												
Mlimi	77.9	86.6	81.1	72.2	65.5	69.8	65.8	66.3	91.0	89.4	86.1	83.3
Employee	12.9	6.0	9.3	16.2	21.4	17.8	19.9	19.4	4.0	4.0	5.9	10.1
Family												
Business	2.4	2.1	2.8	2.5	2.8	2.1	2.5	2.9	2.1	2.2	2.8	1.8
Self												
Employed	5.8	4.3	5.7	5.6	9.0	7.6	9.6	7.3	2.5	3.7	4.5	2.2
Employer	0.2	0.1	0.1	0.2	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Unemployed	0.7	1.0	0.9	3.4	1.0	2.5	1.9	3.8	0.5	0.7	0.6	2.4
Northern Region												
Mlimi	77.8	86.0	74.8	68.1	66.6	73.3	65.0	63.7	89.2	88.1	79.2	78.6
Employee	12.0	5.2	10.6	15.0	20.1	13.2	18.0	16.9	3.8	3.9	7.3	10.4
Family				3.4				3.4		2.9		
Business	3.0	2.8	4.2		2.8	2.4	2.6		3.2		4.9	3.4
Self				8.9				10.9		4.3		
Employed	6.0	4.8	8.8		8.8	7.9	11.6		3.2		7.6	4.2
Employer	0.2	0.1	0.2	0.2	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.2
Unemployed	0.9	1.0	1.4	4.4		2.8	2.6	4.8	0.5	0.8	0.9	3.4
					1.3							
Central Region												
Mlimi	82.5	89.7	84.0	74.2	72.8	75.4	68.5	68.2	92.8	92.3	90.4	86.1
Employee	11.0	5.1	9.2	16.2	17.6	15.7	20.9	19.8	3.9	3.2	4.5	9.1
Family				2.1				2.5		1.1	1.5	1.2
Business	1.5	1.1	1.5		1.8	1.2	1.6		1.1			
Self				4.7			7.5	6.2	1.7	2.9	3.2	1.7
Employed	4.4	3.3	4.4		6.9	5.6						
Employer	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.0	0.1	0.1	0.1
Unemployed	0.5	0.7	0.7	2.7	0.7	1.7	1.3	3.1	0.3	0.5	0.4	1.9
Southern Region												
Mlimi	73.8	84.5	80.3	71.1	58.8	64.2	63.9	64.9	89.8	87.6	84.7	81.8
Employee	14.9	6.7	9.2	16.3	25.1	20.7	19.4	19.4	4.1	4.6	6.5	10.9
Family												
Business	3.2	2.7	3.3	2.8	3.7	2.7	3.2	3.2	2.6	2.7	3.3	2.0
Self												
Employed	7.1	4.8	6.1	5.8	11.0	9.1	10.9	7.8	2.9	4.2	4.8	2.4
Employer	0.2	0.1	0.1	0.2	0.4	0.2	0.2	0.3	0.1	0.0	0.1	0.1
Unemployed	0.9	1.1	1.0	3.8	1.1	3.1	2.3	4.4	0.6	0.8	0.6	2.7

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.5.5 Marital Status by Industry

According to 1998 census, more than 80 percent of the married, widowed, divorced or separated and never married population which was economically active was in agriculture, fishing and forestry industry. Majority of the rest in respect of their marital status was in wholesale and retail industry, social and community services industry and manufacturing industry. Mining and quarry had the least of the married, never married, widowed and divorced proportion. Table 3.18 shows percent distribution of population by marital status and industry. All industries had large proportion of males than females but agriculture, fishing and forestry industry had more females than males.

Table 3.18 Marital Status by Industry and Sex at National and Regional Level

	Agriculture, fishing & Forestry	Mining and Quarry	Manu- facturing	Electricity		Wholesale And Retail	Transp ort and Com- munication	Finance and Bossiness	Social and Community Services
				Gas & Water	Constru- ction				
Malawi									
Married	83.35	0.06	2.71	0.17	1.78	5.55	0.74	0.30	5.33
Widowed	89.72	0.03	1.84	0.06	0.47	4.24	0.28	0.18	3.18
Divorced/Separated	86.84	0.04	2.47	0.07	0.93	5.92	0.33	0.15	3.26
Never Married	80.59	0.05	2.53	0.19	1.59	6.96	0.96	0.48	6.65
Male									
Married	74.30	0.10	4.43	0.31	3.33	7.78	1.34	0.46	7.94
Widowed	78.29	0.09	3.74	0.26	2.59	5.79	1.24	0.49	7.51
Divorced/Separated	78.11	0.12	4.20	0.18	3.16	7.22	0.93	0.27	5.81
Never Married	77.14	0.08	3.38	0.26	2.32	8.49	1.27	0.52	6.53
Female									
Married	92.95	0.01	0.90	0.03	0.13	3.19	0.11	0.13	2.56
Widowed	91.59	0.02	1.52	0.03	0.12	3.99	0.12	0.13	2.47
Divorced/Separated	89.69	0.01	1.91	0.03	0.20	5.49	0.13	0.11	2.43
Never Married	87.06	0.01	0.95	0.06	0.21	4.08	0.37	0.39	6.87

Source: National Statistical Office, 1998 Malawi Population and Housing Census

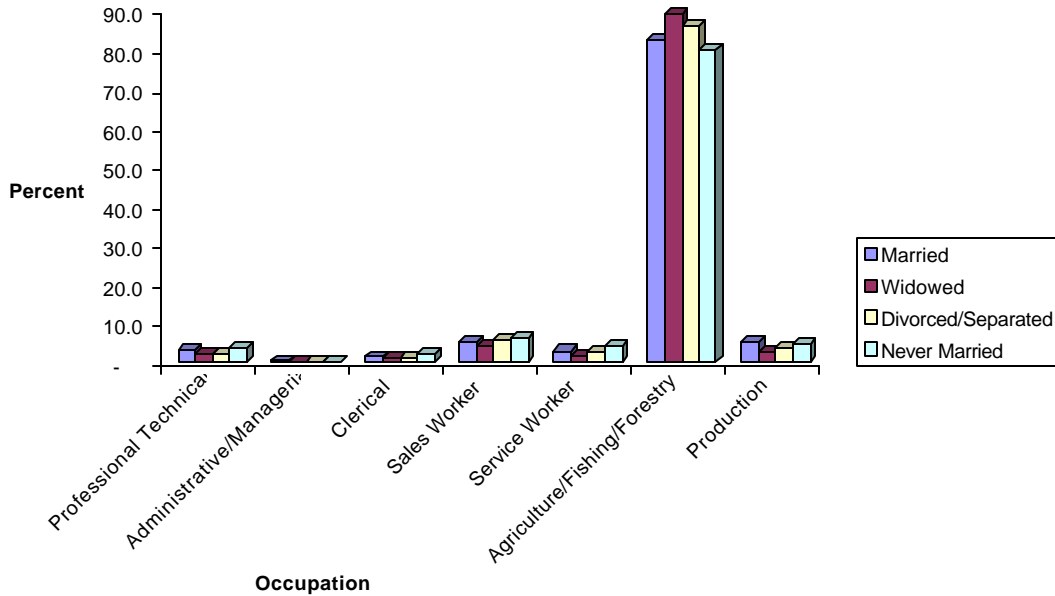
Agriculture, Fishing and industry had majority of the married, widowed, divorced and never married population at the Central region as compared with the Southern and northern regions. Apart from agriculture industry, manufacturing industry had the largest proportion of divorced in the Central region while in the Southern region majority was either married or never married. Social and community services, and wholesale and retail industries had large proportion of never married persons in all regions while construction had majority of the never married and married persons.

3.5.6 Marital Status by Occupation

The occupation which had the majority of the married, divorced, widowed and never married persons was agriculture, fishing and forestry followed by sales worker, production, service worker, professional and technical, and clerical. Administrative or managerial occupation had the least proportion. Professional and technical, production, clerical and service workers had large proportion of males irrespective of their marital status as compared to females whom the majority engaged in agriculture. Figure 3.4 shows marital status of population aged 10 years and over by occupation.

Fig 3.4:

Percent Distribution of Population Aged 10 Years and Over by Marital Status and Occupation



3.5.7 Marital Status by Educational Attainment

Table 3.19 shows information on marital status by educational attainment. According to 1998 census more than half of the married (53 percent) and never married (75 percent) persons had primary education, 37 and 13 percent respectively had no education, and only 9 and 12 percent respectively had secondary education and the rest had university education. More than half of the widowed (63 percent) and divorced or separated (52 percent) had no education, 32 and 43 percent respectively had primary education, 5 percent respectively had secondary education and less than 1 percent had university education. The never married population had a large proportion with secondary and primary education and small proportion, which had no education as compared to population with other marital status.

More than half of the males except the widowed had primary education. Majority of the widowed males had either no education or primary education. For female population more than half of the never married females had primary education while majority of the widowed and divorced or separated had no education.

Few of the urban population in respect to its marital status had no education while in rural more than half of the widowed and divorced/separated persons had no education. Urban had large proportion of married, widowed, divorced and never married persons with secondary education as compared to rural.

In the Northern region more than half of population from all marital status except the widowed had primary education while in Central region majority of the married and never married had primary education and majority of divorced and widowed had no education. In the southern region more than half of the never married population had primary education and majority of the widowed and divorced had no education. Large proportion of the population from all marital status had secondary education in the northern region as compared to Southern and Central regions.

Table 3.19 Marital Status by Educational Attainment and Sex at National and Regional Level

Area, Sex and Marital Status	Total				Males				Females			
	None	Primary School	Secondary School	University	None	Primary School	Secondary School	University	None	Primary School	Secondary School	University
Married	37.29	53.04	9.15	0.52	27.85	58.07	13.27	0.80	45.88	48.45	5.40	0.26
Widowed	63.12	32.10	4.46	0.32	41.34	46.65	10.94	1.06	66.64	29.76	3.41	0.20
Divorced/separated	51.49	43.01	5.26	0.24	37.85	53.09	8.57	0.50	55.80	39.82	4.21	0.16
Never married	13.20	74.52	12.02	0.26	13.38	72.67	13.62	0.33	12.96	77.01	9.86	0.17
Urban	9.95	59.55	28.68	1.82	6.46	57.15	33.86	2.53	13.83	62.22	22.92	1.03
Married	12.78	55.58	29.18	2.46	7.70	52.02	36.63	3.64	18.11	59.31	21.36	1.22
Widowed	30.27	44.88	22.89	1.96	16.56	46.22	32.85	4.37	34.28	44.48	19.98	1.26
Divorced/ separated	21.72	54.35	22.41	1.53	15.81	56.70	25.26	2.23	24.90	53.09	20.87	1.15
Never married	4.42	65.65	28.88	1.06	4.47	62.96	31.28	1.30	4.35	69.27	25.65	0.73
Rural	33.81	59.58	6.46	0.15	25.07	65.46	9.26	0.22	41.89	54.15	3.87	0.09
Married	41.37	52.61	5.82	0.20	31.50	59.17	9.04	0.29	50.15	46.79	2.95	0.11
Widowed	66.92	30.63	2.32	0.13	46.37	46.73	6.50	0.39	69.97	28.24	1.71	0.09
Divorced/separated	54.67	41.80	3.43	0.11	41.45	52.50	5.84	0.21	58.58	38.63	2.71	0.08
Never married	15.10	76.44	8.38	0.09	15.31	74.77	9.80	0.12	14.81	78.67	6.47	0.04
Northern	13.09	73.21	13.41	0.28	8.01	73.03	18.50	0.46	17.84	73.39	8.66	0.11
Married	16.46	70.02	13.17	0.35	10.70	68.24	20.42	0.64	21.23	71.49	7.17	0.11
Widowed	45.63	49.22	5.00	0.14	26.56	61.16	11.67	0.62	48.38	47.50	4.04	0.07
Divorced/separated	22.61	65.96	11.27	0.16	18.42	66.85	14.37	0.36	24.23	65.61	10.07	0.09
Never married	4.16	80.78	14.84	0.21	4.29	78.64	16.80	0.27	3.99	83.74	12.15	0.12
Central	30.84	60.04	8.75	0.37	23.30	64.54	11.63	0.53	38.24	55.62	5.93	0.21
Married	38.33	53.29	7.90	0.48	28.90	59.08	11.31	0.72	47.08	47.93	4.74	0.25
Widowed	64.34	31.24	4.10	0.31	43.93	45.58	9.55	0.94	67.96	28.70	3.14	0.20
Divorced/separated	50.87	43.54	5.32	0.27	39.47	52.10	7.96	0.47	55.39	40.15	4.27	0.19
Never married	14.01	74.90	10.87	0.22	14.73	72.70	12.29	0.28	13.05	77.85	8.96	0.15
Southern	34.08	55.65	9.81	0.46	24.55	61.39	13.37	0.69	42.93	50.31	6.50	0.26
Married	41.71	48.46	9.22	0.60	31.08	54.72	13.28	0.92	51.45	42.73	5.51	0.31
Widowed	66.83	28.24	4.57	0.36	42.92	43.94	11.88	1.27	70.53	25.81	3.43	0.22
Divorced/separated	55.97	39.43	4.36	0.24	40.30	51.23	7.93	0.54	60.14	36.29	3.41	0.16
Never married	15.08	72.41	12.21	0.30	14.84	70.92	13.86	0.39	15.39	74.40	10.01	0.19

Source: National Statistical Office, 1998 Malawi Population and Housing Census

3.5.8 Marital Status by Religion

In Malawi three quarters of the population were Christians. Christian religion had a large proportion of never married population followed by widowed population while Islam religion had a large proportion of divorced/separated population and married population. Southern region had a large proportion of Islam of all marital status while northern region had a large proportion of Christian of all marital status. Table 3.20 shows data on marital status by religion. According to the data collected in 1998 census population without religion had large proportion of males than females and majority of them were divorced, widowed and married. Central region had a large proportion of population without education of which the majority were widowed and divorced while Northern region had the least proportion of which majority were divorced.

Table 3.20 Population Aged 10 Years and Over by Marital Status, Religion, Sex and Area

Area, Sex and Marital Status	Total				Male				Female			
	Christian	Islam	Other	None	Christian	Islam	Other	None	Christian	Islam	Other	None
Malawi	79.48	12.67	3.06	4.80	78.15	12.47	3.03	6.35	80.74	12.86	3.08	3.32
Married	77.76	13.37	3.23	5.64	75.74	13.34	3.21	7.70	79.59	13.39	3.25	3.77
Widowed	78.50	12.38	2.89	6.23	75.38	10.40	2.81	11.42	79.01	12.70	2.90	5.39
Divorced/ Separated	74.32	16.11	3.32	6.25	69.23	13.69	3.22	13.87	75.93	16.87	3.35	3.84
Never Married	82.83	11.21	2.77	3.19	81.70	11.38	2.79	4.13	84.34	10.99	2.75	1.92
Northern	96.20	1.44	1.52	0.85	95.53	1.67	1.55	1.25	96.82	1.21	1.50	0.48
Married	95.68	1.70	1.65	0.98	94.90	1.95	1.67	1.48	96.33	1.49	1.63	0.56
Widowed	97.37	0.58	1.25	0.80	94.02	1.23	1.74	3.01	97.85	0.48	1.18	0.48
Divorced/ Separated	95.45	1.21	1.37	1.98	90.27	2.62	1.77	5.34	97.45	0.66	1.21	0.68
Never Married	96.83	1.19	1.39	0.59	96.45	1.36	1.40	0.80	97.35	0.97	1.37	0.30
Central	82.32	6.95	2.67	8.06	79.81	7.11	2.59	10.50	84.78	6.80	2.75	5.66
Married	80.48	7.17	2.93	9.41	76.95	7.31	2.86	12.88	83.76	7.03	3.00	6.20
Widowed	78.74	6.52	2.49	12.25	72.58	5.90	2.09	19.44	79.84	6.63	2.55	10.98
Divorced/ Separated	76.79	7.89	3.05	12.27	67.77	7.64	2.78	21.80	80.36	7.99	3.15	8.50
Never Married	86.06	6.57	2.25	5.13	84.30	6.85	2.24	6.61	88.41	6.19	2.26	3.13
Southern	72.72	20.45	3.78	3.05	72.17	19.97	3.80	4.06	73.23	20.89	3.76	2.12
Married	70.77	21.80	3.90	3.52	70.03	21.44	3.90	4.63	71.45	22.14	3.90	2.51
Widowed	73.40	19.62	3.61	3.37	73.03	16.24	3.65	7.09	73.46	20.15	3.60	2.79
Divorced/ Separated	69.90	22.89	3.75	3.46	66.36	20.40	3.82	9.42	70.85	23.55	3.73	1.87
Never Married	76.04	18.10	3.62	2.24	75.19	18.20	3.68	2.93	77.17	17.96	3.56	1.31

Source: National Statistical Office, 1998 Malawi Population and Housing Census

CHAPTER 4

LITERACY AND EDUCATION

Ladislav R. S. Mpando

4.0 Introduction

The 1998 Population and Housing Census collected information on the ability of an individual to read and write a simple statement in Chichewa, English or any other language(s). This is referred to as '**literacy**'. The census further collected data on current school attendance, highest educational level attended and highest qualification attained by an individual. The questions on literacy and education were asked of each person aged 5 years or older. Similar data were collected in the 1987 Population and Housing Census. In the 1977 Census, however, only information on an eligible individual's school attendance and highest level attended were collected. Since questions on literacy were not asked, indirect methods were employed to determine literacy status of individuals.

In this analysis, comparisons of literacy and educational characteristics are done for the 1977, 1987 and 1998 Censuses for selected background characteristics.

In both the 1987 and 1998 Population and Housing Censuses direct questions on literacy were asked although eligible persons were not asked to read any statement to ascertain if their responses were accurate. Unlike in the 1987 Census where the literacy questions were confined to only Chichewa or/and English in the 1998 Census similar questions were asked but in addition to English and Chichewa the questions on language(s) other than Chichewa and English were also asked of all eligible persons. Thus the literacy rates from the three censuses should be compared but with caution. Further, the literacy rates from the three sources might have been affected by reporting errors with respect to age or literacy status of individuals. The magnitude of these errors may have been different.

On the other hand, the three censuses collected similar data on educational characteristics of the population and these data are comparable, notwithstanding differences in the magnitudes of reporting errors.

In this chapter analysis is largely confined to national and regional levels only. However, in some cases it goes beyond to rural/urban levels. Analytical results at TA or STA or Town/City levels are not presented here. Furthermore, projections on school going populations are presented in a separate volume on 'Projections'.

4.1 Literacy

4.1.1 Literacy Levels

The 1998 Population and Housing Census enumerated a total of about 8.3 million persons aged 5 years or over and were eligible to respond to the questions on literacy and education. Of this total, approximately 4.1 million persons, or 49 percent, were males and 4.2 million persons, or 51 percent, were females.

Table 4.1 reveals that in 1998 the overall literacy rate for both males and females aged 5 years or older considered together was about 58 percent. It further shows that about 65 percent of the total eligible males and 51 percent of the total eligible females were literate in at least one language. It is also observed that literacy rates for persons aged 15 years or older; that is, **adult literacy rates**, were generally higher than the corresponding overall literacy rates. At national level, for instance, about 64 percent of all the adults were literate in at least one language. The corresponding literacy rates for adult males and adult females were 75 and 54 percent respectively.

It is also noted that in rural areas only about 54 percent of all eligible persons were literate, and 61 and 47 percent of the male and female persons were literate. In urban areas, 79 percent of the total eligible population were literate and 83 and 75 percent of the total eligible males and females were literate. The levels of the literacy rates in rural areas are close to the levels observed for Malawi as a whole regardless of sex or any background characteristics. This is expected since about 86 percent of the Malawi population lives in the rural areas thus the weighted average of the literacy rates for rural and urban areas would be closer to the rural level.

A further examination of the results reveals that substantial regional variations in literacy rates exist. In the Northern Region about 72 percent of all eligible persons were literate and about 76 and 68 percent of the males and females in the Region respectively were literate. Adult literacy rates stood at 82 percent, and were 89 and

Table 4.1: Overall and Adult Literacy Rates by Sex for Regions and Rural/Urban Areas: 1998

AREA AND LITERACY STATUS	BOTH SEXES		MALE		FEMALE	
	OVERALL 5+	ADULT 15+	OVERALL 5+	ADULT 15+	OVERALL 5+	ADULT 15+
MALAWI						
Literate	57.6	64.1	64.5	74.9	51.0	54.0
English only	0.1	0.0	0.1	0.0	0.1	0.0
Chichewa only	20.7	18.5	21.3	19.4	20.2	17.7
Other language only	1.6	1.3	1.4	0.9	1.8	1.6
English/Chichewa	22.0	28.2	26.6	35.4	17.6	21.5
English/Chichewa/Other.	13.2	16.1	15.1	19.1	11.3	13.2
URBAN						
Literate	79.4	87.1	83.3	92.2	75.1	81.3
English only	0.1	0.0	0.1	0.0	0.1	0.1
Chichewa only	17.5	12.3	15.8	10.7	19.3	14.2
Other language only	0.6	0.4	0.5	0.3	0.7	0.6
English/Chichewa	41.5	50.6	45.7	55.5	37.0	44.8
English/Chichewa/Other.	19.6	23.8	21.2	25.6	17.9	21.7
RURAL						
Literate	53.8	60	61.0	71.4	47.1	49.7
English only	0.1	0.0	0.1	.00	0.1	0.0
Chichewa only	21.3	19.6	22.3	21.2	20.3	18.2
Other language only	1.8	1.4	1.6	1.1	2.0	1.7
English/Chichewa	18.7	24.2	23.1	31.3	14.5	17.8
English/Chichewa/Other.	12.1	14.7	14.0	17.8	10.2	11.9
NORTHERN REGION						
Literate	71.7	81.7	75.7	88.6	68.0	75.4
English only	0.0	0.0	0.0	.0.0	0.0	0.0
Chichewa only	4.0	3.3	3.7	2.9	4.2	3.7
Other language only	7.5	5.0	6.6	3.4	8.3	6.5
English/Chichewa	3.8	4.8	4.0	5.3	3.5	4.4
English/Chichewa/Other.	56.5	68.5	61.4	77.0	51.9	60.8
CENTRAL REGION						
Literate	54.5	61.7	61.3	72.3	47.9	51.3
English only	0.1	0.1	0.1	0.0	0.1	0.1
Chichewa only	24.0	22.2	24.4	23.2	27.3	24.5
Other language only	0.3	0.3	0.3	0.3	0.4	0.4
English/Chichewa	25.2	32.6	30.3	40.5	23.4	28.7
English/Chichewa/Other.	5.0	6.5	6.1	8.3	4.4	5.5
SOUTHERN REGION						
Literate	56.5	61.7	64.3	73.7	49.2	50.8
English only	0.1	0.0	0.1	0.0	0.1	0.1
Chichewa only	22.3	19.3	23.1	20.4	21.6	18.3
Other language only	1.1	1.1	1.0	0.9	1.3	1.3
English/Chichewa	24.1	30.5	29.4	38.6	19.2	23.1
English/Chichewa/Other.	8.8	10.7	10.8	13.8	7.0	8.0

NOTE: (a) English/Chichewa/Other include the following language combinations:

- i. English and Other (exclude Chichewa)
- ii. Chichewa and Other (exclude English)
- iii. English, Chichewa and Any Other language)

(b) Percentages may not add to total due to rounding

75 percent for males and females respectively. In the Central Region, the overall literacy rates for both sexes combined was 55 percent and were 61 and 56 percent for males and females respectively. The corresponding adult literacy rates in the Region were 62 percent (both sexes), 72 and 59 percent for males and females respectively. In the Southern Region, about 57 percent of the eligible population were literate and 64 percent of the males and 49 percent of their female counterparts reported that they were able to read and write a simple sentence in at least one language. Furthermore, adult literacy rates among all adults (both sexes), males and females in the Southern Region were 62, 74 and 51 percent respectively.

It is also noted that the majority of the literate persons in the Central and Southern Regions were able to read and write in both English and Chichewa. In the Northern Region, however, the majority was literate in at least three languages.

4.1.2 Literacy Trends

Table 4.2 below summarises literacy rates at district level in 1977, 1987 and 1998. It should be borne in mind that direct questions on literacy were not asked in the 1977 Census, hence indirect estimation procedure. Thus in comparing literacy in 1977, 1987 and 1998, it should be noted that that literacy rates determined for 1977 were based on the assumption that any persons who had attended at least Standard Four of primary school were regarded as literate.

TABLE 4.2: LITERACY RATES BY SEX FOR REGIONS FOR REGIONS AND DISTRICTS: 1977, 1987 AND 1998

Region/ District	1977			1987			1998			% increase (1987-1998)		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
MALAWI	22.0	30.3	14.3	41.6	52.4	31.6	57.6	64.5	51.0	38.5	23.1	61.4
NORTHERN	35.4	45.1	26.9	56.3	65.3	47.9	71.7	75.7	68.0	27.4	15.9	42.0
Chitipa	32.5	42.3	24.0	61.1	70.3	53.0	67.3	72.7	62.5	10.1	3.4	17.9
Karonga	34.8	44.1	26.6	54.6	46.1	63.9	75.4	79.0	72.1	38.1	71.4	12.8
Nkhata Bay	33.3	43.6	24.1	57.3	66.9	48.2	74.5	78.6	70.7	30.0	17.5	46.7
Rumphi	44.0	51.1	38.0	65.6	71.6	60.0	77.8	79.6	76.0	18.6	11.2	26.7
Mzimba	35.3	45.5	26.3	53.5	62.9	44.6	69.5	73.7	65.4	29.9	17.2	46.6
Likoma	-	-	-	-	-	-	69.7	70.0	69.5	-	-	-
CENTRAL	20.6	28.1	13.5	41.3	51.5	31.6	54.5	61.3	47.9	32.0	19.0	51.6
Kasungu	28.2	37.6	17.8	48.5	58.1	37.9	58.3	63.9	52.2	20.2	10.0	37.7
Nkhotakota	22.4	32.8	12.8	43.2	54.9	31.2	53.7	61.3	46.0	24.3	11.7	47.4
Ntchisi	22.4	30.4	15.1	41.0	50.4	32.1	52.7	58.2	47.3	28.5	15.5	47.4
Dowa	19.7	26.7	13.0	40.6	49.7	31.9	52.7	58.7	46.9	29.8	18.1	47.0
Salima	16.3	23.5	9.5	37.6	49.0	27.0	45.8	54.3	37.7	21.8	10.8	39.6
Lilongwe	22.6	30.0	15.3	44.7	54.7	35.0	59.9	66.7	53.1	34.0	21.9	51.7
Mchinji	18.5	25.5	11.1	41.4	51.5	30.7	52.7	59.0	46.3	27.3	14.6	50.8
Dedza	13.7	19.0	9.3	30.0	39.3	22.2	42.4	49.5	36.2	41.3	26.0	63.1
Ntcheu	20.5	28.0	14.3	40.0	50.6	31.3	56.9	64.1	50.6	42.3	26.7	61.7
SOUTHERN	19.8	28.5	11.9	38.6	50.2	28.0	56.5	64.3	49.2	46.4	28.1	75.7
Mangochi	8.7	13.6	4.6	23.2	33.8	14.0	41.3	50.2	33.1	78.0	48.5	136.4
Machinga	12.5	19.0	7.1	31.3	43.0	21.0	44.9	53.2	37.4	43.5	23.7	78.1
Zomba	21.8	30.7	13.7	42.9	53.0	32.8	59.7	66.4	53.4	39.2	25.3	62.8
Chiradzulu	23.6	33.0	15.7	48.3	59.4	39.1	65.7	71.8	60.4	36.0	20.9	54.5
Blantyre	38.3	47.7	27.9	63.5	72.0	54.1	76.6	80.9	72.0	20.6	12.4	33.1
Mwanza	19.8	27.7	12.8	36.6	47.9	26.8	54.9	61.3	48.9	50.0	28.0	82.5
Thyolo	19.8	28.7	11.4	42.4	54.9	30.8	58.5	66.3	51.6	38.0	20.8	67.5
Mulanje	17.0	25.5	9.6	36.0	48.2	25.6	52.7	61.8	44.8	46.4	28.2	75.0
Chikwawa	15.7	25.6	6.1	27.3	40.8	14.1	43.5	54.9	32.1	59.3	34.6	127.7
Nsanje	12.0	20.1	4.8	20.2	31.2	10.2	42.3	54.9	30.5	109.4	76.0	199.0
Phalombe	-	-	-	-	-	-	52.0	61.4	43.8	-	-	-
Balaka	-	-	-	-	-	-	65.1	70.7	60.1	-	-	-

- = not computed, Likoma was part of Nkhata Bay
Phalombe was part of Mulanje
Balaka was part of Machinga
Literacy Rates in 1977 estimated by assuming that those who had attended Standard Four of Primary School were literate

The results reveal that the proportion of persons aged 5 years or over who were literate in at least one language has been steadily increasing during the past two decades. During the 1977-98 period, literacy rates for both sexes increased from 22 percent in 1977 to a transient 42 percent in 1987 and finally 58 percent in 1998. During the 1987-98 intercensal period the literacy rates for both sexes increased by 38 percent. The literacy rates for males in 1977, 1987 and 1998 were 30, 52 and 65 percent respectively. The corresponding rates for their female counterparts in the same years were 14, 32 and 51 percent respectively. During the 1987-98 intercensal period male literacy and female literacy rates rose by 23 and 61 percent respectively.

At regional level, literacy rates in 1977, 1987 and 1998 were consistently higher in the Northern Region than they were in the Central or Southern Regions. It is noted that females experienced more significant gain than their male counterparts. It is also observed that females in the Southern Region improved most significantly (76 percent) and those in the Northern Region improved the least (42 percent). It is also evident from Table 4.2 that during the 1987-98 intercensal period, the literacy rates for females in Nsanje (199 percent), Mangochi (136 percent) and Chikwawa (128 percent) improved the most. On the other hand, during the same period, the percentage increases

in literacy rates for females in Karonga (13 percent), Chitipa (18 percent), Rumphi (27 percent), Blantyre (33 percent) and Kasungu (38 percent) were the least. It should, however, be noted the districts that improved most were the lowest while the literacy rates in those districts that showed very slow increases were the highest in 1987. Among the males, the districts that experienced the most significant improvement were Nsanje (76 percent) and Mangochi (49 percent). The districts that experienced the least improvement in literacy rates were Chitipa (3 percent), Kasungu (10 percent), Rumphi and Salima (11 percent each), Nkhotakota and Blantyre (12 percent each), and Mchinji (15 percent). It should, however, be noted that most of the districts that experienced the most significant improvement in literacy, irrespective of sex, had very low literacy rates in 1987.

Table 4.3 also gives evidence of improving adult literacy rates during the 1977-98 period. Literacy rates for adult females increased more significantly than those for their male counterparts. It is, however, worth noting that generally the most substantial gains in adult literacy rates were experienced among females in the Southern Region (75 percent) and the least gains occurred among females in the Northern Region (50 percent). Adult literacy rates for males in the Central Region (12 percent) and adult males in the Northern Region experienced a 14 percent increase.

At district level, adult females in Nsanje (182 percent), Mangochi (132 percent), and Chikwawa (124 percent) experienced the most significant increases in literacy rates whereas those in Chitipa (31 percent), Rumphi (32 percent), Blantyre (34 percent), Salima (40 percent), Ntchisi (42 percent) and Dowa (43 percent) experienced the least gains. In Nsanje (54 percent), Mangochi (34 percent) and Chikwawa (21 percent) adult males experienced the largest gains in literacy rates. The lowest increases were observed in Chitipa and Ntchisi (7 percent), Salima (8 percent), Blantyre (9 percent), Chiradzulu, Kasungu and Nkhotakota (10 percent each), and Rumphi, Dowa, Machinga and Thyolo (11 percent each).

TABLE 4.3: ADULT LITERACY RATES BY SEX FOR REGIONS AND DISTRICTS: 1977, 1987 AND 1998												
Region/ District	1977			1987			1998			% increase (1987-1998)		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
MALAWI	28.9	40.8	17.4	48.5	65.3	33.5	64.1	74.9	54.0	32.2	14.7	61.2
NORTHERN	49.8	61.5	32.2	63.4	78.0	50.4	81.7	88.6	75.4	28.9	13.6	49.6
Chitipa	44.0	61.7	30.0	66.6	82.5	53.6	78.5	88.3	70.2	17.9	7.0	31.0
Karonga	43.4	59.2	30.2	61.9	76.9	49.0	83.6	89.9	78.1	35.1	16.9	59.4
Nkhata Bay	46.8	59.9	35.8	63.9	79.2	50.2	81.7	88.5	75.6	27.9	11.7	50.6
Rumphi	68.7	71.5	47.1	73.9	83.7	65.0	89.1	92.6	85.8	20.6	10.6	32.0
Mzimba	44.6	60.9	31.1	60.8	75.9	47.2	80.2	87.5	73.3	31.9	15.3	55.3
Likoma	-	-	-	-	-	-	82.6	86.6	79.5	-	-	-
CENTRAL	26.9	37.9	16.8	48.9	64.5	34.3	61.7	72.3	51.3	26.2	12.1	49.6
Kasungu	36.0	48.6	21.8	56.1	69.5	40.9	68.5	76.6	59.5	22.1	10.2	45.5
Nkhotakota	28.6	43.4	15.3	49.5	66.5	32.4	61.5	72.9	49.9	24.2	9.6	54.0
Ntchisi	29.1	41.1	18.7	49.8	64.9	35.8	60.2	69.6	50.9	20.9	7.2	42.2
Dowa	26.0	36.3	16.4	48.3	62.5	35.1	59.7	69.4	50.3	23.6	11.0	43.3
Salima	20.5	30.9	11.2	43.4	59.9	28.3	51.9	64.9	39.7	19.6	8.3	40.3
Lilongwe	29.6	40.1	19.2	52.7	67.8	38.0	66.4	76.6	55.9	26.0	13.0	47.1
Mchinji	24.8	34.7	14.4	48.4	63.2	32.6	59.9	69.8	49.8	23.8	10.4	52.8
Dedza	18.0	26.3	11.6	36.7	52.8	24.5	48.3	60.2	38.4	31.6	14.0	56.7
Ntcheu	26.9	39.2	17.7	48.3	66.7	34.7	63.7	76.1	53.4	31.9	14.1	53.9
SOUTHERN	25.5	38.4	14.3	44.9	62.9	29.1	61.7	73.7	50.8	37.4	17.2	74.6
Mangochi	10.7	18.2	5.2	27.1	42.9	13.9	44.0	57.5	32.2	62.4	34.0	131.7
Machinga	16.0	26.1	8.4	36.4	54.8	21.6	47.7	60.6	36.6	31.0	10.6	69.4
Zomba	27.6	40.4	16.3	49.8	67.9	34.5	65.7	76.0	56.1	31.9	11.9	62.6
Chiradzulu	30.6	45.4	19.0	54.8	74.0	40.2	71.1	81.5	62.5	29.7	10.1	55.5
Blantyre	48.6	60.5	34.5	70.8	82.6	57.4	83.7	89.7	77.1	18.2	8.6	34.3
Mwanza	25.0	38.9	15.8	44.3	62.9	29.2	61.9	72.4	52.4	39.7	15.1	79.5
Thyolo	26.2	39.3	14.2	49.7	69.2	32.5	64.6	77.1	49.8	30.0	11.4	53.2
Mulanje	22.4	35.6	11.7	43.2	64.0	27.1	58.5	73.2	46.7	35.4	14.4	72.3
Chikwawa	20.4	34.6	7.2	33.3	53.0	14.4	48.2	64.2	32.2	44.7	21.1	123.6
Nsanje	15.4	27.0	5.7	23.8	40.3	9.9	44.0	62.2	27.9	84.9	54.3	181.8
Phalombe	-	-	-	-	-	-	55.9	71.0	43.5	-	-	-
Balaka	-	-	-	-	-	-	70.1	79.2	62.2	-	-	-

- = not computed, Likoma was part of Nkhata Bay
 Phalombe was part of Mulanje
 Balaka was part of Machinga

4.2 Literacy Differentials

In this Section, an investigation is made to seek insight into the variations of literacy rates by selected background characteristics of all eligible persons in Malawi and in the regions.

4.2.1 Literacy by Religion

Table 4.4 shows variations in literacy among eligible persons according to their religion. It is observed that in Malawi as a whole, 61 percent of all the Christians were literate compared to 45 percent of their Moslem counterparts or only 36 percent of the non-religious persons.

The census results further show that in Malawi of the 6.6 million Christians aged 5 years or older, 61 percent were literate in contrast to 45 percent of their about 480,000 Moslem counterparts. It is worth noting that about 74 and 67 percent of the literate Christians and Moslems respectively were able to read and write in Chichewa or both English and Chichewa.

The results further reveal that males in each religious category were generally more literate than females of the same religion. For instance, of the 3.2 million Christian males aged 5 years or older in Malawi, about 68 percent

were literate compared to 55 percent of the 3.4 million Christian females. Similarly, of the 500,000 male Moslems, around 54 percent were literate compared to 37 percent of the 545,000 female Moslems

At regional level, it is noted that 72, 57 and 61 percent of all the Christians aged 5 years or older in the Northern, Central and Southern Regions respectively were literate. Comparatively, 63, 48 and 44 percent of the Moslems in the three respective regions were literate, noting that these literacy levels were lower than those for Christians in the same regions.

It is noted that literacy rates among males regardless of religion are consistently higher than literacy rates for females. It is also observed that literacy rates among Christian males aged 5 years or over in the Northern Region (76 percent) and Christian females (68 percent) were higher than the corresponding literacy rates for their Moslem counterparts. About 67 percent of the eligible male Moslems and 58 percent of the eligible female Moslems were literate. Regardless of religion, the majority of those who were literate were able to read a combination of Chichewa, English and at least one other language.

In the Central Region, literacy rates for eligible Christian and Moslem males were 64 and 57 percent respectively while 51 percent and 38 percent of the Christian and Moslem females respectively were literate. Similarly, in the Southern Region around 69 percent of the eligible male Christians and 53 percent of their Moslem counterparts were literate compared to 54 percent of the female Christians and 37 percent of the female Moslems who were literate. Unlike in the Northern Region where the majority were literate in at least three languages including English and Chichewa, the majority of those literate were able to read and write in Chichewa only or both English and Chichewa.

AREA AND LITERACY STATUS	BOTH SEXES					MALES					FEMALES				
	Total	Christian	Islam	Other Religion	No Religion	Total	Christian	Islam	Other Religion	No Religion	Total	Christian	Islam	Other Religion	No Religion
Malawi															
Persons 5 years and over.															
Literate	57.6	61.0	45.2	53.0	35.9	64.5	67.8	53.9	61.3	45.0	51.0	54.7	37.2	45.3	20.2
Of Total Literate															
English only	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.5
Chichewa only	36.0	35.0	36.7	45.5	52.4	33.0	31.6	34.3	41.4	50.1	39.6	38.9	40.1	50.7	61.2
Other language only	2.8	2.5	5.1	2.7	2.5	2.2	2.0	3.8	1.9	1.9	3.5	3.1	6.9	3.6	4.8
English and Chichewa	38.3	39.4	30.5	36.4	34.6	41.3	42.6	32.8	40.7	37.5	34.6	35.6	27.4	30.9	23.8
English, Chichewa & Other	22.9	23.0	27.4	15.2	10.2	23.4	23.7	28.9	15.7	10.4	22.2	22.2	25.5	14.6	9.7
Northern Region															
Persons 5 years and over.															
Literate	71.7	72.0	62.8	68.3	60.2	75.7	76.0	67.0	72.7	64.7	68.0	68.3	57.5	64.1	50.1
Of Total Literate															
English only	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.2
Chichewa only	5.5	5.5	8.5	6.9	5.7	4.9	4.8	8.1	6.3	5.1	6.2	6.1	9.2	7.6	7.7
Other language only	10.4	10.4	7.1	12.8	17.4	8.7	8.6	5.4	9.9	14.2	12.2	12.2	9.5	15.9	26.6
English and Chichewa	5.2	5.2	5.9	8.3	5.2	5.3	5.2	6.1	8.6	5.1	5.2	5.1	5.8	7.9	5.6
English, Chichewa & Other	78.8	78.9	78.2	71.9	71.6	81.1	81.3	80.2	75.0	75.6	76.3	76.5	75.4	68.5	-
Central Region															
Persons 5 years and over.															
Literate	54.5	57.2	47.9	46.8	34.5	61.3	64.0	57.0	55.1	43.5	47.9	50.8	38.4	39.0	19.0
Of Total Literate															
English only	0.2	0.1	0.3	0.3	0.3	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.6
Chichewa only	43.9	43.3	39.1	51.6	58.2	39.8	38.7	35.8	46.7	55.3	49.1	48.6	44.1	58.1	69.2
Other language only	0.6	0.5	2.2	0.5	0.6	0.5	0.4	1.7	0.4	0.5	0.7	0.6	2.9	0.6	0.9
English and Chichewa	46.2	47.2	41.1	40.2	37.3	49.5	50.9	43.4	44.3	40.1	42.0	42.9	37.5	34.7	26.4
English, Chichewa & Other	9.1	8.9	17.4	7.4	3.7	10.0	9.9	18.9	8.3	3.8	8.0	7.7	15.1	6.4	0.1
Southern Region															
Persons 5 years and over.															
Literate	56.5	60.9	44.2	55.3	37.2	64.3	68.6	52.6	63.9	46.9	49.2	53.7	36.5	47.2	21.0
Of Total Literate															
English only	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.4
Chichewa only	39.5	39.6	36.7	47.3	45.9	35.9	35.5	34.5	42.9	44.1	44.0	44.4	39.6	53.0	53.0
Other language only	2.0	1.1	6.0	2.5	4.6	1.5	0.8	4.5	1.7	3.3	2.6	1.5	8.0	3.4	9.6
English and Chichewa	42.7	46.2	27.8	38.1	32.6	45.6	49.5	29.9	42.7	35.7	39.1	42.3	24.9	32.2	21.1
English, Chichewa & Other	15.6	13.0	29.3	11.9	16.6	16.8	14.0	30.9	12.5	16.8	14.2	11.7	27.2	11.1	0.0
NOTE: (a)	English/Chichewa/Other include the following language combinations:														
	i. English and Other (exclude Chichewa)														
	ii. Chichewa and Other (exclude English)														
	iii. English, Chichewa and Any Other language)														
(b)	Percentages may not add to total due to rounding														

4.2.2 Literacy by Economic Activity

Table 4.5 summarises the census results on literacy status of economically active population aged 10 years or over. Among the economically active population, subsistence farmers (*mlimi*) had the lowest literacy rates (50 percent) and employers (85 percent) and unemployed persons (84 percent each) exhibited the highest rates.

The Census results also show that in Malawi among the economically active males aged 10 years or over, subsistence farmers showed the lowest literacy rate (61 percent) and the employees and employers (85 percent each) and the unemployed (86 percent) exhibited the highest literacy rates. Among the females, *mlimi* (42

percent), self-employed (65 percent) and family business workers (68 percent) showed the lowest literacy rates as opposed to employees and employers (81 percent each).

In the Northern Region, male *mlimi* (86 percent) had equal literacy status as employees. In the Central and Southern regions the literacy rates stood for male *mlimi* stood at 66 percent and 58 percent respectively. About 71 percent of the female *mlimi* in the region were literate, compared to 43 percent and 42 percent among females in the Central and Southern Regions respectively. The table further shows that in the Central Region literacy rates for employers for both males (66 percent) and females (43 percent) and for family business workers both males (60 percent) and females (40 percent) were also lower than the corresponding rates observed in the Northern Region (Table 4.5). Likewise in the Southern Region literacy rates for male employees were 85 percent for males and 42 percent for female employees. In the region about 81 percent of the male family business workers and 64 percent of the female business workers were literate.

AREA AND SEX	ACTIVITY STATUS						
	Total	Mlimi	Employee	Family Business	Self-Employed	Employer	Unemployed
MALAWI							
Both Sexes	64.5	50.2	84.4	76.5	77.3	84.7	83.7
Males	73.2	61.2	85.3	82.8	81.2	85.4	86.2
Females	56.3	42.3	80.7	68.3	65.4	80.6	78.2
NORTHERN REGION							
Both Sexes	80.7	78.3	78.1	74.4	93.7	88.2	88.5
Males	85.9	85.8	85.6	82.1	94.2	92.2	90.7
Females	75.8	70.8	70.7	68.6	91.5	84.7	82.9
CENTRAL REGION							
Both Sexes	61.9	54.8	54.6	48.9	82.7	76.8	78.8
Males	70.4	66.4	66.1	59.7	83.5	82.6	82.6
Females	53.6	42.8	42.6	40.1	79.1	66.6	64.8
SOUTHERN REGION							
Both Sexes	62.6	45.9	83.9	73.8	74.2	82.4	80.2
Males	72.3	57.5	84.9	81.2	78.3	83.2	82.9
Females	53.6	42.3	42.0	38.4	79.7	64.5	61.4

4.2.3 Literacy by Occupation

Table 4.6 gives a summary of literacy rates of persons aged 10 years or older in various occupation categories according to International Standard Classification of Occupation. It is observed that about 57 percent of all the enumerated persons in various occupation categories were literate. It is further observed that literacy rates among persons aged 10 years or over in various occupation categories, except Agriculture, Animal Husbandry and Forestry were more than 81 percent. Virtually all of the administrators and managers, as expected, were literate in contrast to 51 percent of those engaged in Agriculture, Animal Husbandry and Forestry.

Also at national level, literacy rates for males aged 10 years or older in the various occupation categories were 86 percent or more except for those working in Agriculture, Hunting and Forestry where only 62 percent were literate. As expected virtually all males in Administration and Managerial group were literate. However, the overall literacy rate for males in the various occupation groups of 69 percent suggests that the majority of the population employed were in the Agriculture sector.

Similarly, the literacy rate for females in the different occupation categories was 43 percent, reflecting the fact that most females were also in the Agriculture sector.

At regional level, Table 4.6 reveals that literacy rates were highest in the Northern Region where 86 percent of the eligible males and 71 percent of the eligible females were literate. Furthermore, about three-quarters of the males engaged in Agriculture, Animal Husbandry and Forestry were literate. The corresponding rates in the Central Region were 66 percent for males and 43 percent for females whereas in the Southern Region the literacy rate for

males was 68 percent and was 42 percent for females. The proportions among persons engaged in Agriculture, Animal Husbandry and Forestry were 50 and 47 percent in the Central and Southern Regions respectively. It is also noted that whereas 69 percent of the females in the Northern Region were engaged in Agriculture, 40 and 39 percent of their counterparts in the Central and Southern Regions respectively were engaged in Agriculture, Animal Husbandry and Forestry.

At regional level, literacy rates among persons aged 10 years or over were higher in the Northern Region (78 percent) than they were in the Central or Southern Regions (55 percent each). Literacy rates among males were 88, 66 and 68 percent in the Northern, Central and Southern Regions respectively. Literacy rates for their corresponding female counterparts were 71, 43 and 42 percent in the Northern, Central and Southern Regions respectively.

AREA AND SEX	OCCUPATION									
	Total	Professional and Technical	Administrative and Managerial	Clerical and Related	Sales	Service	Agriculture, Animal Hus. Forestry	Product. and Related	Trans. and Equip.	Operators and Labourers
	Malawi									
Both Sexes	57.2	96.7	98.6	97.6	81.4	84.1	51.0	82.7	94.0	90.4
Male	69.0	97.2	98.7	97.7	85.7	85.9	61.8	86.3	94.2	92.1
Female	45.6	95.6	97.8	97.3	72.4	75.6	42.5	58.5	91.0	73.3
Northern Region										
Both Sexes	78.3	98.5	99.0	98.7	91.2	92.5	74.9	90.0	95.0	97.1
Male	85.8	99.0	99.5	99.1	93.9	93.6	82.5	93.0	94.8	97.7
Female	70.8	97.6	96.2	97.8	87.8	86.6	68.8	77.6	100.0	86.7
Central Region										
Both Sexes	54.8	97.0	99.1	98.2	83.6	84.3	49.5	81.7	90.6	93.9
Male	66.4	97.3	99.3	98.1	86.8	86.5	60.1	85.2	90.5	94.5
Female	42.8	96.4	98.3	98.3	73.7	74.2	40.3	54.7	91.5	81.5
Southern Region										
Both Sexes	54.6	95.8	98.1	97.0	78.3	82.4	47.0	81.6	94.9	88.3
Male	67.6	96.6	98.2	97.1	83.7	84.0	58.4	85.5	95.2	90.3
Female	42.3	94.4	97.6	96.6	68.3	74.9	38.7	54.0	89.8	71.1

4.2.4 Literacy and Industry

This report further summarises literacy rates of all eligible persons according to the industry they belong to. The summary of the results is presented in Table 4.7. The various industry categories are based on the International Standard Classification of Industry (ISIC). The results indicate that generally the lowest rates of literacy (51 percent) were observed among the eligible persons engaged in the agriculture sector and the highest were observed in the Education, and Financial groups (98 percent each). As expected, a marked variation exists between male and female literacy rates in virtually all industry groups: the male rates were consistently and substantially higher than female literacy rates, regardless of region of residence.

The Table further shows that in Malawi, literacy rates among males in the Fishing and Agriculture industries were the lowest (62 percent) and 69 percent respectively. On the other hand literacy rate in the Education sector was 98 percent and as for females the lowest rates were observed in the same Fishing (46 percent) and Agriculture, Hunting and Forestry (57 percent) industries. A further look at the results shows that regardless of sex, highest literacy rates are observed among persons in the Fishing, Hunting and Forestry industries while Education and Finance industries have the highest literacy rates.

TABLE 4.7: LITERACY RATES BY INDUSTRY FOR MALAWI AND REGIONS: 1998

INDUSTRY	MALAWI			NORTHERN REGION			CENTRAL REGION			SOUTHERN REGION		
	Both	Male	Female	Both	Male	Female	Both	Male	Female	Both	Male	Female
	Sexes			Sexes			Sexes			Sexes		
Total	57.2	69.0	45.6	78.3	85.8	70.8	54.8	66.4	42.8	54.6	67.6	42.3
Agriculture Hunting & Forestry	51.4	62.4	42.6	75.0	82.6	68.8	49.8	60.6	40.4	47.4	59.5	38.9
Fishing	59.3	59.4	54.0	87.2	87.3	84.2	58.3	58.2	59.3	52.7	53.0	44.1
Mining & Quarrying	81.8	84.3	62.8	93.5	93.9	78.9	78.8	83.1	63.5	77.1	79.1	59.1
Manufacturing	80.2	85.1	60.7	87.4	91.6	78.1	81.8	86.5	60.2	77.9	83.3	55.3
Electricity, Gas & Water	95.2	95.5	92.3	97.6	97.7	95.7	94.8	94.9	93.9	95.0	95.4	89.7
Construction	86.4	87.1	71.1	93.7	94.5	79.0	86.0	86.4	75.4	85.3	86.1	67.4
Wholesale & Retail Trade	82.0	86.0	73.2	91.5	93.8	88.2	83.4	86.6	73.4	79.6	84.5	69.6
Hotels & Restaurants	82.7	87.1	74.1	92.5	95.0	88.8	82.7	86.8	74.1	80.3	85.7	70.0
Transport, Storage & Communication	95.8	95.9	95.0	97.4	97.7	93.9	96.0	96.0	95.9	95.5	95.6	94.7
Financial Intermediation	98.2	98.5	97.5	98.5	98.1	100.0	98.9	98.8	99.1	97.7	98.3	96.4
Real Estates & Business	95.0	95.8	92.5	94.8	96.3	89.9	93.9	94.7	91.4	95.7	96.3	93.6
Public Administration	88.7	90.1	82.4	95.8	96.5	91.0	89.5	91.2	82.2	87.2	88.4	81.8
Community, Social Services	95.6	95.7	95.5	97.4	98.1	96.1	96.1	95.9	96.3	94.7	94.7	94.8
Education	97.7	97.8	97.5	98.6	99.0	98.0	98.0	97.9	98.3	97.0	97.3	96.7
Health & Social Work	92.4	92.7	91.9	95.2	96.4	93.1	93.1	93.5	92.5	91.1	91.0	91.3
Other Comm. Services	93.2	93.4	91.9	95.8	97.1	90.0	92.5	92.8	91.1	93.0	92.9	93.1

4.3 EDUCATION

4.3.1 School Attendance

The 1998 census results show that in Malawi of the about 8.3 million persons aged 5 years or over, about 2.7 million or 33 percent had never attended school, 4.9 million (59 percent) had attended primary school and about 700,000 (8 percent) had attended secondary school or higher (Table 4.8). The table further shows that about 26 percent of the males and about 39 percent of the females had never attended any school. Furthermore, 63 percent of the males and 56 percent of the females had attended only up to primary school. About 11 percent of the males and 6 percent of their female counterparts had attended at least some secondary school education.

At regional level, about 16 percent of the persons enumerated in the Northern Region, and a third of those in the Central Region and 36 percent of the total eligible population in the Southern Region had never attended any school. On the other hand, around 11 percent of the population in the Northern Region compared to 8 percent and 9 percent in the Central and Southern Regions respectively attended at least some secondary education.

TABLE 4.8: PERCENTAGE DISTRIBUTION OF POPULATION AGE 5 YEARS OR OVER BY HIGHEST EDUCATION ATTENDED, AGE AND SEX: 1998

AREA, SEX & EDUCATION LEVEL	AGE (YEARS)													
	TOTAL	Less than 10	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
MALAWI														
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	32.5	43.4	12.5	15.6	25.6	31.1	34.0	38.4	42.6	45.3	46.9	50.1	57.9	65.6
Primary School	59.1	56.6	86.9	71.6	54.7	53.0	53.3	50.8	47.3	46.5	45.5	44.3	38.4	32.6
Secondary School	8.1	0.0	0.6	12.8	19.3	15.2	11.9	10.0	9.2	7.5	6.8	5.0	3.3	1.7
University	0.3	0.0	0.0	0.0	0.3	0.7	0.8	0.8	0.9	0.7	0.7	0.5	0.4	0.2
Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	26.1	44.9	12.7	12.3	17.7	21.8	23.1	25.4	28.7	31.3	32.0	34.5	40.6	49.9
Primary School	62.5	55.1	86.5	73.9	54.8	55.7	58.2	58.5	56.1	56.0	55.8	56.3	52.6	46.8
Secondary School	10.9	0.0	0.6	13.8	27.0	21.5	17.5	15.0	14.0	11.7	11.0	8.4	6.0	3.0
University	0.5	0.0	0.0	0.0	0.5	1.0	1.2	1.2	1.3	1.1	1.2	0.8	0.6	0.3
Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	38.6	41.9	12.1	18.7	31.9	40.2	45.0	51.1	56.6	59.3	62.1	66.6	73.2	79.4
Primary School	55.8	58.1	87.2	69.4	54.7	50.3	48.3	43.4	38.5	37.1	35.1	31.7	25.8	20.0
Secondary School	5.4	0.0	0.7	11.9	13.2	9.1	6.3	5.1	4.5	3.2	2.6	1.4	0.9	0.5
University	0.2	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1
NORTHERN REGION														
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	15.8	28.4	3.5	4.4	7.7	10.3	12.4	16.3	20.4	24.2	28.2	31.7	37.7	44.2
Primary School	72.9	71.6	95.9	79.6	65.7	67.8	70.3	68.2	65.5	63.9	60.9	60.2	56.3	52.5
Secondary School	11.0	0.0	0.6	15.9	26.4	21.4	16.8	15.0	13.6	11.4	10.2	7.6	5.6	3.1
University	0.2	0.0	0.0	0.0	0.3	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.2
Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	12.0	29.7	3.6	3.5	5.1	6.7	7.4	8.3	10.4	12.3	14.5	16.7	21.3	27.7
Primary School	72.5	70.3	95.8	80.1	58.2	61.1	66.6	66.8	66.6	67.9	66.4	68.8	67.5	66.3
Secondary School	15.1	0.0	0.5	16.4	36.2	31.5	25.8	23.9	22.0	18.9	18.0	13.6	10.5	5.6
University	0.4	0.0	0.0	0.0	0.4	0.8	0.8	0.9	0.9	0.9	1.1	0.9	0.7	0.3
Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	19.4	27.0	3.4	5.3	9.7	13.6	34.0	17.4	23.6	29.8	40.6	46.3	52.5	60.2
Primary School	73.3	73.0	96.0	79.2	71.7	74.1	53.3	74.5	69.5	64.5	56.0	51.9	46.3	39.0
Secondary School	7.1	0.0	0.6	15.5	18.3	12.1	11.9	8.0	6.7	5.6	3.2	1.7	1.3	0.7
University	0.1	0.0	0.0	0.0	0.2	0.2	0.8	0.2	0.2	0.1	0.2	0.1	0.1	0.1
CENTRAL REGION														
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	33.3	44.6	13.0	16.4	27.4	32.3	34.9	38.9	43.5	46.8	50.1	58.4	65.5	65.5
Primary School	59.2	55.4	86.5	72.0	55.4	53.6	53.9	51.6	47.7	46.4	45.1	38.5	32.9	32.9
Secondary School	7.2	0.0	0.6	11.6	16.9	13.4	10.5	8.8	8.1	6.2	4.4	2.7	1.4	1.4
University	0.3	0.0	0.0	0.0	0.3	0.6	0.7	0.7	0.8	0.7	0.5	0.4	0.2	0.2
Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	27.5	46.5	13.9	13.7	19.7	23.2	24.6	26.5	30.3	33.1	32.8	36.0	42.3	50.6
Primary School	62.6	53.5	85.6	74.1	56.8	57.5	59.4	59.7	56.7	55.5	56.3	56.0	52.2	46.8
Secondary School	9.5	0.0	0.5	12.3	23.1	18.4	15.0	12.8	11.8	10.4	9.9	7.2	4.9	2.4
University	0.4	0.0	0.0	0.0	0.4	0.8	1.1	1.1	1.2	1.1	1.1	0.7	0.6	0.3
Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	39.1	42.3	12.1	19.0	33.7	41.9	46.0	51.7	57.5	59.0	61.5	65.5	72.9	78.8
Primary School	55.9	57.2	87.3	70.0	54.3	49.5	47.9	43.2	38.0	37.7	36.0	33.0	26.2	20.6
Secondary School	4.9	0.0	0.6	11.0	11.8	8.1	5.6	4.6	4.1	2.9	2.3	1.3	0.7	0.4
University	0.2	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2
SOUTHERN REGION														
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	36.1	46.5	14.6	17.9	28.8	35.1	38.7	43.4	47.7	49.7	52.0	55.2	63.1	69.2
Primary School	55.3	53.5	84.7	69.1	51.2	48.8	48.5	45.9	42.2	42.4	40.8	39.4	33.3	28.5
Secondary School	8.2	0.0	0.7	12.9	19.6	15.3	11.9	9.8	9.1	7.2	6.5	4.8	3.1	2.0
University	0.4	0.0	0.0	0.0	0.4	0.8	0.9	0.9	1.0	0.8	0.8	0.6	0.4	0.3
Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	28.5	47.9	14.7	13.5	19.2	24.2	25.9	28.6	31.9	33.9	35.6	37.9	45.1	53.2
Primary School	59.6	52.1	84.7	72.1	52.1	52.8	55.2	55.3	52.8	53.8	52.8	53.2	48.6	42.9
Secondary School	11.1	0.0	0.6	14.3	28.1	21.8	17.6	14.7	13.9	11.2	10.2	8.0	5.7	3.5
University	0.6	0.0	0.0	0.0	0.6	1.2	1.4	1.4	1.5	1.1	1.3	0.9	0.2	0.4
Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	43.3	45.2	14.5	22.0	36.1	45.4	51.2	57.3	62.8	65.0	68.4	73.2	79.2	63.1
Primary School	51.0	54.8	84.7	66.3	50.5	45.0	41.9	37.1	32.1	31.4	28.6	25.1	19.7	16.1
Secondary School	5.4	0.0	0.7	11.6	13.1	9.1	6.4	5.2	4.5	3.2	2.6	1.5	0.9	0.6
University	0.2	0.0	0.0	0.0	0.3	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.2	0.2

4.3.2 Current School Attendance

The 1998 census asked of all persons aged 5 years or over if they were enrolled in a formal school the previous month; that is, August 1998. In this analysis, focus is made only on persons aged 5-29 years as persons older than 29 years constituted a very negligible proportion of all those currently enrolled in school.

The results as summarised by Table 4.9 show that, in Malawi, of the 5.5 million persons aged 5-29 years, about 2.4 million (43 percent) were currently in school in 1998. Approximately 90 percent of those attending school were enrolled in primary school and a further 10 percent were enrolled in secondary school. Those who were enrolled in the University constituted only about 0.1 percent of the total school-going population.

A further examination of the results reveals that about 47 percent of the males were in school, 89 percent of whom were in primary school in comparison with 40 percent of their female counterparts who enrolled in a formal educational institution. Slightly over 92 percent of the females were in primary school, a further 8 percent in secondary school and only about 0.1 percent in the university.

In urban areas, slightly under half of the population age 5-29 years enrolled in schools compared to 42 percent of the population in the same age group who enrolled in schools in rural areas. Furthermore, approximately 80 percent of those in school were in primary school, 20 percent enrolled in secondary school and about 0.5 percent were attending university. In the rural areas, about 92 percent of those in school were in primary school, 8 percent were in the higher institutions.

The analysis at regional level reveals that larger proportion of males enrolled in schools at all ages except in the 5-9 year age group where more girls enrolled in school. In the age group 10-14 boys and girls who enrolled in school were more or less in equal proportions. This observation seems to suggest that more girls enrol in school when they are young but drop out more rapidly than boys before proceeding with their education. It is further noted that age-specific enrolment rates of persons in the Northern Region were consistently higher than the age-specific enrolment rates of their counterparts in the Central or Southern Regions (Table 4.9).

TABLE 4.9: AGE-SPECIFIC SCHOOL ATTENDANCE RATE BY SEX FOR MALAWI AND REGIONS: 1998						
AREA, SEX AND SCHOOL ATTENDANCE	TOTAL	Less than	10 - 14	15 - 19	20 - 24	25 - 29
		10 years	years	years	years	years
MALAWI						
Both Sexes						
TOTAL ATTENDING	43.4	47.8	76.9	53.8	15.1	3.6
Primary	90.3	100.0	99.3	79.7	38.2	43.0
Secondary	9.6	0	0.7	20.2	60.6	53.8
University	0.1	0.0	0.0	0.0	1.2	3.2
Male						
TOTAL ATTENDING	47.1	46.4	76.7	63.8	24.3	5.0
Primary	88.5	100.0	99.4	80.8	37.7	36.5
Secondary	11.4	0.0	0.6	19.2	61.1	60.0
University	0.2	0.0	0.0	0.0	1.1	3.5
Female						
TOTAL ATTENDING	39.8	49.2	77.1	44.4	7.8	2.2
Primary	92.3	100.0	99.2	78.3	39.2	57.8
Secondary	7.6	0.0	0.8	21.7	59.4	39.8
University	0.1	0.0	0.0	0.0	1.4	2.4
NORTHERN REGION						
Both Sexes						
TOTAL ATTENDING	56.0	65.5	90.6	65.9	22.2	6.1
Primary	89.7	100.0	99.4	79.1	37.5	41.2
Secondary	10.2	0.0	0.6	20.9	61.7	56.8
University	0.1	0.0	0.0	0.0	0.8	2.1
Male						
TOTAL ATTENDING	61.8	64.3	90.8	79.1	36.0	8.5
Primary	87.7	100.0	99.4	80.8	36.8	31.8
Secondary	12.1	0.0	0.6	19.2	62.4	65.6
University	0.1	0.0	0.0	0.0	0.8	2.7
Female						
TOTAL ATTENDING	50.6	66.7	90.4	53.5	11.0	3.8
Primary	91.9	100.0	99.3	76.8	39.6	60.7
Secondary	8.0	0.0	0.7	23.2	59.6	38.5
University	0.0	0.0	0.0	0.0	0.9	0.8
CENTRAL REGION						
Both Sexes						
TOTAL ATTENDING	41.7	46.5	75.5	52.1	13.1	3.0
Primary	91.2	100.0	99.4	81.1	39.3	42.6
Secondary	8.7	0.0	0.6	18.8	59.7	54.4
University	0.1	0.0	0.0	0.0	1.1	3.0
Male						
TOTAL ATTENDING	44.3	44.9	74.8	60.3	26.0	4.1
Primary	89.6	100.0	99.4	82.1	39.0	35.9
Secondary	10.3	0.0	0.6	17.8	60.0	60.9
University	0.1	0.0	0.0	0.0	1.0	3.2
Female						
TOTAL ATTENDING	39.2	48.1	76.2	44.4	7.4	1.9
Primary	93.1	100.0	99.3	79.9	39.8	58.0
Secondary	6.9	0.0	0.7	20.1	58.9	39.4
University	0.1	0.0	0.0	0.0	1.3	2.6
SOUTHERN REGION						
Both Sexes						
TOTAL ATTENDING	41.4	44.1	74.3	51.9	17.7	3.5
Primary	89.6	100.0	99.2	78.7	37.6	44.2
Secondary	10.2	0.0	0.8	21.2	61.0	52.0
University	0.2	0.0	0.0	0.1	1.5	3.8
Male						
ATTENDING	45.6	42.9	74.4	62.6	32.5	5.0
Primary	87.8	100.0	99.3	79.7	37.1	38.8
Secondary	12.0	0.0	0.7	20.3	61.5	57.0
University	0.2	0.0	0.0	0.1	1.4	4.1
Female						
TOTAL ATTENDING	37.4	45.3	74.3	42.0	8.4	2.1
Primary	91.7	100.0	99.1	77.4	38.7	56.4
Secondary	8.2	0.0	0.9	22.6	59.7	40.6
University	0.1	0.0	0.0	0.1	1.6	3.0

4.3.3 Trends of School Enrolment 1977-1998

A comparative analysis of school enrolment during the 20-year period prior to the census reveals that school attendance rate in Malawi steadily increased from around 22 percent in 1977 to 24 percent in 1987 before finally peaking at 43 percent in 1998. About 68 percent of those attending school in 1998 were aged under-15. Similar increases are evident for males and females when considered separately. School attendance rates for males

remained constant at 28 percent during the 1977-87 period but rose to 47 percent in 1998. On the other hand, female school attendance rate was 17 percent in 1977 and rose to 20 percent in 1987 and then to 40 percent in 1998.

At regional level, Table 4.10 reveals that the Northern Region school attendance rate in 1977 of 39 percent was higher than the corresponding rates for the Central and Southern Regions (20 percent each). In the Northern Region, school attendance rate increased from 42 percent in 1987 to 56 percent in 1998 whereas in the Central Region school attendance rate increased from 23 percent in 1987 to 42 percent in 1998. In the Southern Region the rates in 1987 and 1998 were 22 and 41 percent respectively. In all the regions school attendance rates for males were higher than for females.

TABLE 4.10: PERCENTAGE DISTRIBUTION OF POPULATION AGED 5-29 YEARS BY CURRENT SCHOOL ATTENDANCE, AGE AND SEX: 1977, 1987 AND 1998

AREA, SEX AND ATTENDANCE STATUS	1977						1987						1998					
	TOTAL	Less than 10 years	10 - 14 years	15 - 19 years	20 - 24 years	25 - 29 years	TOTAL	Less than 10 years	10 - 14 years	15 - 19 years	20 - 24 years	25 - 29 years	TOTAL	Less than 10 years	10 - 14 years	15 - 19 years	20 - 24 years	25 - 29 years
MALAWI																		
Both Sexes																		
TOTAL ATTENDING	22.1	15.3	48.7	34.5	6.7	0.9	24.2	16.7	48.0	36.3	10.3	1.9	43.4	47.8	76.9	53.8	15.1	3.6
Primary	96.7	100.0	99.9	94.8	68.8	67.6	95.1	100.0	99.9	93.7	60.2	49.3	90.3	100.0	99.3	79.7	38.2	43.0
Secondary	3.2	0.0	0.1	5.1	29.5	29.9	4.7	0.0	0.1	6.2	38.2	47.1	9.6	0.0	0.3	4.9	3.7	0.6
University	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.6	3.5	0.1	0.0	0.0	0.0	1.2	3.2
Male																		
TOTAL ATTENDING	27.7	16.1	52.4	49.0	13.4	1.5	28.4	16.8	49.4	48.2	18.2	3.2	47.1	46.4	76.7	63.8	24.3	5.0
Primary	96.1	100.0	99.9	95.4	70.4	63.7	94.0	100.0	99.9	94.6	62.4	45.8	88.5	100.0	99.4	80.8	37.7	36.4
Secondary	3.8	0.0	0.1	4.5	28.1	33.3	5.7	0.0	0.1	5.4	36.0	50.2	11.4	0.0	0.6	19.2	6.1	60.0
University	0.2	0.0	0.0	0.1	1.6	3.0	0.2	0.0	0.0	0.0	1.6	4.0	0.2	0.0	0.0	0.0	1.1	3.5
Female																		
TOTAL ATTENDING	17.0	14.5	44.7	21.0	1.6	0.3	20.4	16.5	46.6	25.5	3.9	0.7	39.8	49.2	77.1	44.4	7.8	2.2
Primary	97.7	100.0	99.9	93.5	59.1	82.5	96.5	100.0	99.9	92.3	51.7	63.4	92.3	100.0	99.2	78.3	39.2	57.8
Secondary	2.3	0.0	0.1	6.4	38.3	16.9	3.4	0.0	0.1	7.7	46.8	35.0	7.6	0.0	0.8	21.7	59.4	39.8
University	0.1	0.0	0.0	0.1	2.6	0.5	0.1	0.0	0.0	0.0	1.5	1.7	0.1	0.0	0.0	0.0	1.4	2.4
NORTHERN REGION																		
Both Sexes																		
TOTAL ATTENDING	39.0	27.1	75.8	54.4	14.1	2.0	41.9	31.8	77.6	58.2	19.6	3.9	56.0	65.5	90.6	65.9	22.2	6.1
Primary	96.8	100.0	99.9	95.7	69.5	55.8	95.1	100.0	99.9	94.7	62.6	44.4	89.7	100.0	99.4	79.1	37.5	41.2
Secondary	3.1	0.0	0.1	4.3	29.9	43.7	4.8	0.0	0.1	5.3	36.3	53.4	10.2	0.0	0.6	20.9	61.7	56.8
University	0.0	0.0	0.0	0.0	0.6	0.5	0.1	0.0	0.0	0.0	1.1	2.2	0.1	0.0	0.0	0.0	0.8	2.1
Male																		
TOTAL ATTENDING	47.1	28.5	79.1	73.5	27.6	3.4	48.3	31.6	78.7	75.0	34.8	6.7	61.8	64.3	90.8	79.1	36.0	8.5
Primary	96.0	100.0	99.9	96.1	70.9	55.0	93.7	100.0	99.9	95.4	64.4	39.8	87.7	100.0	99.4	80.8	36.8	31.8
Secondary	3.9	0.0	0.1	3.9	28.5	44.3	6.1	0.0	0.1	4.6	34.5	57.4	12.1	0.0	0.6	19.2	62.4	65.8
University	0.1	0.0	0.0	0.0	0.6	0.6	0.2	0.0	0.0	0.0	1.0	2.7	0.1	0.0	0.0	0.0	0.8	2.7
Female																		
TOTAL ATTENDING	31.5	25.6	72.3	37.1	3.3	0.6	35.7	32.0	76.4	42.7	7.0	1.4	50.6	66.7	90.4	53.5	11.0	3.8
Primary	98.0	100.0	100.0	94.9	59.8	78.8	96.8	100.0	99.9	93.6	55.2	65.1	91.9	100.0	99.3	76.8	39.6	60.7
Secondary	2.0	0.0	0.0	5.0	39.5	21.4	3.2	0.0	0.1	6.4	43.7	34.1	8.0	0.0	0.7	23.2	59.6	38.4
University	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.1	0.9	0.0	0.0	0.0	0.0	0.9	0.8
CENTRAL REGION																		
Both Sexes																		
TOTAL ATTENDING	19.7	12.8	44.3	32.2	5.9	0.8	22.5	14.6	45.9	35.3	9.1	1.7	41.7	46.5	75.5	52.1	13.1	3.0
Primary	97.2	100.0	99.9	96.1	72.2	70.1	95.6	100.0	99.9	94.6	63.7	52.0	91.2	100.0	99.4	81.1	39.3	42.8
Secondary	2.7	0.0	0.1	3.8	25.7	26.8	4.2	0.0	0.1	5.4	34.9	44.4	8.7	0.0	0.6	18.8	59.7	54.4
University	0.2	0.0	0.0	0.1	2.1	3.3	0.1	0.0	0.0	0.0	1.4	3.5	0.1	0.0	0.0	0.0	1.1	3.0
Male																		
TOTAL ATTENDING	24.2	13.1	46.9	44.9	11.5	1.3	26.0	14.6	46.7	46.5	15.6	2.7	44.3	44.9	74.8	60.3	26.0	4.1
Primary	96.5	100.0	99.9	96.5	73.1	65.8	94.7	100.0	99.9	95.4	66.0	48.9	89.6	100.0	99.4	82.1	39.0	35.3
Secondary	3.3	0.0	0.1	3.4	24.8	29.9	5.1	0.0	0.1	4.6	32.6	47.3	10.3	0.0	0.6	17.8	60.0	60.6
University	0.2	0.0	0.0	0.1	2.1	4.2	0.2	0.0	0.0	0.0	1.4	3.8	0.1	0.0	0.0	0.0	1.0	3.2
Female																		
TOTAL ATTENDING	15.4	12.5	41.5	19.9	1.4	0.3	19.3	14.6	45.1	25.0	3.4	0.6	39.2	48.1	76.2	44.4	7.4	1.9
Primary	98.2	100.0	99.9	95.1	65.8	85.4	96.9	100.0	99.9	93.2	54.3	66.0	93.1	100.0	99.3	79.9	39.8	58.0
Secondary	1.8	0.0	0.1	4.8	32.3	14.6	3.1	0.0	0.1	6.8	44.1	31.7	6.9	0.0	0.7	20.1	58.9	39.2
University	0.1	0.0	0.0	0.1	1.9	0.0	0.1	0.0	0.0	0.0	1.5	2.3	0.1	0.0	0.0	0.0	1.3	2.8

4.3.4 Educational Attainment

The results in Table 4.11 show that in Malawi in 1998, of the 8.3 million persons aged 5 years or over, about 7.3 million or 88 percent did not have any educational qualification, 6 percent had a Primary School Leaving Certificate (PSLC) whereas a further 3 percent had a Malawi Junior Certificate of Education (JC). Further, only 2 percent had a Malawi School Certificate of Education (MSCE) and about 0.3 percent had a GCE 'A' Level, Diploma or Degree.

As expected, variations in educational qualifications exist among males and females. About 84 percent of all eligible males and 92 percent of their female counterparts did not have any educational qualification while 8 and 5 percent of all eligible males and females respectively had PSLC. About 5 and 2 percent of the eligible males and females respectively had JC while 3 percent of the males and only 1 percent of the females had MSCE. It is also observed that 0.4 percent of the males and only 0.1 percent of the females had at least a GCE 'A' level.

Although regional variations in educational qualification exist, the patterns of educational qualifications in the regions are similar. In the Northern Region about 19 percent had some educational qualification compared to about 11 percent of the eligible persons in each of the Central and Southern Regions. A further examination of the results shows that higher proportions of males were more educated than females.

TABLE 4.11: POPULATION AGE 5 AND OVER BY HIGHEST EDUCATION ACHIEVEMENT, AGE AND SEX

AREA, SEX & QUALIFICATION	TOTAL	Less than	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and
		10 years	years	years	years	years	years	years	years	years	years	years	years	over
MALAWI														
Both sexes														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	87.9	100.0	99.2	84.7	75.4	77.1	78.7	81.0	82.5	85.7	87.0	90.4	93.8	96.8
PSLC.....	6.4	0.0	0.8	11.3	11.2	9.6	10.6	10.1	9.3	7.8	7.1	5.2	3.3	1.9
JC.....	3.4	0.0	0.1	3.5	9.3	6.9	5.1	4.3	4.0	3.3	3.2	2.5	1.6	0.8
MSCE OR HIGHER...	2.3	0.0	0.0	0.5	4.1	6.4	5.7	4.7	4.3	3.2	2.8	1.9	1.2	0.5
Males														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	83.7	100.0	99.2	83.8	67.2	68.9	69.6	71.8	73.6	77.9	79.1	84.0	88.8	94.2
PSLC.....	8.2	0.0	0.7	12.1	14.5	12.1	14.3	14.5	13.6	11.6	11.2	8.5	5.9	3.3
JC.....	4.5	0.0	0.1	3.6	12.4	9.5	7.3	6.3	6.0	5.2	5.2	4.2	3.0	1.5
MSCE OR HIGHER...	3.5	0.0	0.0	0.5	5.8	9.6	8.8	7.3	6.8	5.3	4.6	3.3	2.3	1
Females														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	91.9	100.0	99.1	85.7	82.0	85.2	87.9	89.9	91.3	93.4	94.9	97.1	98.4	99.1
PSLC.....	4.6	0.0	0.8	10.5	8.5	7.1	6.8	5.8	4.9	3.9	3.0	1.6	1.0	0.6
JC.....	2.3	0.0	0.1	3.4	6.7	4.4	2.8	2.3	2.0	1.5	1.2	0.7	0.4	0.2
MSCE OR HIGHER...	1.2	0.0	0.0	0.5	2.8	3.3	2.5	2.0	1.7	1.2	0.9	0.5	0.3	0.1
NORTHERN REGION														
Both sexes														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	80.7	100.0	98.6	75.4	61.2	62.9	65.2	68.1	70.9	75.1	78.6	83.8	89.0	93.4
PSLC.....	11.9	0.0	1.3	20.2	21.6	18.9	20.3	19.1	17.7	15.4	12.7	9.6	6.2	4.0
JC.....	4.8	0.0	0.1	4.0	13.1	10.7	7.7	7.0	6.4	5.3	5.1	3.9	2.9	1.7
MSCE OR HIGHER...	2.6	0.0	0.0	0.4	4.2	7.5	6.8	5.7	5.0	4.3	3.5	2.6	1.9	0.9
Males														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	74.9	100.0	98.7	74.9	51.4	51.2	51.6	53.3	55.8	61.0	63.6	71.8	79.7	88.3
PSLC.....	14.3	0.0	1.2	20.7	25.5	21.6	25.5	25.9	25.2	22.6	20.8	16.4	11.0	6.8
JC.....	6.6	0.0	0.1	3.9	17.1	15.2	11.7	11.1	10.2	8.8	9.1	7.1	5.7	3.0
MSCE OR HIGHER...	4.2	0.0	0.0	0.5	6.0	12.1	11.3	9.7	8.9	7.7	6.5	4.8	3.7	1.8
Females														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	86.2	100.0	98.6	75.8	69.1	73.7	78.5	81.9	85.2	88.1	92.0	95.6	97.3	98.3
PSLC.....	9.6	0.0	1.4	19.7	18.4	16.5	15.3	12.9	10.6	8.6	5.5	3.1	1.9	1.3
JC.....	3.1	0.0	0.1	4.1	9.8	6.5	3.8	3.2	2.8	2.2	1.6	0.9	0.5	0.3
MSCE OR HIGHER...	1.1	0.0	0.0	0.4	2.8	3.3	2.4	2.0	1.4	1.1	0.8	0.5	0.3	0.1
CENTRAL REGION														
Both sexes														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	89.3	100.0	99.3	86.7	78.7	79.7	81.0	82.9	84.2	86.8	87.9	91.4	94.7	97.3
PSLC.....	5.7	0.0	0.6	9.8	9.7	8.6	9.6	9.3	8.5	7.3	6.8	4.8	2.9	1.6
JC.....	3.0	0.0	0.1	3.0	8.1	6.1	4.4	3.8	3.5	3.0	2.9	2.3	1.3	0.6
MSCE OR HIGHER...	2.0	0.0	0.0	0.4	3.5	5.6	5.0	4.1	3.8	2.9	2.4	1.5	1.0	0.4
Males														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	85.6	100.0	99.3	86.0	71.9	72.7	73.1	74.9	76.6	79.8	80.7	85.9	90.4	95.2
PSLC.....	7.4	0.0	0.6	10.5	12.7	11.1	13.1	13.5	12.6	10.8	10.7	7.8	5.3	2.9
JC.....	3.9	0.0	0.1	3.1	10.6	8.2	6.2	5.4	5.1	4.6	4.7	3.7	2.4	1.2
MSCE OR HIGHER...	3.0	0.0	0.0	0.4	4.8	8.0	7.6	6.3	5.8	4.8	3.9	2.6	1.9	0.8
Females														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	93.0	100.0	99.3	87.4	84.4	87.1	89.4	91.1	92.4	94.1	95.5	97.5	98.6	99.2
PSLC.....	3.9	0.0	0.7	9.2	7.2	5.9	5.7	4.9	4.2	3.5	2.7	1.5	0.8	0.5
JC.....	2.0	0.0	0.1	3.0	6.0	4.0	2.6	2.1	1.8	1.3	1.0	0.7	0.4	0.2
MSCE OR HIGHER...	1.1	0.0	0.0	0.4	2.5	3.0	2.2	1.9	1.6	1.0	0.8	0.4	0.2	0.1
SOUTHERN REGION														
Both sexes														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	88.6	100.0	99.2	85.6	76.3	78.2	80.1	82.5	83.9	87.1	88.3	91.3	94.5	97.2
PSLC.....	5.6	0.0	0.7	10.1	9.8	8.2	9.0	8.6	7.8	6.5	5.9	4.3	2.8	1.6
JC.....	3.3	0.0	0.1	3.7	9.3	6.7	4.9	4.1	3.8	3.1	2.3	2.3	1.5	0.7
MSCE OR HIGHER...	2.5	0.0	0.0	0.5	4.7	6.9	6.0	4.8	4.5	3.2	2.9	2.0	1.3	0.6
Males														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	84.4	100.0	99.2	84.3	67.2	69.7	71.0	73.6	75.4	80.0	81.4	85.6	90.0	94.9
PSLC.....	7.3	0.0	0.7	11.2	13.3	10.7	12.5	12.6	11.7	9.9	9.2	7.1	5.0	2.8
JC.....	4.5	0.0	0.1	3.9	12.9	9.2	7.1	6.0	5.8	4.9	4.7	3.8	2.7	1.3
MSCE OR HIGHER...	3.8	0.0	0.0	0.6	6.7	10.4	9.3	7.7	7.2	5.2	4.7	3.5	2.3	1.0
Females														
Persons 5 years+.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None.....	92.5	100.0	99.2	86.9	83.3	86.4	89.0	90.8	92.1	94.1	95.3	97.3	98.4	99.1
PSLC.....	3.9	0.0	0.8	9.0	7.1	5.7	5.6	4.8	4.0	3.2	2.4	1.4	0.8	0.5
JC.....	2.3	0.0	0.1	3.5	6.6	4.3	2.8	2.2	1.9	1.4	1.1	0.7	0.5	0.2
MSCE OR HIGHER...	1.3	0.0	0.0	0.5	3.1	3.6	2.7	2.2	1.9	1.3	1.1	0.6	0.3	0.2

4.4 Education Differentials

4.4.1 Education and Economic Activity Status

The census enumerated a total of about 6.8 million persons aged 5 years or over in Malawi of which 4.5 million or 66 percent were economically active (Table 4.12). It is noted that of the total economically active population, around 85 percent did not have any academic qualification, 8 percent had a PSLC and about 7 percent had at least a secondary school certificate. It is also noted that in Malawi 90 percent of the economically active males and 96 percent of the economically active females had either a PSLC or did not have any academic certificate at all.

Table 4.12 shows that the highest proportion of persons without an academic qualification were subsistence farmers (93 percent) and about half of the employed persons were without any academic certificate. The results further reveal that over 88 percent of all family business workers or self-employed persons had a PSLC as the highest academic qualification. It is further observed that about 2 percent of the subsistence farmers had an MSCE, and around 12 percent of the self-employed had at least a JC. It is also noted that about 45 percent of the unemployed persons had no educational qualification while 43 percent had either a JC or an MSCE, and a further 1 percent had either a university diploma or degree.

Table 4.12 also shows that about 81 percent of the population with an MSCE were involved in an economic activity of some sort and about 7 percent were not involved in any economic activity; that is, they were unemployed. It is further noted that about 93 percent of the persons with a university degree were involved in an economic activity, but 3 percent were unemployed. While the majority of the persons without an academic certificate, or those with a PSLC were largely involved in subsistence farming, the majority of the persons with at least a JC were employees. The same pattern exposed by the population at national level is also observed for the various regions although variations in levels exist between regions.

TABLE 4.12: PERCENTAGE DISTRIBUTION OF PERSONS AGED 10 YEARS OR OVER BY ECONOMIC ACTIVITY STATUS, SEX AND AGE: 1998

Literacy Education	Economically Active									Total Econ. Inactive
	ALL PERSONS	Total Economically Active	Total Employed	Employed						
				Milimi	Employee	Family Business	Self-Employed	Employer		
MALAWI										
Persons 10 yrs and over.	100.0	66.0	65.3	51.3	8.4	1.6	3.8	0.1	0.7	34.0
None.....	100.0	66.0	65.6	55.9	5.0	1.4	3.3	0.1	0.4	34.0
PSLC.....	100.0	60.4	59.5	34.1	15.0	2.9	7.1	0.2	1.0	39.6
JC.....	100.0	61.2	57.5	18.2	29.9	2.7	6.3	0.4	3.6	38.8
MSCE OR HIGHER.....	100.0	88.4	82.1	8.3	63.9	2.7	6.3	0.8	6.3	11.6
Males 10 years and over...										
None.....	100.0	67.4	66.4	44.3	14.1	1.9	5.9	0.2	1.0	32.6
PSLC.....	100.0	65.9	65.3	49.2	9.1	1.6	5.2	0.2	0.6	34.1
JC.....	100.0	68.6	67.4	33.8	21.1	2.9	9.2	0.3	1.1	31.4
MSCE OR HIGHER.....	100.0	67.6	64.1	19.2	33.8	2.8	7.8	0.5	3.5	32.4
MSCE OR HIGHER.....	100.0	91.7	85.6	9.1	65.5	2.7	7.3	0.9	6.2	8.3
Females 10 years and over...										
None.....	100.0	64.7	64.2	57.9	3.1	1.4	1.8	0.0	0.4	35.3
PSLC.....	100.0	66.0	65.8	61.5	1.5	1.2	1.6	0.0	0.2	34.0
JC.....	100.0	46.5	45.8	34.7	4.6	2.9	3.5	0.1	0.7	53.5
MSCE OR HIGHER.....	100.0	49.0	45.1	16.2	22.4	2.7	3.5	0.2	3.9	51.0
MSCE OR HIGHER.....	100.0	79.0	72.2	6.2	59.5	2.5	3.5	0.5	6.8	21.0
Northern Region										
Persons 10 yrs and over.	100.0	57.4	56.6	44.2	6.8	1.8	3.7	0.1	0.8	42.6
None.....	100.0	55.1	54.7	47.2	3.1	1.4	2.9	0.1	0.3	44.9
PSLC.....	100.0	60.8	60.1	42.1	9.0	2.9	5.9	0.2	0.7	39.2
JC.....	100.0	62.4	59.0	25.5	24.1	2.9	6.1	0.5	3.4	37.6
MSCE OR HIGHER.....	100.0	87.5	81.6	15.9	55.6	2.9	6.5	0.8	5.9	12.5
Males 10 years and over...										
None.....	100.0	59.1	58.0	39.1	11.5	1.7	5.4	0.2	1.1	40.9
PSLC.....	100.0	53.6	53.1	41.4	5.8	1.2	4.5	0.1	0.5	46.4
JC.....	100.0	67.0	66.0	41.9	13.5	2.6	7.6	0.3	1.0	33.0
MSCE OR HIGHER.....	100.0	68.6	65.3	27.4	27.1	2.8	7.4	0.6	3.3	31.4
MSCE OR HIGHER.....	100.0	90.6	84.7	17.2	56.5	2.9	7.3	0.9	5.9	9.4
Females 10 years and over...										
None.....	100.0	55.8	55.3	49.0	2.5	1.8	2.0	0.0	0.4	44.2
PSLC.....	100.0	56.2	56.0	51.8	0.9	1.6	1.7	0.0	0.2	43.8
JC.....	100.0	52.2	51.7	42.3	2.5	3.4	3.5	0.1	0.4	47.8
MSCE OR HIGHER.....	100.0	49.9	46.4	21.6	18.1	3.0	3.4	0.2	3.5	50.1
MSCE OR HIGHER.....	100.0	76.6	70.6	11.2	52.4	2.8	3.7	0.5	6.0	23.4
Central Region										
Persons 10 yrs and over.	100.0	67.6	67.0	55.2	7.7	1.0	3.0	0.1	0.6	32.4
None.....	100.0	67.6	67.3	59.4	4.6	0.9	2.5	0.1	0.3	32.4
PSLC.....	100.0	62.3	61.4	38.0	14.5	2.0	6.7	0.2	0.9	37.7
JC.....	100.0	62.3	58.7	19.2	30.9	2.0	6.2	0.4	3.6	37.7
MSCE OR HIGHER.....	100.0	89.2	83.0	8.6	65.4	2.1	6.1	0.9	6.1	10.8
Males 10 years and over...										
None.....	100.0	69.5	68.7	49.9	12.6	1.3	4.7	0.2	0.8	30.5
PSLC.....	100.0	68.4	68.0	54.6	8.2	1.2	4.0	0.1	0.4	31.6
JC.....	100.0	71.1	70.1	39.3	19.6	2.2	8.7	0.3	1.0	28.9
MSCE OR HIGHER.....	100.0	98.5	94.9	20.9	33.7	2.1	7.8	0.5	3.5	31.5
MSCE OR HIGHER.....	100.0	92.4	86.3	9.5	66.4	2.1	7.2	1.0	6.1	7.6
Females 10 years and over...										
None.....	100.0	65.6	65.3	60.3	2.9	0.7	1.3	0.0	0.3	34.4
PSLC.....	100.0	66.9	66.7	63.6	1.4	0.7	1.1	0.0	0.1	33.1
JC.....	100.0	45.7	45.1	35.5	4.8	1.8	2.9	0.1	0.6	54.3
MSCE OR HIGHER.....	100.0	50.8	46.9	16.0	25.6	1.7	3.2	0.2	3.9	49.2
MSCE OR HIGHER.....	100.0	80.1	73.8	6.0	62.3	1.9	3.1	0.5	6.3	19.9
Southern Region										
Persons 10 yrs and over.	100.0	66.9	66.0	49.9	9.5	2.1	4.5	0.1	0.9	33.1
None.....	100.0	67.1	66.6	54.9	5.8	1.8	4.0	0.1	0.5	32.9
PSLC.....	100.0	58.6	57.4	26.3	19.0	3.7	8.2	0.3	1.2	41.4
JC.....	100.0	59.8	56.1	14.6	31.3	3.3	6.5	0.4	3.8	40.2
MSCE OR HIGHER.....	100.0	88.1	81.5	6.1	65.2	3.0	6.4	0.8	6.6	11.9
Males 10 years and over...										
None.....	100.0	67.7	66.5	40.7	16.1	2.4	7.0	0.3	1.2	32.3
PSLC.....	100.0	66.5	65.7	46.2	10.7	2.2	6.5	0.2	0.8	33.5
JC.....	100.0	67.1	65.8	24.7	26.4	3.7	10.6	0.4	1.3	32.9
MSCE OR HIGHER.....	100.0	66.6	63.0	14.7	36.6	3.3	8.0	0.5	3.6	33.4
MSCE OR HIGHER.....	100.0	91.7	85.8	6.1	68.3	3.0	7.4	0.9	6.0	8.3
Females 10 years and over...										
None.....	100.0	66.2	65.6	58.3	3.4	1.8	2.1	0.0	0.5	33.8
PSLC.....	100.0	67.7	67.4	62.0	1.8	1.6	2.0	0.0	0.3	32.3
JC.....	100.0	43.5	42.6	29.1	5.9	3.6	4.0	0.1	0.9	56.5
MSCE OR HIGHER.....	100.0	47.3	43.3	14.4	21.4	3.3	3.8	0.3	4.0	52.7
MSCE OR HIGHER.....	100.0	78.8	71.4	5.2	59.1	2.8	3.8	0.5	7.4	21.2

4.4.2 Education and Occupation

The census results show that of the 4.5 million persons economically active in Malawi in 1998, about 83 percent of them were employed in the Agriculture sector. Furthermore, 92 percent of them did not have any academic certificate and a further 5 percent had a PSLC. This shows that about 3 percent of those in agriculture sector had at least a JC.

It is also clear from Table 4.13 that a significant proportion of Malawians was involved in sales. However, a significant percentage of persons with at least some secondary education were employed in the Professional and Technical, Administrators & Managers, and Clerical & Related Workers categories.

Administrators & Managers, Clerical & Related Workers categories were conspicuously insignificant in the Agriculture category (Table 4.13). A similar trend is also evident for males and females when considered separately.

It is further noted that in the Northern Region, 73 percent of the economically active population did not have any academic certificate, compared to 87 percent in each of the Central and Southern Regions. The majority of the population in each region was in the agriculture sector. However, while 81 percent of the population in the

AREA, SEX AND EDUCATION	Total	Profession- al & echnical	Adminis- trators & Managers	Clerical & related	Sales	Service	Agriculture, Animals, Forestry	Production and related	Transport Equipment	Operators and Labourers
MALAWI										
All Persons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	85.4	15.0	9.4	17.3	68.2	62.4	92.3	65.7	40.4	45.0
PSLC	7.1	7.2	5.4	13.4	15.4	19.0	5.3	17.3	22.9	20.4
JC	3.8	27.5	11.9	23.1	8.7	10.9	1.6	9.3	18.2	17.9
MSCE	3.4	42.7	39.6	42.3	7.1	7.2	0.6	7.2	18.0	15.8
University	0.4	7.5	33.8	3.9	0.6	0.5	0.1	0.5	0.5	0.8
All Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	78.5	14.8	9.2	18.7	65.0	60.7	88.3	63.0	40.6	43.2
PSLC	10.2	7.0	5.3	15.4	16.6	20.1	7.8	18.7	23.4	21.3
JC	5.5	23.9	11.6	22.1	9.3	11.1	2.6	9.9	17.9	18.5
MSCE	5.2	45.3	39.8	40.2	8.3	7.6	1.2	7.8	17.7	16.2
University	0.7	8.9	34.1	3.7	0.8	0.4	0.1	0.6	0.5	0.8
All Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	92.2	15.5	10.1	14.0	74.9	70.3	95.5	83.3	36.3	63.9
PSLC	4.0	7.6	6.1	8.9	12.9	13.7	3.4	8.5	13.4	11.2
JC	2.1	33.9	13.4	25.5	7.5	10.0	0.9	4.7	24.4	12.2
MSCE	1.6	38.0	38.3	47.2	4.5	5.5	0.2	3.2	24.4	11.2
University	0.2	5.1	32.1	4.4	0.3	0.5	0.0	0.3	1.5	1.4
NORTHERN REGION										
All Persons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	73.4	11.4	9.5	11.7	53.4	45.1	80.7	55.1	39.1	27.9
PSLC	15.3	8.0	6.7	15.1	24.8	29.4	14.0	24.4	28.0	29.0
JC	6.4	32.4	12.2	28.3	12.7	15.4	3.7	12.1	19.0	23.5
MSCE	4.6	43.6	42.7	42.4	8.8	9.7	1.5	8.0	12.4	19.0
University	0.3	4.7	28.9	2.4	0.4	0.4	0.1	0.4	1.6	0.6
All Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	62.8	10.0	7.9	10.4	45.0	43.5	72.2	49.5	39.0	26.9
PSLC	19.9	7.8	6.6	16.5	26.2	30.4	18.8	26.6	28.7	29.7
JC	9.4	29.7	12.3	26.4	15.6	15.4	6.1	14.1	18.5	23.7
MSCE	7.4	46.9	43.7	44.1	12.8	10.2	2.9	9.4	12.2	19.1
University	0.6	5.6	29.5	2.6	0.5	0.5	0.1	0.5	1.7	0.6
All Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	83.9	14.0	20.8	15.0	64.1	53.8	87.7	78.1	41.2	48.7
PSLC	10.9	8.4	7.5	11.6	23.0	23.7	10.1	15.3	11.8	14.7
JC	3.4	37.9	11.3	33.2	8.9	15.3	1.8	4.3	29.4	20.0
MSCE	1.8	36.8	35.8	38.1	3.8	6.8	0.4	2.2	17.6	16.7
University	0.1	2.9	24.5	2.0	0.2	0.3	0.0	0.0	0.0	0.0
CENTRAL REGION										
All Persons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	87.0	13.8	8.2	15.5	67.0	60.9	93.1	67.0	45.1	39.2
PSLC	6.4	7.0	6.1	12.9	16.0	19.5	4.9	17.5	20.7	23.1
JC	3.3	29.8	10.9	23.2	9.0	11.7	1.4	8.8	16.0	20.7
MSCE	2.9	42.4	40.1	43.9	7.3	7.5	0.5	6.3	17.8	16.4
University	0.4	7.0	34.7	4.5	0.7	0.5	0.1	0.4	0.4	0.6
All Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	81.1	14.6	8.0	17.7	65.4	58.9	89.4	100.0	46.3	38.6
PSLC	9.3	7.1	6.3	14.6	16.8	20.5	7.3	100.0	21.1	23.6
JC	4.7	25.2	10.4	21.5	9.1	12.0	2.2	100.0	15.0	21.0
MSCE	4.3	44.9	40.0	41.8	7.9	8.1	1.0	100.0	17.2	16.4
University	0.6	8.2	35.3	4.4	0.8	0.5	0.1	300.0	0.4	0.5
All Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	93.2	12.4	9.7	10.0	71.9	69.8	96.2	84.2	25.5	51.9
PSLC	3.3	6.8	4.9	8.6	13.4	14.7	2.8	7.6	14.9	14.5
JC	1.9	37.9	13.6	27.6	8.8	10.3	0.7	4.8	31.9	15.5
MSCE	1.4	38.1	40.1	48.9	5.4	4.8	0.2	3.0	27.7	16.3
University	0.2	4.8	31.6	4.8	0.5	0.5	0.0	0.3	0.0	1.8
SOUTHERN REGION										
All Persons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	86.6	17.2	10.0	19.4	71.7	66.6	94.3	67.2	39.1	49.2
PSLC	5.8	7.2	4.9	13.5	13.2	16.8	3.7	15.8	22.8	18.4
JC	3.6	24.1	12.5	22.1	7.8	9.6	1.4	8.9	18.8	16.2
MSCE	3.5	42.7	39.0	41.2	6.6	6.5	0.5	7.5	18.9	15.2
University	0.5	8.8	33.6	3.8	0.6	0.4	0.0	0.6	0.4	1.0
All Males	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	79.7	16.5	10.1	20.9	68.1	65.2	91.1	64.7	39.1	47.1
PSLC	8.8	6.7	4.6	15.7	14.8	17.9	5.7	17.1	23.3	19.3
JC	5.3	21.0	12.3	21.7	8.5	9.8	2.2	9.5	18.6	16.8
MSCE	5.4	45.2	39.2	38.4	7.8	6.7	1.0	8.1	18.6	15.9
University	0.8	10.5	33.7	3.4	0.8	0.4	0.1	0.7	0.4	0.9
All Females	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	93.1	18.4	9.5	16.1	78.5	73.2	96.7	84.6	39.4	66.9
PSLC	3.1	8.1	6.7	8.6	10.2	11.5	2.4	6.7	13.1	10.5
JC	1.9	29.5	13.5	23.1	6.6	9.1	0.8	4.7	21.2	11.2
MSCE	1.7	38.2	37.3	47.6	4.2	5.7	0.2	3.6	24.1	10.0
University	0.2	5.8	33.0	4.6	0.4	0.5	0.0	0.4	2.2	1.4

Northern Region had no academic certificate, 93 percent of their counterparts from the Central Region and 94 percent from the Southern Region did not have any academic certificate (Table 4.13)

The variations in academic qualifications by sex and occupation of the eligible persons are similar to those observed for Malawi as a whole.

4.4.3 Education and Religion

The census results that in Malawi, of the 8.3 million persons aged 5 years or over, about 80 percent were Christians, 13 percent were Moslems and 5 percent were pagans (Table 4.14).

It is also evident from Table 4.14 that of all the persons with no academic qualifications, about 78 percent were Christians and 14 percent were Moslems. Furthermore, 90 percent of the degree holders in Malawi were Christians compared to 4 percent who were Moslems. It is further observed that of the males with MSCE, 92 percent were Christians and 5 percent were Moslems as compared to 94 percent of the females who were Christians and 4 percent who were Moslems. It should be born in mind that Christians form the majority of the population of Malawi, hence have a heavier weight on the entire population than Moslems who are only about 13 percent of the population.

It should be noted that in 1998 about 1, 7 and 21 percent of the populations in the Northern, Central and Southern Regions respectively were Moslems. About 1, 8 and 3 percent of the persons in the Northern, Central and Southern Regions respectively were not religious. It is further observed that 82 percent of the male Christians and 91 percent of the male Moslems had no academic certificate compared to 4 percent and 2 percent of the Christian and Moslem males respectively who had at least an MSCE (Table 4.15).

At regional level, the results show that 25, 14 and 16 percent of the males in the Northern, Central, and Southern Regions respectively had attained at least a PSLC. On the other hand, 14, 7 and 8 percent of the females in the Northern, Central and Southern Regions had acquired at least a PSLC (Table 4.15).

TABLE 4.14: POPULATION DISTRIBUTION OF PERSONS AGED 5 YEARS OR OVER BY EDUCATION LEVEL ACHIEVED AND RELIGION: 1998

AREA, SEX & QUALIFICATION	Both Sexes					Males					Females				
	Total Religion	Christian	Islam	Other Religion	No Religion	Total Religion	Christian	Islam	Other Religion	No Religion	Total Religion	Christian	Islam	Other Religion	No Religion
MALAWI															
Persons 5 yrs+	100.0	79.7	12.7	3.1	4.5	100.0	78.6	12.6	3.0	5.8	100.0	80.8	12.9	3.1	3.3
None	100.0	78.2	13.6	3.2	4.9	100.0	76.5	13.5	3.2	3.5	100.0	79.7	13.5	3.2	3.5
PSLC	100.0	88.8	7.2	2.2	1.9	100.0	87.0	7.9	2.4	2.7	100.0	91.9	5.9	1.7	0.5
JC	100.0	91.1	6.1	1.8	1.1	100.0	90.2	6.5	1.9	1.5	100.0	92.8	5.4	1.5	0.3
MSCE	100.0	92.6	5.0	1.6	0.7	100.0	92.2	5.3	1.6	0.9	100.0	93.8	4.3	1.5	0.4
GCE 'A' LEVEL	100.0	83.2	10.4	4.1	2.3	100.0	84.3	9.8	3.7	2.2	100.0	80.3	12.1	5.0	2.7
Diploma	100.0	92.6	3.8	1.5	1.5	100.0	92.7	4.1	2.0	1.3	100.0	92.5	3.0	0.0	2.2
Degree	100.0	90.0	4.1	3.2	2.6	100.0	90.3	4.4	3.0	2.4	100.0	89.1	3.1	4.2	3.7
NORTHERN REGION															
Persons 5 yrs+	100.0	96.3	1.4	1.5	0.8	100.0	95.7	1.6	1.5	1.1	100.0	96.8	1.2	1.5	0.5
None	100.0	96.1	1.5	1.6	0.8	100.0	95.4	1.8	1.6	1.2	100.0	96.7	1.3	1.6	0.5
PSLC	100.0	97.1	1.0	1.3	0.6	100.0	96.6	1.1	1.4	0.9	100.0	97.8	0.8	1.2	0.2
JC	100.0	97.3	1.1	1.2	0.5	100.0	97.1	1.1	1.2	0.7	100.0	97.7	1.0	1.1	0.2
MSCE	100.0	97.4	1.1	1.1	0.4	100.0	97.4	1.0	1.1	0.5	100.0	97.4	1.2	1.1	0.3
GCE 'A' LEVEL	100.0	93.6	3.2	1.0	2.2	100.0	94.3	3.0	0.9	1.8	100.0	90.9	3.9	1.3	3.9
Diploma	100.0	96.2	1.7	0.7	1.4	100.0	96.6	1.7	0.8	0.8	100.0	94.6	1.6	0.0	3.9
Degree	100.0	93.8	2.3	2.7	1.1	100.0	93.4	2.4	3.1	1.0	100.0	95.8	1.7	0.8	1.7
CENTRAL REGION															
Persons 5 yrs+	100.0	82.8	6.9	2.7	7.5	100.0	80.7	7.1	2.6	9.6	100.0	84.9	6.8	2.8	5.5
None	100.0	81.9	7.1	2.8	8.1	100.0	79.3	7.3	2.8	10.6	100.0	84.3	7.0	2.9	5.9
PSLC	100.0	88.9	6.1	1.8	3.2	100.0	87.0	6.7	1.9	4.4	100.0	92.6	5.0	1.5	0.9
JC	100.0	91.8	5.3	1.4	1.5	100.0	90.9	5.6	1.5	2.1	100.0	93.7	4.7	1.2	0.5
MSCE	100.0	93.3	4.4	1.3	1.0	100.0	92.9	4.6	1.3	1.3	100.0	94.4	3.9	1.3	0.3
GCE 'A' LEVEL	100.0	83.6	8.7	3.5	4.2	100.0	84.5	8.0	3.7	3.8	100.0	80.9	10.8	3.0	5.2
Diploma	100.0	93.5	3.4	1.9	1.2	100.0	93.3	3.8	1.7	1.1	100.0	94.0	2.4	2.4	1.2
Degree	100.0	89.7	3.6	3.6	3.2	100.0	90.5	3.8	2.9	2.8	100.0	86.9	2.6	5.9	4.6
SOUTHERN REGION															
Persons 5 yrs+	100.0	72.6	20.7	3.8	2.9	100.0	72.1	20.3	3.8	3.8	100.0	73.0	21.1	3.8	2.1
None	100.0	70.8	22.2	3.9	3.1	100.0	69.6	22.2	4.0	4.2	100.0	71.7	22.1	3.9	2.3
PSLC	100.0	84.1	11.5	3.0	1.4	100.0	82.1	12.5	3.4	2.0	100.0	87.5	9.8	2.3	0.4
JC	100.0	88.1	8.6	2.3	1.0	100.0	86.9	9.3	2.5	1.3	100.0	90.3	7.4	1.9	0.3
MSCE	100.0	90.7	6.6	2.0	0.6	100.0	90.0	7.1	2.1	0.7	100.0	92.6	5.4	1.7	0.4
GCE 'A' LEVEL	100.0	81.3	12.4	4.8	1.4	100.0	82.4	12.0	4.3	1.4	100.0	78.9	13.4	6.2	1.5
Diploma	100.0	91.3	4.5	2.5	1.8	100.0	91.3	4.8	2.5	1.5	100.0	91.1	3.6	2.6	2.7
Degree	100.0	89.8	4.7	3.1	2.4	100.0	89.7	5.0	3.0	2.2	100.0	89.9	3.5	3.4	3.2

TABLE 4.15: POPULATION DISTRIBUTION OF PERSONS AGED 5 YEARS OR OVER BY EDUCATION LEVEL ACHIEVED AND RELIGION: 1998

AREA, SEX & QUALIFICATION	Both Sexes					Males					Females				
	Total Religion	Christian	Islam	Other Religion	No Religion	Total Religion	Christian	Islam	Other Religion	No Religion	Total Religion	Christian	Islam	Other Religion	No Religion
MALAWI															
Persons 5 yrs+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	87.9	86.3	93.9	92.2	96.1	83.7	81.6	91.0	88.6	94.5	91.9	90.8	96.5	95.6	98.8
PSLC	6.4	7.1	3.6	4.5	2.6	8.2	9.1	5.2	6.5	3.7	4.6	5.2	2.1	2.6	0.7
JC	3.4	3.9	1.6	1.9	0.8	4.5	5.2	2.3	2.8	1.1	2.3	2.6	0.9	1.1	0.2
MSCE	2.1	2.4	0.8	1.1	0.3	3.1	3.7	1.3	1.7	0.5	1.1	1.2	0.4	0.5	0.1
GCE 'A' LEVEL	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Diploma	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Degree	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1
NORTHERN REGION															
Persons 5 yrs+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	80.7	80.5	85.7	84.0	86.3	74.9	74.6	82.4	78.4	83.1	86.2	86.0	89.8	89.4	93.3
PSLC	11.9	12.0	8.6	10.3	9.1	14.3	14.4	10.2	13.3	11.1	9.6	9.7	6.5	7.4	4.5
JC	4.8	4.9	3.6	3.7	3.0	6.6	6.7	4.4	5.2	3.8	3.1	3.2	2.6	2.3	1.2
MSCE	2.5	2.5	1.9	1.8	1.3	3.9	4.0	2.5	2.7	1.7	1.1	1.1	1.0	0.8	0.6
GCE 'A' LEVEL	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Diploma	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2
Degree	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1
CENTRAL REGION															
Persons 5 yrs+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	89.3	88.4	91.5	93.7	96.7	85.6	84.1	87.9	90.8	95.3	93.0	92.3	95.1	96.4	99.1
PSLC	5.7	6.1	5.0	3.7	2.4	7.4	8.0	7.1	5.4	3.4	3.9	4.3	2.9	2.1	0.6
JC	3.0	3.3	2.2	1.5	0.6	3.9	4.4	3.1	2.2	0.8	2.0	2.2	1.4	0.9	0.2
MSCE	1.8	2.0	1.1	0.9	0.2	2.7	3.1	1.7	1.3	0.4	0.9	1.1	0.5	0.5	0.1
GCE 'A' LEVEL	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Diploma	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Degree	0.1	0.1	0.1	0.2	0.0	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.0
SOUTHERN REGION															
Persons 5 yrs+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	88.6	86.4	94.7	92.2	95.5	84.4	81.5	92.1	88.4	93.7	92.5	90.9	97.0	95.7	98.6
PSLC	5.6	6.4	3.1	4.4	2.7	7.3	8.3	4.5	6.5	3.9	3.9	4.7	1.8	2.4	0.7
JC	3.3	4.1	1.4	2.0	1.1	4.5	5.4	2.0	2.9	1.5	2.3	2.8	0.8	1.2	0.3
MSCE	2.2	2.8	0.7	1.2	0.5	3.3	4.2	1.2	1.8	0.7	1.2	1.5	0.3	0.5	0.2
GCE 'A' LEVEL	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Diploma	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1
Degree	0.1	0.2	0.0	0.1	0.1	0.2	0.3	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1

CHAPTER 5

ECONOMIC CHARACTERISTICS

Richmond Chatose Chinula

5.0 Introduction

The 1998 Census collected data on economic activity on every enumerated person aged 10 years and over. The information related to economic activity status, occupation and industry of each eligible person. The reference period was set at “last seven days” or “last week”.

The activity status was split into economically active and economically inactive. A person was economically active if he/she performed work for remuneration in the form of wages, salary, profit or other income. The economically active category was further subdivided into employed and unemployed. The employed category included the Mlimi (the subsistence farmer), the employee, the family business worker, the self-employed and the employer. The unemployed category was subdivided into “worked before” and “never worked before” and further classified seeking/not-seeking work.

The economically inactive category included non-worker (never worked before and not seeking work), home workers, students, and others.

5.1 Economic Status

The 1998 Census enumerated about 6.8 million persons aged 10 years and over in Malawi. Of this total, about 4.5 million reported to be economically active while the remaining 2.3 million were economically inactive.

The table 5.1 below shows the percentage distribution of population aged 10 years and over. In Malawi as a whole, 66 percent of the population aged 10 years and over were economically active and 34 percent were economically inactive. The percentage for the active population was comprised of 65 percent working and 0.7 percent employed. Males were relatively more active, economically, than females. Of the total males aged 10 years and over, working, unemployed and inactive were about 66, 1 and 33 percent respectively with the corresponding figures for females being about 64, 0.4 and 35.3 percent respectively.

In Malawi as a whole, the Gross Activity Rate (GAR) which is the fraction of economically active in the total population aged 10 years and over, was higher in urban areas at 34.4 percent (62.8 –28.4) than in the rural areas at –2.3 percent (68.3-70.6) showing that more females were economically active in rural areas than males.

At the regional level, the GAR was lowest in the Northern region at 57.4 percent followed by the Southern region at 66.9 percent then the Central region at 67.9 percent. The GAR for males was higher in all the regions than for the females. The difference between the GARs for males and females was lowest in the Southern region at about 2 percent then the Northern region at about 3 percent and the Central region at about 4 percent.

5.1.1 Economic Activity Status

The distribution of the working population aged 10 years and over, by economic activity status in Malawi, Regions and Urban/Rural areas by sex is given in Table 5.1.

Table 5.1 Percentage distribution of working population aged 10 years and over by economic activity status and sex for Malawi, regional, urban and rural

AREA	Total Active	Economically Active		Inactive	All
		Working	Unemployed		
Malawi	66.0	65.3	0.7	34.0	100.0
Males	67.4	66.4	1.0	32.6	100.0
Females	64.7	64.2	0.4	35.3	100.0
URBAN	46.5	44.0	2.5	53.5	100.0
Males	62.8	59.5	3.3	37.2	100.0
Females	28.4	26.8	1.6	71.6	100.0
RURAL	69.5	69.1	0.4	30.5	100.0
Males	68.3	67.7	0.6	31.7	100.0
Females	70.6	70.3	0.3	29.4	100.0
NORTHERN	57.4	56.6	0.8	42.6	100.0
Males	59.1	58.0	1.1	40.9	100.0
Females	55.8	55.3	0.4	44.2	100.0
URBAN	42.0	39.3	2.7	58.0	100.0
Males	57.7	53.8	3.8	42.3	100.0
Females	26.1	24.5	1.6	73.9	100.0
RURAL	59.7	59.3	0.4	40.3	100.0
Males	59.3	58.6	0.7	40.7	100.0
Females	60.2	59.9	0.2	39.8	100.0
CENTRAL	67.6	67.0	0.6	32.4	100.0
Males	69.5	68.7	0.8	30.5	100.0
Females	65.6	65.3	0.3	34.4	100.0
Urban	46.5	44.3	2.3	53.5	100.0
Males	63.8	60.7	3.0	36.2	100.0
Females	27.0	25.6	1.4	73.0	100.0
RURAL	71.2	70.9	0.3	28.8	100.0
Males	70.6	70.2	0.4	29.4	100.0
Females	71.7	71.6	0.2	28.3	100.0
SOUTHERN	66.9	66.0	0.9	33.1	100.0
Males	67.7	66.5	1.2	32.3	100.0
Females	66.2	65.6	0.5	33.8	100.0
Urban	47.4	44.8	2.6	52.6	100.0
Males	63.1	59.8	3.4	36.9	100.0
Females	29.9	28.2	1.7	70.1	100.0
RURAL	70.6	70.1	0.5	29.4	100.0
Males	68.7	67.9	0.8	31.3	100.0
Females	72.4	72.0	0.3	27.6	100.0

Table 5.2 Working population percentage distribution age 10 years and over

AREA	Mlimi	Employee	Family Bus. Worker	Self Employed	Employer	All
MALAWI	78.6	12.9	2.5	5.8	0.2	100.0
Males	66.8	21.2	2.8	8.8	0.3	100.0
Females	90.2	4.8	2.1	2.8	0.1	100.0
URBAN	15.1	55.9	7.9	20.7	0.5	100.0
Males	8.9	61.8	6.5	22.3	0.5	100.0
Females	30.4	41.5	11.2	16.6	0.3	100.0
RURAL	85.9	8.0	1.9	4.1	0.2	100.0
Males	76.8	14.2	2.2	6.5	0.3	100.0
Females	94.0	2.5	1.6	1.9	0.0	100.0
NORTHERN	78.1	12.1	3.1	6.5	0.2	100.0
Males	67.5	19.9	2.9	9.3	0.4	100.0
Females	88.5	4.5	3.3	3.7	0.1	100.0
URBAN	16.5	50.9	10.7	21.5	0.4	100.0
Males	11.1	58.0	8.1	22.3	0.5	100.0
Females	28.6	35.1	16.4	19.7	0.1	100.0
RURAL	84.4	8.1	2.4	4.9	0.2	100.0
Males	76.0	14.1	2.1	7.4	0.4	100.0
Females	92.1	2.6	2.5	2.7	0.1	100.0
CENTRAL	82.4	11.5	1.5	4.4	0.2	100.0
Males	72.7	18.3	1.9	6.8	0.3	100.0
Females	92.4	4.5	1.1	1.9	0.0	100.0
URBAN	16.4	54.2	5.9	23.0	0.5	100.0
Males	10.1	58.7	5.3	25.4	0.5	100.0
Females	33.5	42.1	7.4	16.7	0.3	100.0
RURAL	89.5	6.9	1.1	2.4	0.1	100.0
Males	82.8	11.7	1.4	3.8	0.2	100.0
Females	95.7	2.3	0.8	1.1	0.0	100.0
SOUTHERN	75.5	14.4	3.1	6.8	0.2	100.0
Males	61.3	24.2	3.6	10.5	0.4	100.0
Females	88.9	5.2	2.7	3.2	0.1	100.0
URBAN	13.7	58.2	8.9	18.7	0.5	100.0
Males	7.4	64.9	7.3	19.9	0.5	100.0
Females	28.6	42.4	12.7	16.0	0.3	100.0
RURAL	83.0	9.0	2.4	5.3	0.2	100.0
Males	71.4	16.6	2.9	8.8	0.4	100.0
Females	92.9	2.7	2.0	2.4	0.1	100.0

In Malawi as whole, out of the total working population for both sexes, about 79 percent were Mlimi (Subsistence farmers) and only 13 were employees. The Self-employed made up about 5.8 percent while those in family business contributed 3 percent and only about 0.2 percent were employers.

By sex distribution, more females, about 91 percent, reported to be Mlimis than males at about 67 percent. For the other categories, the percentages of male involvement were higher than that of females. For example, there was a distinctive difference on the Employee category. About 21.2 percent of males reported to be Employees while only 5 percent females reported to be such. In the Self-employed category, males were about 7 percent while females were about 3 percent. In the Family business worker category, about 3 percent were males and about 2.1 percent were females engaged in this activity. Smaller percentages of about 0.3 and 0.1 for males and females respectively were Employers.

At regional level, as also already seen at the national level, the main economic activity for the population living in Malawi, was subsistence farming (Mlimi). For both sexes, the Central region had more Mlimis at 82 percent then the Northern region had 78 percent and the Southern region had 75.5 percent. For the other activities, there were more Employees in the Southern region at 14 percent then the Northern region followed at 12 and the Central region had 12 percent. More Family business workers were found in the Northern and Southern regions at 3.1 percent each and the Central region had only 2 percent. For the Self-employed category, the Southern region had 7 percent while the Northern region had 7 percent and the Central region had 4 percent. As for the Employer category, all the regions reported to have 0.2 percent for both sexes of the total active people.

Comparing urban and rural areas in Malawi as whole, there were wider differences on the economic activity status of the population. Looking at all the activities at once, it is observed that about 86 percent of the rural population were Mlimis compared to only 15 percent in the urban areas. It is also shown that more females in the rural areas, about 94 percent, were engaged in subsistence farming than males at about 76.8 percent. In the urban areas, about 56 percent of the total urban population reported to be Employees compared to only about 8 percent in the rural areas. In urban areas, more males reported to be Employees at about 62 percent compared to about 42 percent of females. In other categories, about 22 percent males in urban areas reported to be Self-employed while 17 percent females reported to be such. In rural areas it was the same case, with more males being Self-employed at 7 percent compared to 2 percent females. For the Employer category, the urban areas reported 0.5 percent and the rural areas reported 0.2 percent. Also more males reported to be Employers in urban areas at 0.5 percent compared to females at 0.3 percent and in the rural areas 0.0 percent females reported to be Employers and 0.3 percent of males reported as such.

At regional level, looking at the urban and rural areas as a whole, it is shown that more females about 92 percent and above in all the three regions were engaged in subsistence farming. As for males, in all the regions they reported to be more in the Employee category whether in rural or urban areas compared to females in this category. For the other categories, more males in the three regions reported to be Self-employed and to be Employers compared to females in these two categories. But there were variations in the Family business worker category among the regions and between males and females. In all the regions in urban areas, more females reported to be engaged in Family business at 13, 16 and 7 percents for Southern, Northern and Central compared to 7, 8 and 5 percents for males respectively. The Employer had the lowest percentages for all the regions with some having no percentages for females as employers.

5.1.2 Economically Inactive Status

The distribution of the economically inactive population aged 10 years and over, by their status for Malawi, Regions and Urban/Rural areas by sex is given in Table 5.3 below.

As can be seen from the table, many of the economically inactive population in Malawi as a whole reported to be Students at 76 percent, then Home workers were 15 percent followed by Non workers at 6 percent and Others were about 3 percent. The 'other' category could include people who are dependents, aged, and disabled/handicapped etc. For both sexes, males who reported to be Students were 89 percent and females were 64 percent. More females reported to be Home workers about 26 percent and only 3 percent of males reported to be Home workers. In the Non-worker category, 6 percent were females and 5 percent were males. The Others' category comprised of 4 males and 3 females.

Table 5.3 Percentage Distribution of Economically Inactive population aged 10 Years and over by Status and Sex for Malawi, Regions, Rural and Urban areas

Area	Non worker	Home worker	Student	Other	All
Malawi	5.7	15.3	75.6	3.4	100.0
Males	5.0	2.9	88.5	3.6	100.0
Females	6.3	26.3	64.3	3.1	100.0
Urban	7.6	32.0	56.8	3.6	100.0
Males	6.9	5.9	81.5	5.6	100.0
Females	7.9	47.1	42.6	2.4	100.0
Rural	5.1	10.1	81.5	3.3	100.0
Males	4.5	2.2	90.1	3.2	100.0
Females	5.6	18.0	73.0	3.4	100.0
Northern	3.9	17.9	75.3	2.9	100.0
Males	3.4	3.4	90.5	2.7	100.0
Females	4.4	30.5	62.2	3.0	100.0
Urban	5.7	33.5	58.6	2.2	100.0
Males	5.8	6.6	83.9	3.7	100.0
Females	5.6	49.2	43.9	1.3	100.0
Rural	3.6	14.4	79.0	3.0	100.0
Males	3.0	2.9	91.6	2.5	100.0
Females	4.0	25.3	67.2	3.5	100.0
Central	4.4	15.1	77.6	3.0	100.0
Males	4.1	2.8	89.7	3.4	100.0
Females	4.6	25.7	67.1	2.6	100.0
Urban	7.1	33.7	56.3	2.9	100.0
Males	6.9	6.1	82.0	5.1	100.0
Females	7.3	49.3	41.8	1.6	100.0
Rural	3.5	9.1	84.4	3.0	100.0
Males	3.4	2.1	91.5	3.0	100.0
Females	3.5	16.1	77.4	3.0	100.0
Southern	7.3	14.7	74.1	3.9	100.0
Males	6.2	2.8	86.9	4.1	100.0
Females	8.3	25.3	62.8	3.6	100.0
Urban	8.4	30.4	56.8	4.5	100.0
Males	7.2	5.7	80.6	6.4	100.0
Females	9.0	44.8	42.9	3.3	100.0
Rural	7.0	9.3	80.0	3.7	100.0
Males	6.0	2.0	88.5	3.5	100.0
Females	8.0	16.8	71.4	3.8	100.0

At regional level, the Central region had a bigger share of economically inactive population as Students at 78 percent followed by the Northern region at 75 percent then the Southern region had 74 percent. This category, was followed by the Home worker which had the highest percentage in the Northern region at about 18 percent followed by the Central region at 15 percent then the Southern region came third with 15 percent. It can be noted that many of the Home workers in all the regions, whether in rural or urban areas, as was the case with Malawi as a whole, were females compared to males with somehow wider percentage margins compared to the other categories.

5.1.3 Age Specific Participation Rate (ASPR)

The Age Specific Participation Rate (ASPR), defined as the percentage working to total population in a specific age group, is useful in a study of the age pattern of engagement of the population in economic activity. These rates for each sex in Malawi as whole, with regions and urban and rural areas are given in Table 5.5 below.

For the total population of Malawi both sexes, the ASPR is highest in the age groups between 45 – 59 years and lowest in the age group 10-14 years, but generally the ASPR increases with the advancement in age. The ASPR is lowest in this age group because this is mainly the school-going age. Compared to the other age groups, this pattern of the lowest ASPR in this age group is observed even in the three regions whether urban or rural, male or female. But there is a difference in the highest ASPR for total males and females in Malawi. For total males, the highest ASPR is observed in the age group 45-49 years while for the total females is at the age group 55-59 years.

The above trend is also observed in the urban areas at the national level. For both sexes, the highest ASPR is in the age group 40-44 years and for males is at the age group 35-39 years and for females is at the age group 50-54 years. But for the rural areas at national level, the highest ASPR is observed at the age 45-49 years for both sexes and even for males and females at 96percent, 98 percent and 94 percent respectively.

The ASPRs, for both sexes combined in urban areas of Malawi as a whole were lower than the corresponding rates in rural areas. This is also shown for the three regions as well. The ASPRs for females in urban areas in the three regions were consistently lower than those for males. But the story is different in the rural areas. The ASPRs for females in the rural areas for the age groups 10-14, 15-19 and 20-24 age groups were higher than those of the males. This is true in all the three regions of the country. But the situation changes from the age group 25-29 going upwards. The male ASPRs start increasing than those of the females. This might be that from the age groups 10–24, males tend to stay longer in schools/education than females.

The differences between the specific rates for males and females in rural areas were considerably lower than those in the rural areas. For example, the ASPRs for males and females in the age group 45-49 years showed a difference of 4 percentage point (98.2-93.8). It is also noted that the ASPRs for males were higher in rural areas than in urban areas. A similar pattern is also noted for females. However, the difference between the ASPRs in rural areas and urban areas for females were larger than the corresponding differences for males. For example, the ASPR difference between the rural and urban area in the age group 45-49 years, at 43.8 percentage point (93.2-49.4) is substantially higher than that for males at 4 percentage point (98.2 – 93.8). The above pattern noted for Malawi as a whole was generally valid for the population of each region. See the table 5.5 below .

Table 5.5: Participation Percent for working population aged 10 years and over by sex and age for Malawi, Regions at Urban and Rural Areas, 1998

Area	Age Group	Malawi			Urban			Rural		
		Both	Male	Female	Both	Male	Female	Both	Male	Female
Malawi	10 - 14	14.2	14.6	13.8	4.3	3.9	4.6	15.9	16.3	15.5
	15 - 19	36.3	29	43.1	14.6	18.1	11.3	40.5	31.2	49.3
	20 - 24	71.3	68.8	73.2	40.6	56.7	25.6	78.4	72	83.4
	25 - 29	86.3	91.6	81	65.6	85.9	39.4	91.2	93.2	89.3
	30 - 34	90.9	96.3	84	71.9	92.5	43.7	94.1	97.2	91.1
	35 - 39	92.2	97.2	86.2	73.5	93.9	46.4	95	97.9	92.3
	40 - 44	93.2	97.3	88.2	76	93.6	49.7	95.4	98	93
	45 - 49	93.6	97.5	89.7	75.7	93.2	49.4	95.9	98.2	93.8
	50 - 54	93.7	97.1	90.2	75.6	91.4	50.4	95.8	98	93.6
	55 - 59	93.7	96.8	90.6	73.6	88.5	49.7	95.6	97.7	93.5
	60 - 64	92.6	95.9	89.6	68.3	83.5	47.7	94.4	97.1	92.1
65+	87.6	92.5	83.4	60.2	76.4	77.3	89.1	93.4	85.3	
10+	65.4	66.4	64.2	44	59.5	27.4	69.1	67.7	70.3	
Northern Region	10 - 14	4.8	5	4.7	1.6	1.9	1.4	5.3	5.4	5.2
	15 - 19	25.6	16.4	34.2	9.5	10.3	8.7	28.1	17.3	38.3
	20 - 24	62.3	57.8	66.1	33.2	44.8	23.5	68	60.3	74.3
	25 - 29	81	87.8	74.7	60.8	81.5	37.6	85.2	89.3	81.5
	30 - 34	86.5	95.1	78.1	69	90.5	41.9	89.8	96.1	83.9
	35 - 39	87.9	96	80.3	71	92.3	44.7	90.7	96.8	85.4
	40 - 44	89	96.4	82.1	73.1	91.9	47.4	91.3	97.2	86.2
	45 - 49	89.4	96.2	83.1	71.5	90.5	46.7	91.7	97	86.9
	50 - 54	88.7	95.8	82.4	69.6	87.7	46.6	90.8	96.8	85.6
	55 - 59	88.3	94.8	82	65.3	83	45.2	90.4	95.9	85
	60 - 64	85.7	93.5	78.7	59.9	76.2	41.1	87.6	95	81.1
65+	75.8	85.9	66	46.3	65.1	29.1	77.5	87.1	68.2	
10+	56.6	58	55.3	39.3	53.8	24.5	59.3	58.6	59.9	
Central Region	10 - 14	15.1	16	14.1	4.3	3.8	4.7	16.9	17.9	15.8
	15 - 19	38	32.3	43.5	15	19.8	10.2	42.5	34.8	49.7
	20 - 24	74.6	73.4	75.6	42	60.3	24.2	81.9	76.7	86.2
	25 - 29	88.2	93.4	82.8	66.5	87.5	37.6	93.1	94.9	91.3
	30 - 34	91.5	97.3	85.4	72.2	93.9	41.5	95.4	98.1	92.7
	35 - 39	93	98.1	87.8	74.4	95.2	45.8	96.3	98.7	93.9
	40 - 44	93.9	98	89.5	76.3	94.4	48.9	96.6	98.6	94.5
	45 - 49	94.8	98.2	91.2	76.3	94.1	49	97.1	98.8	95.4
	50 - 54	95	97.8	92	75.7	92.3	49.7	97	98.5	95.5
	55 - 59	95.2	97.8	92.4	74.1	89.8	50.3	97.1	98.6	95.4
	60 - 64	94.3	97.1	91.8	69.9	86.2	49.3	96	98	94.3
65+	90.6	94.6	87	61	77.7	45	92.1	95.5	89.1	
10+	67	68.7	65.3	44.3	60.7	25.6	70.9	70.2	71.6	
Southern Region	10 - 14	16.1	16.1	16.1	4.8	4.4	5.2	18.2	18.1	18.2
	15 - 19	37.7	29.6	45.3	15.4	18.3	12.6	42.4	32	52.1
	20 - 24	70.6	67.6	73	41.1	56.1	27.2	78.1	70.9	83.4
	25 - 29	85.8	90.9	81	65.9	85.5	41	90.9	92.6	89.5
	30 - 34	90.1	95.7	84.5	72.4	92	45.7	94.1	96.8	91.7
	35 - 39	91.4	96.8	86.4	73.3	93.3	47.3	94.9	97.6	92.6
	40 - 44	92.7	96.8	88.7	76.5	93.4	50.8	95.5	97.6	93.6
	45 - 49	93.5	97.2	89.9	76.2	93	50.3	95.9	97.9	94.1
	50 - 54	93.9	96.9	90.8	76.9	91.5	52	96	97.8	94.3
	55 - 59	94	96.4	91.5	75.2	88.7	50.6	95.8	97.4	94.3
	60 - 64	93.2	95.7	90.9	69.3	83.4	48.6	95	96.9	93.3
65+	88.1	92.4	84.4	63.4	78.3	47.3	89.4	93.3	86.1	
10+	66	66.5	65.6	44.8	59.8	28.2	70.1	67.9	72	

Table 5.6: Percentage Distribution of Economically Active Population aged 10 years and over by Sex and Occupation: Malawi, Rural and Urban, 1998

Area and Occupation	Total			Urban			Rural		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Malawi	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional & Technical	2.8	3.6	2.0	11.6	9.3	17.4	1.7	2.5	1.0
Administrative & Manager	0.2	0.3	0.0	1.2	1.5	0.7	0.0	0.1	0.0
Clerical & Related	1.3	1.8	0.8	8.8	8.1	10.5	0.4	0.7	0.1
Sales	5.3	7.1	3.4	23.2	23.0	23.7	3.1	4.2	2.1
Services	2.8	4.6	1.0	15.8	17.7	11.0	1.2	2.3	0.3
Agriculture, Animal & Forestry	82.5	73.3	91.6	17.1	11.5	30.9	90.3	84.5	95.6
Production & Related	4.1	7.1	1.1	15.9	20.7	4.2	2.7	4.7	0.8
Transport & Equipment	0.1	0.2	0.0	0.5	0.6	0.1	0.0	0.1	0.0
Operation & Laboratory	1.1	2.0	0.2	5.8	7.5	1.5	0.5	1.0	0.1
Northern Region	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional & Technical	3.6	4.9	2.4	12.2	9.6	17.9	2.7	4.1	1.4
Administrative & Manager	0.1	0.2	0.0	0.6	0.8	0.2	0.0	0.1	0.0
Clerical & Related	1.1	1.7	0.6	7.5	7.3	7.9	0.4	0.7	0.2
Sales	5.3	6.0	4.6	25.4	23.1	30.5	3.1	3.3	3.0
Services	2.6	4.5	0.8	14.8	18.2	7.2	1.3	2.3	0.4
Agriculture, Animal & Forestry	81.8	73.9	89.7	19.2	14.5	29.7	88.7	83.4	93.5
Production & Related	4.6	7.5	1.8	15.7	20.1	5.8	3.4	5.5	1.5
Transport & Equipment	0.1	0.2	0.0	0.2	0.2	0.0	0.1	0.1	0.0
Operation & Laboratory	0.7	1.3	0.1	4.4	6.0	0.8	0.3	0.5	0.0
Central Region	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional & Technical	2.6	3.3	1.9	11.8	9.4	18.5	1.6	2.2	0.9
Administrative & Manager	0.1	0.2	0.0	1.2	1.4	0.7	0.0	0.0	0.0
Clerical & Related	1.1	1.5	0.6	8.5	7.9	10.1	0.3	0.5	0.1
Sales	4.0	5.9	2.0	23.8	25.1	20.6	1.8	2.7	0.9
Services	2.4	3.8	0.9	15.5	16.9	12.0	0.9	1.6	0.2
Agriculture, Animal & Forestry	86.1	78.7	93.7	18.7	13.1	33.7	93.7	89.8	97.3
Production & Related	2.9	5.0	0.7	15.0	19.2	3.5	1.5	2.6	0.5
Transport & Equipment	0.0	0.1	0.0	0.2	0.3	0.1	0.0	0.0	0.0
Operation & Laboratory	0.8	1.4	0.1	5.1	6.7	0.9	0.3	0.5	0.0
Southern Region	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional & Technical	2.7	3.5	1.9	11.4	9.2	16.5	1.6	2.4	0.9
Administrative & Manager	0.2	0.3	0.1	1.4	1.6	0.7	0.0	0.1	0.0
Clerical & Related	1.5	2.1	0.9	9.3	8.5	11.4	0.5	0.8	0.2
Sales	6.3	8.4	4.3	22.3	21.4	24.5	4.3	5.9	2.8
Services	3.2	5.4	1.1	16.1	18.3	11.1	1.6	2.9	0.4
Agriculture, Animal & Forestry	79.6	68.4	90.2	15.5	9.7	29.2	87.8	79.8	94.6
Production & Related	4.9	8.9	1.2	16.7	21.9	4.4	3.4	6.3	1.0
Transport & Equipment	0.1	0.2	0.0	0.7	1.0	0.1	0.0	0.1	0.0
Operation & Laboratory	1.5	2.7	0.3	6.5	8.5	2.0	0.8	1.6	0.2

5.2 Occupation and Activity Status

As it has been already seen in the Economic Activity status in Table 5.2, the main activity for the population of Malawi and for each region is Mlimi. Therefore, it is expected that many of the people should be engaged in Agriculture and its related occupations. But the distribution differs by sex and between areas.

In Malawi as a whole, 83 percent of the population were concentrated in Agriculture, Animal & Forestry occupations. When it comes to sex categories, more females were dominating the Agriculture and its related occupations at 92 percent compared to 73 percent for males. As for the other occupations, at national level, males dominated them. The least occupation with a very small number of people was Transport & Equipment at 0.1 percent at the national level with 0.2 percent being males and 0.0 percent being females. Apart from Agriculture and its related occupations, males than females dominated each of the other remaining occupations. This trend persists even for the three regions.

But when it comes to urban areas the trend is quite mixed up. Still more, more females dominated the Agriculture and its related occupations and this is persistent in all the three regions even in rural areas. In urban areas for Malawi as a whole and indeed even at regional levels, the females dominated the Sales occupation at 24 percent compared to 23 percent for males followed by the Professional and Technical occupation at 17 percent with males being at 9 percent then the Clerical and Related occupations at 11 percent. It is only in the Central region, where the Sales occupation was male dominated at 25 percent compared to females at 21 percent.

In rural areas, many of the economically active people were engaged in agriculture and its related occupations than in urban areas. It can be seen that the distribution of these people is very concentrated in one occupation in rural areas than in urban areas. In urban areas, the percentage differences were not that pronounced in one occupation. At national level, females dominated the Agriculture and its related occupation at 96 percent compared to males at 85 percent. As for the other occupations, males dominated them all and this is even true for the three regions though the percentage differences were not all that big between the groups.

As for the sexes at national level, the distribution of males by occupation was different from females. The females' population was heavily concentrated in Agriculture, Animals and forestry Occupations at 92 percent females compared to 73 percent for males. Each of the remaining group had relatively less males than females. The most noticeable difference was in the Production and related occupations; the group shared 7 percent of economically active males as compared with only 1 percent males.

In the rural area males dominated all the other occupations except for the Agriculture, animal and forestry, the gap between male and female participation in the different occupation was small. But in the urban areas there was no clear trend of domination by either males or females in the different occupations. The gap between males and females in different occupations is bigger than in the rural areas.

The females continued to dominate over the males in the agriculture, animal and forestry. Males dominated over the females in the production and related occupations in both rural and urban areas.

In urban areas in this occupation males accounted for 21 percent whilst the females accounted for 4.2 percent. In the rural areas the males accounted for 5 percent whilst the female accounted for 1 percent

Females dominated in the sales in the urban areas whilst in the rural areas it was males. In the urban areas the females accounted for 24 percent of the economically active population whilst the males accounted for 23.0 percent of the economically active population, in the rural areas females for 2 percent whilst the males accounted for 4.2 percent of the total economically active population.

At regional level, in the urban areas, the occupation with a lot of people was Sales. It was highest in the northern region and it accounted for 25 percent of the economically active population. The lowest turnout for sales was in the Southern region accounting for 22 percent of the economically active population. The highest turnout for males in sales was in the central region accounting to 25 percent of the total economically active population. The lowest turnout for females in sales was in the central region accounting for 21 percent of the economically active population.

At regional level, in the rural areas, agriculture, animal and forestry was the occupation with the highest participation. The central region had the highest participation. It accounted for 94 percent of the economically active population and the southern region had the lowest participation, which accounted of 88 percent of the economically active population. The central region had the highest participation of males and females in agriculture, animal and forestry which accounted for 90 and 97 percent respectively. The northern region had the lowest female participation, 92 percent of the economically active population and the southern region had the lowest male participation, which accounted for 80 percent of the economically active population.

Agriculture, Animal and forestry was the highest in the Northern Region with 19 percent of economically active population and the lowest in the southern region with 16 percent of the economically active population. The gap between the participation of males and females in the agriculture, animal and forestry was noticed in the southern region in which males accounted for 10 percent and females accounted for 29 percent of the economically active population.

But in all the regions, the Northern region at 15 percent had the highest number of males participating in the agriculture, animal and forestry. While in the central region at 34 percent of females was the highest participation in the regions.

The occupation with the lowest turnout of people in the regions was still transport and equipment. The southern region had the highest turnout in the regions of 1 percent of the economically active population and the northern and southern region had the same turnout of 0.2 percent of the total economically active population. The males participated more than the females in all the regions.

Sales were the second occupation, which had a lot of people in the regions. The Southern region had the highest turnout for Sales, which accounted for 4 percent of the economically active population and the Central region had the lowest turnout for Sales in the Southern region, which accounted for 2 percent. The highest participation of males in Sales was in the Southern region accounting for 6 percent of the economically active population and the highest participation of females' Sales was in the Northern region accounting for 3 percent of the economically active population. The lowest participation of males and females in Sales was in the Central region accounting for 3 and 1 percent respectively of the total economically active population.

5.3 Industry

It is noted with regard to Economic Activity Status and Occupation categories that many people in Malawi were Mlimis in the Agriculture and its related occupations. It is also expected that many people should be engaged in the Agriculture, Hunting and Forestry industry. This industry accounted for 83 percent of all economically active population. Wholesale and retail trading accounted for 6 percent of the whole population in Malawi and was the second industry from Agriculture, hunting and forestry. This might be a result of the liberalisation of the economy in Malawi during the few past years.

As for the urban and rural areas, the above trend holds for both areas. But it is also interesting to note that none of the population in rural areas participated in either Finance or insurance or Mining and quarrying. However, females in urban areas dominated in Teaching and Community, Social Services with 13 percent and 10 percent respectively as compared to their rural counterparts. Comparatively, no female rural population in all the three regions participated in Electricity, gas and water industries, transport, storage and communication industry and Real estate and business activities while their male counterparts were involved to a lesser extent thus a fraction of a percentage. Generally, in rural areas, except for Agriculture, hunting and forestry industry group, there was relative numerical dominance of males over females in the various industry groups. A similar pattern was also observed in urban areas.

At regional level, Central Region had 87 percent of the population involved in Agriculture, Hunting and forestry compared to 81 percent and 80 percent for the Northern and Southern Regions respectively. Wholesale and Retail trade and Manufacturing were higher in Southern Region with about 7 percent and 3 percent respectively as compared to the other regions. However, community and social service industry rated highest in the Northern Region with 4 percent against 3 percent in the Central and 3 percent in the Southern Region. Each of the remaining industry groups contained at least proportionately more males than females in urban areas than in the rural areas.

More male urban population in the Southern Region participated in manufacturing, construction, public administration and transport, storage and communication accounting for 11.4 percent, 11.0 percent, 19 percent and 6 percent respectively while females dominated in agriculture, wholesale and retail trade, community and social services and education accounting for 31 percent, 28 percent, 19 percent and 12 percent respectively. Similarly, the trend in the Southern Region applied even to the rest of the regions in as far as participation by male urban population in manufacturing, public administration and transport, storage and communication was concerned though by less marginal differences than the former.

In conclusion, the rural and urban areas differed in respect of the distribution of the active population by industry. Rural areas were dominated by agriculture, hunting and forestry. By contrast, the economically active population in urban areas was relatively more dispersed across various industrial groups.

CHAPTER 6

FERTILITY

Ladislav R. S. Mpando

6.0 Introduction

In Malawi registration of vital events such as births and deaths is not yet enforced and as such vital registration cannot be used to establish levels of fertility or mortality in the country. While it is true that the Ministry of Health and Population routinely collect statistical data on, for example, number of deliveries and births at maternity centres in the country such numbers of births are likely to be grossly underreported and would therefore grossly underestimate the levels of fertility.

Vital statistics from censuses and surveys may also suffer from incomplete coverage but it is normally possible to evaluate the magnitude of such errors. Thus patterns, trends and levels of fertility in Malawi are traditionally established using census and survey data.

In this chapter, levels of fertility are estimated at Malawi, rural/urban residence, regional and district levels. Levels of fertility are further estimated for women by selected background characteristics, such as education or marital status, restricted to national, rural/urban and regional levels only. Estimates of fertility for women with selected background characteristics at district levels are likely to be biased as the number of births during the 12-month period is too small to yield any meaningful fertility results.

6.0.1 Sources and Quality of Fertility Data

The 1998 Population and Housing Census collected data on current and lifetime fertility of women aged 12 years or older. This information is used to establish the current level of fertility and the levels of lifetime fertility respectively. However, this information is often inaccurate and the levels established are usually lower than the actual levels. Nevertheless, the data provides useful input during the indirect estimation of fertility levels. Similar information was collected in the 1971/72 Malawi Population Change Survey, 1977 Population Census, 1982 Malawi Demographic Survey, 1984 Family Formation Survey, 1987 Malawi Population and Housing Census and 1992 Malawi Demographic and Health Survey. In the absence of a postenumeration survey (PES) after the 1998 Population and Housing Census, evaluation or assessment of the census data becomes a difficult task. However, an examination of the results from all these sources gives an insight into the quality of the data.

6.1 Reported Fertility Indicators

6.1.1 Reported Fertility Data

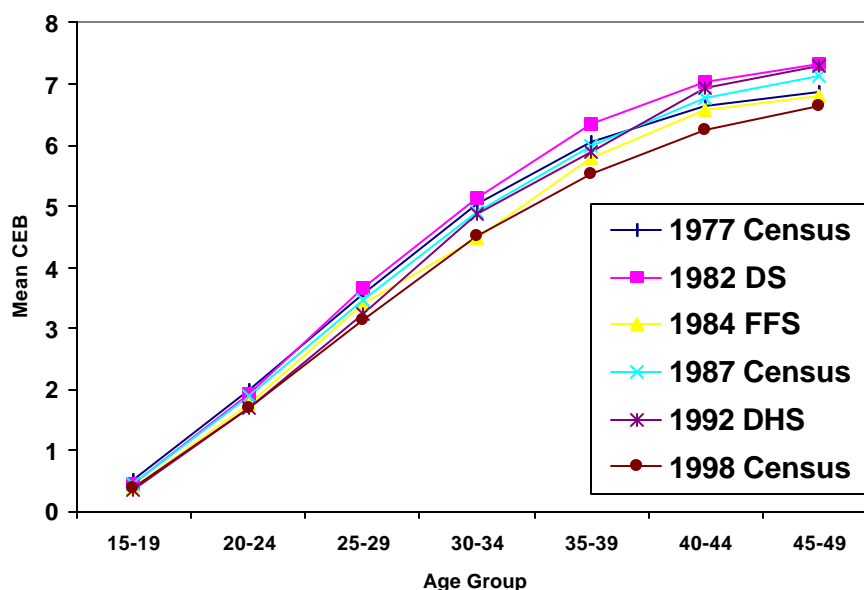
All the women aged 12 years or over were asked to report the number of children who were born alive to them during their lifetime. It is expected that the average number of children ever born per woman in each age group would be increasing with age and the average number of children ever born to women in the age group 45-49 would represent a measure of completed fertility.

An examination of the 1998 Census data reveals that the mean number of children born to women in the age group 45-49 was 6.7. The mean number of children among women in the same age group from various fertility sources during the past two decades was around 7, notwithstanding underreporting of children and supports the finding that fertility in Malawi has traditionally been high (Table 6.1). Figure 6.1 demonstrates that the usual problem of underreporting of children by older women appears to be insignificant in Malawi as judged from the line graphs that do not taper off after age 40-44.

Table 6.1: Reported Average Children Ever Born per Woman for Malawi: 1977-1998

AGE GROUP	1977 CENSUS	1982 DS	1984 FFS	1987 CENSUS	1992 DHS	1998 CENSUS
15-19	0.5	0.4	0.4	0.4	0.3	0.4
20-24	2.0	1.9	1.8	1.9	1.7	1.7
25-29	3.6	3.6	3.4	3.5	3.2	3.1
30-34	5.0	5.1	4.5	4.9	4.9	4.5
35-39	6.1	6.4	5.8	6.0	5.9	5.5
40-44	6.7	7.1	6.6	6.8	6.9	6.3
45-49	6.9	7.3	6.8	7.1	7.3	6.7

Figure 6.1: Mean Children Ever Born Alive (CEB) by Age of Women



Being a lifetime measure of fertility, completed fertility is not capable of locating the actual time when childbearing took place. A quick method based on mean parities is given by the following empirical formula developed by Coale and Demeny:

$$TFR = (P_3)^2 / P_2$$

A similar formula devised by Brass is given by:

$$TFR = P_2(P_4/P_3)^4$$

Using the information from Table 6.1 an estimate of TFR of Malawi in 1998 using Coale-Demeny formula is $TFR = (3.12)^2 / 1.67 = 5.8$ and the TFR estimate from Brass formula is, $TFR = 1.67(4.51/3.12)^4 = 7.3$. The actual TFR value may be an average of these two values (Ramachandran, 1983). Thus the estimated TFR in Malawi around 1998 was around 6.6.

6.1.2 Childlessness

Table 6.2 presents the percentage distribution of women by age with zero parity (i.e. Zero children ever born). It is observed that slightly over a quarter of teenage women in Malawi had already started childbearing, and by age 24 more than three quarters of the women aged 20-24 had already given birth to at least one child. The proportion childless decreases with age and by age 49 only 3.8 percent of the women were still childless. The proportion childless among women age 45-49 years may be considered as a crude measure of primary infertility since

marriage is universal in Malawi (Table 3.16) and all married women are probably likely to wish to have at least a child in their families.

At regional level, Southern Region (4.0 percent) had the highest proportion of childless women at age 45-49 years and Central Region (3.0 percent) had the least proportion. The proportion of childless women among all women age 45-49 in the Northern Region was 3.5 percent.

Table 6.2: Percentage Distribution of Women with Zero Parity by Age and Area: 1998

AGE GROUP	NORTHERN CENTRAL SOUTHERN						
	MALAWI	RURAL	URBAN	REGION	REGION	REGION	
15-19		73.4	72.5	78.0	74.0	76.4	70.7
20-24		21.5	19.8	29.3	22.3	20.8	21.9
25-29		8.5	7.7	12.5	8.5	6.7	10.0
30-34		5.3	5.1	6.4	4.9	3.9	6.5
35-39		4.0	4.0	4.1	3.9	3.0	4.8
40-44		3.9	4.0	3.5	3.5	2.9	4.8
45-49		3.8	3.9	3.8	3.5	3.0	4.6

6.1.3 Quality of Current Fertility Data

The number of births by women during the 12-month period prior to the 1998 Census resulted in the reported total fertility rate (TFR) of Malawi of 4.8 (Table 6.3). Assuming that the extent of reporting errors is the same in both censuses, the reported (unadjusted) TFR of 5.7 in 1987 suggests a modest fertility decline of about 15 percent during the 1987-98 intercensal period. With the contraceptive prevalence rate in Malawi currently at less than 30 percent, it is reasonable to conclude that the reported TFR of 4.8 is probably lower than the true rate. Moreover, nothing of demographic significance has taken place in Malawi during the recent past to warrant a fertility decline to 4.8 in 1998. Table 6.3 shows the reported selected measures of current fertility in Malawi and its sub areas in 1998. The results show that the reported TFR in Malawi, rural and urban areas were 4.8, 5.0 and 3.7 respectively. At regional level, the TFR in the Northern, Central and Southern Regions were 4.8, 5.3 and 4.5 respectively.

Table 6.3: Reported Selected Measures of Current Fertility in Malawi, Rural, Urban Areas and Regions: 1998

Age Group	ASFR						
	Malawi	Rural	Urban	Northern Region	Central Region	Southern Region	
15-19	0.1	0.1	0.1	0.1	0.1	0.1	0.1
20-24	0.2	0.2	0.2	0.2	0.2	0.2	0.2
25-29	0.2	0.2	0.2	0.2	0.2	0.2	0.2
30-34	0.2	0.2	0.1	0.2	0.2	0.2	0.2
35-39	0.1	0.1	0.1	0.1	0.2	0.1	0.1
40-44	0.1	0.1	0.1	0.1	0.1	0.1	0.1
45-49	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TFR	4.8	5.0	3.74	4.8	5.3	4.5	
CBR	37.1	37.9	32.8	36.3	39.3	35.4	
GRR	2.5	2.6	1.9	2.4	2.7	2.3	

6.2 Indirect Estimation of Fertility

The observed apparent underreporting of current fertility calls for the need to use indirect demographic techniques to establish a plausible level of fertility in Malawi in 1998. To achieve this objective, three methods, namely; Arriaga Method, Brass P/F Ratio Method and Gompertz Relational Model Method are examined in this analysis. The three methods differ not only in the basic assumptions they demand but also in the input data they require.

It should be noted that analysis of fertility by selected background characteristics of women is confined to national, rural/urban residence and regional levels only. This is so because the numbers of women and births during the reference period in some sub-categories of women, such as women administrators or manageresses, women employers etc are so small that fertility estimates for these women would be grossly inaccurate. It should also be noted that even at regional or rural/urban levels, the number of women who were administrators or managers are still too small to yield accurate estimates of fertility at some of these levels.

6.2.1 Analysis of Fertility Data using Arriaga, Brass P/F Ratio and Gompertz Relational Model Techniques

These methods estimate fertility rates based on census or survey data on the average number of children ever born, by age of women and number of births to women during the 12-month period prior to the census or survey. These methods differ in some of the assumptions they demand and the accuracy of the estimates depends on the extent the conditions demanded by the method are fulfilled or met. For instance, the Brass P/F Ratio Method requires that fertility in the population should be constant in the recent past, but Gompertz Relational Model Method or Arriaga Method does not need to satisfy this requirement.

This analysis makes use of microcomputer programs available as a population analysis spreadsheet (PAS) developed by the U.S. Bureau of the Census for demographic analysis. The spreadsheets ARFE-2, PFRATIO and REL-GMPZ are used to estimate fertility by performing calculations using Arriaga, Brass P/F Ratio and Gompertz Relational Model techniques respectively.

a. Brass P/F Ratio Method

This method developed by William Brass adjusts an observed age-specific fertility pattern to a level of fertility derived from data on the parity (i.e. number of children ever born) and the number of births during the 12-month period prior to the census or survey. In this method, the pattern of fertility is cumulated to exact ages 20, 25, 30,....., 45, 50 (symbolized by F) and these are compared to the average number of children born to women at the same exact ages (symbolized by P). The observed age-specific fertility pattern is adjusted by considering the ratio, P/F.

The method largely assumes the following:

- (a) the reporting of the average number of children ever born per woman is complete, at least up to ages 30 or 35 years,
- (b) there is no age misreporting of women in the childbearing ages,
- (c) the pattern and level of fertility remained constant during the recent past (i.e. 10 or 15 years prior to the census).

This method was applied to the 1998 Population and Housing Census data and considered the average of P_3/F_3 and P_4/F_4 ratios to adjust the observed age-specific fertility rates (ASFRs).

Table 6.4: Estimation of Total Fertility Rate using Brass P/F Ratio Method: Malawi, 1998

Age Group	Average CEB, P(i)	Reported ASFR f(i)	Cumulative fertility $\phi(i)$	F(i)	P/F Ratio	ASFR ¹	Adjusted ASFR's			
							P ₂ /F ₂	P ₃ /F ₃	P ₄ /F ₄	Average (P ₃ /F ₃ , P ₄ /F ₄)
							1.445	1.373	1.406	1.389
15-19	0.4	0.1	0.5	0.2	1.7	0.1	0.2	0.2	0.2	0.2
20-24	1.7	0.2	1.6	1.2	1.4	0.2	0.3	0.3	0.3	0.3
25-29	3.1	0.2	2.7	2.3	1.4	0.2	0.3	0.3	0.3	0.3
30-34	4.5	0.2	3.5	3.2	1.4	0.2	0.2	0.2	0.2	0.4
35-39	5.5	0.1	4.2	4.0	1.4	0.1	0.2	0.2	0.2	0.2
40-44	6.2	0.1	4.6	4.4	1.4	0.1	0.1	0.1	0.1	0.1
45-49	6.7	0.0	4.8	4.8	1.4	0.0	0.1	0.1	0.1	0.1
TFR		4.8				4.8	7.0	6.6	6.8	6.7 ²

¹ ASFR pattern corrected for 6 months to approximately reflect the age of the mother at the time of birth of the child since reported ASFRs were based on age of mother at the time of the census rather than on mother's age at the time of childbirth

² Recommended level of fertility

b. Arriaga Method

Arriaga (U.S. Bureau of the Census, 1983) developed a technique that does not require the assumption of constant fertility as required by the Brass P/F Ratio Method. Arriaga observed that under conditions of declining fertility, the number of children ever born by age of mother changes almost linearly for mothers' ages under 35 years (ARRIAGA, 1984). Based on this observation and the fact the reported number of children ever born by mothers' age under 35 is usually acceptable, linear interpolation of the data on children ever born per woman by age of mother from at least two censuses can provide an estimate of children ever born for one year prior to the census date. Thus Arriaga noted that with the information on the average number of children ever born per woman by age of mothers for two consecutive years, the cohort differences between them for each single year of age of the female population represent the age-specific fertility rates by single years of age.

The following assumptions need to be noted for use of this technique:

- the completeness of reporting of births used to estimate the age-specific fertility rates is the same for all age groups of women;
- reporting of the average number of children ever born per woman is complete (at least for women under 30 or 35 years of age);
- changes in fertility produce a linear change in the average number of children ever born per woman at each particular age of woman (mainly at ages 15 to 35 years) between the two dates; and
- fertility occurs only between exact ages 15 and 50 years (ARRIAGA, 1984).

The principal advantage of Arriaga Method over the Brass P/F Ratio Method is that the former does not require the assumption of constant fertility, and thus, when it is applied in populations where fertility is declining the results are more reliable than those by Brass P/F Ratio technique.

Table 6.5: Estimation of Total Fertility Rate using Arriaga Method: Malawi, 1998

Age Group	1987 Census		1998 Census		Adjustment factors	ASFR ³	ASFR Pattern Cumulative	Adjusted ASFRs Based on Age Group 25-34
	CEB	ASFR	CEB	ASFR				
15-19	0.4	0.2	0.4	0.1	1.6	0.1	0.1	0.1
20-24	1.8	0.3	1.7	0.2	1.3	0.2	0.3	0.3
25-29	3.5	0.3	3.1	0.2	1.3	0.2	0.6	0.3
30-34	4.9	0.3	4.4	0.2	1.3	0.2	0.7	0.2
35-39	6.0	0.2	5.5	0.1	1.2	0.1	0.9	0.2
40-44	7.1	0.0	6.2	0.1	1.2	0.1	0.9	0.1
45-49			6.7	0.0	1.2	0.0	1.0	0.0
TFR	7.4		4.8			4.8		6.2

³ ASFR pattern corrected for half a year to reflect age of mother at the birth of the child

c. Gompertz Relational Model Method

The method was developed by Brass (1981) to estimate total fertility rate. It was observed that the Gompertz function closely follows the pattern of cumulative fertility rates and so Brass used the Gompertz function to represent cumulated fertility. As with the two other methods briefly presented above, the technique estimates total fertility rates based on the average number of children ever born by age of mother and the fertility pattern (i.e. the number of births during the 12-month period prior to the census).

The technique assumes that

- (a) the average number of children ever born per woman by age of the women follows the pattern of Gompertz function;
- (b) the reporting of the average number of children ever born per woman is complete and represents the level of cumulative fertility up to each age group;
- (c) the completeness of reporting of children during the last 12 months prior to the census is the same for all age groups of women.

It is noted that if F(x) represents the cumulative fertility up to age x, and F is the total fertility rate, then

$$F(x)/F = A^{B^x} \dots\dots\dots 3.1$$

where A and B are constants and lie between zero and unity.

The above function can be linearized by taking logarithms twice to take the form

$$Y(x) = \alpha + \beta x, \dots\dots\dots 3.2$$

where α and β depend on the values of A and B

$$\text{then } Y(x) = -\ln [-\ln \{F(x)/F\}]. \dots\dots\dots 3.3$$

According to Brass the model given by equation 3.2 can be improved if Y(x) is related to $Y_s(x)$ obtained in the same manner as Y(x), but referring to a standard population.

$$\text{Thus } Y_s(x) = \alpha_s + \beta_s Y(x) \dots\dots\dots 3.4$$

where α_s , and β_s are constants, and thus

$$Y_s(x) = -\ln [-\ln \{F_s(x)/F_s\}] \dots\dots\dots 3.5$$

Additionally, a scale transformation is performed to obtain a better fit of the Gompertz function to the actual data. However, the total fertility rate, F needs to be known for the linearization of the Gompertz model. This problem was circumvented by Zaba (1981) by transforming ratios of the cumulated fertility rather than the cumulants themselves in fitting the points on a straight line.

When this technique was applied to the 1998 Population and Housing Census data to estimate total fertility rate the results are presented in Table 6.6.

Considering the assumptions, limitations and advantages of each of the above techniques, the Gompertz Relational Model Method is preferred to the other methods and is used to estimate fertility levels in Malawi and other sub-areas in 1998. It is also noted that Gompertz Relational Model and Brass P/F Ratio methods have both been extensively used in Malawi to estimate total fertility rates using the 1977 Population Census, 1982 Demographic Survey, 1987 Population and Housing Census. The estimates from the Gompertz Relational Model have been consistent and the method is thus used for the determination of the level of fertility in Malawi in 1998. Use of the method also makes it convenient to directly compare the fertility estimates since 1982 in order to establish patterns, levels and trends of fertility in Malawi.

It is noted that the total fertility rate for Malawi in 1998 using Gompertz Relational Model was 6.52. This is an average of the estimates of fertility rates in the age group 20-39. The estimates from Brass

P/F Ratio and Arriaga techniques in 1998 were 6.73 and 6.24 respectively.

Table 6.6: Estimation of Total Fertility Rate using Gompertz Relational Model Method: Malawi, 1998

Age Group	Reported ASFR	Mean Parities P(i)	Standard Parity Schedule	$Y_s(i)$	$Y(i)$	$\frac{P(i)}{TFR}$	TFR(i)	Adjusted ASFR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15-19	0.1	0.4	0.1	-1.1	-1.1	0.1	7.3	0.1
20-24	0.2	1.7	0.3	-0.3	-0.3	0.2	6.8	0.3
25-29	0.2	3.1	0.5	0.4	0.3	0.5	6.4	0.3
30-34	0.1	4.5	0.7	1.1	1.0	0.7	6.4	0.2
35-39	0.1	5.5	0.9	2.0	1.9	0.9	6.4	0.2
40-44	0.1	6.2	1.0	3.4	3.4	1.0	6.5	0.1
45-49	0.0	6.7	1.0	6.1	6.0	1.0	6.7	0.1
							6.5	

Notes:

Col (4) is the standard parity schedule

Col (5) is standard values obtainable from BRASS Table C

Col (6) are values predicted from the linear equation, $Y(i) = \alpha + \beta Y_s(i)$.

Solving the above linear equation for α and β yields $\alpha = -0.0202$ and $\beta = 0.9952$

$Y_s(i) = -\ln(-\ln(4))$

$P(i)/TFR = \exp(-\exp(-Y(i)))$, hence $TFR(\text{Col } 8) = \text{Col } (3) / \text{Col } (7)$

Ignoring the value of TFR of 7.366 for age group 15-19 which looks spurious,

The final estimated level of TFR is obtained by averaging TFRs from age group 20-24 up to age group 45-49.

6.2.2 Determining the Level of Fertility in Malawi

In order to determine the plausible level of fertility in Malawi and other sub areas in Malawi, three techniques for indirect estimation have been considered. It is observed that the estimates of the levels of fertility obtained by using Brass P/F Ratio Method are higher than the corresponding estimates using Arriaga or Gompertz Relational Model methods. This probably suggests that the assumption of constant fertility as required by the method is not satisfied. Arriaga Method yields fertility estimates that are generally lower than those from Gompertz Relational Model Method. The Gompertz Model estimates are preferred to those from Arriaga or Brass P/F Ratio methods on the basis that these represent more or less an average of the three methods.

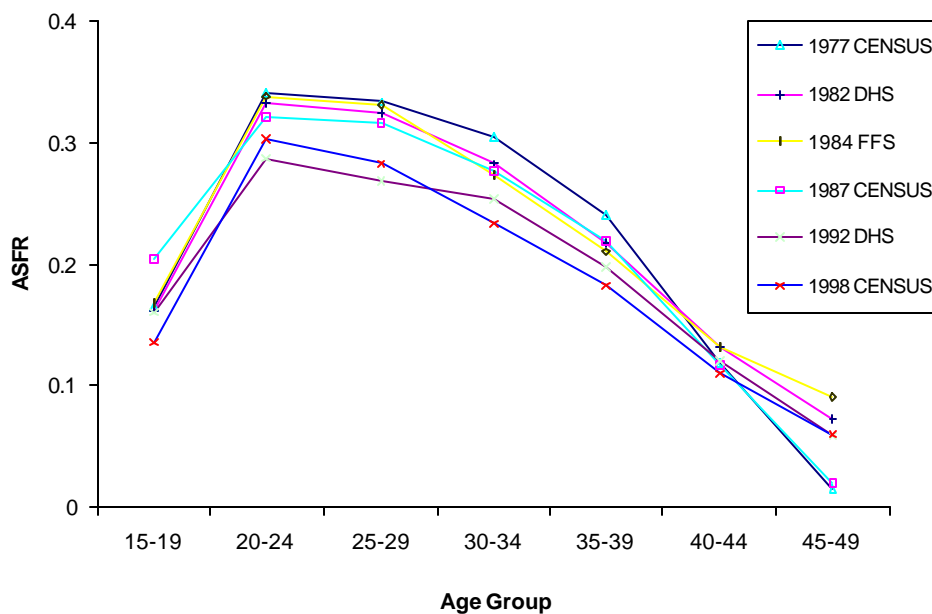
The Gompertz Relational Model Method the final estimates of total fertility rate for Malawi, rural and urban areas were 6.52, 6.68 and 5.39 respectively.

6.2.3 Pattern and Trends of Fertility in Malawi

Information on children ever born and births during the 12-month period prior to census or survey has been collected since 1977 Malawi Population Census thus making it possible to employ the same estimation procedures

to determine the levels of fertility from each source. Such information from a total of six different surveys and censuses is used in this analysis to determine and establish fertility patterns and trends in Malawi during the 20-

Figure 6.2 : Age-Specific Fertility Rates for Malawi: 1977 - 1998



year period prior to the 1998 population and Housing Census. In this analysis, adjusted age-specific fertility rates and total fertility rates are examined. These are summarized and presented in Table 6.7 below.

The Table shows the pattern and levels of adjusted total fertility rates by year of survey or census. Although the fertility estimates are subject to different reference periods, it is evident that fertility had remained constant prior to 1984, but started to decline from a level of 7.6 children per woman in 1982 to the observed current level of 6.5 in 1998. This represents a very modest and an insignificant fertility decline of just 14 percent during the past 16 years.

The table also reveals that childbearing starts very early in Malawi. This is substantiated by the singulate mean age at marriage for females in Malawi in 1998 which was 19.2 years compared to 23.5 years among their male counterparts, assuming that childbearing starts immediately after getting married. Furthermore, the Table shows that although the proportion of births to teenage mothers declined from 14 percent to 10 percent during the 1987-98 intercensal period, it is evident that around seven out of every ten births occurred to women aged under 35 years. The peak of childbearing in Malawi occurs at ages 20-24 and childbearing slightly declines in the next age group (25-29 years). Thus about 56 percent of all the births occur to women aged 20-29 years. The observed distribution of births by age of women in 1998 as well as in the previous years shows a typical pattern of high fertility levels. The pattern observed in 1998 resembles the patterns of age-specific fertility from previous censuses and demographic surveys.

Table 6.7: Adjusted Age-Specific Fertility Rates for Malawi: 1977-1998

Age Group	1977 Census	1982 DS	1984 FFS	1987 Census	1992 DHS	1998 Censuc
15-19	0.2	0.2	0.2	0.2	0.2	0.1
20-24	0.3	0.3	0.3	0.3	0.3	0.3
25-29	0.3	0.3	0.3	0.3	0.3	0.3
30-34	0.3	0.3	0.3	0.3	0.3	0.2
35-39	0.2	0.2	0.2	0.2	0.2	0.2
40-44	0.1	0.1	0.1	0.1	0.1	0.1
45-49	0.0	0.1	0.1	0.0	0.1	0.1
TFR (15-49)	7.6	7.6	7.7	7.4	6.7	6.5
Mean Age of Fertility Schedule	29.8	29.5	30.0	29.9	29.3	29.3

**Table 6.8: Adjusted Selected Measures of Current Fertility in Malawi
Rural, Urban Areas and Regions: 1998**

Age Group	ASFR					
	Malawi	Rural	Urban	Northern Region	Central Region	Southern Region
15-19	0.1	0.1	0.1	0.1	0.1	0.1
20-24	0.3	0.3	0.3	0.3	0.3	0.3
25-29	0.3	0.3	0.2	0.3	0.3	0.3
30-34	0.2	0.2	0.2	0.2	0.3	0.2
35-39	0.2	0.2	0.1	0.2	0.2	0.2
40-44	0.1	0.1	0.1	0.1	0.1	0.1
45-49	0.1	0.1	0.0	0.0	0.1	0.1
TFR	6.5	6.7	5.4	6.5	7.1	6.1
CBR	50.0	50.4	47.5	49.2	52.3	48.6
GRR	3.4	35.5	2.7	3.3	3.7	3.2

Figure 6.3: Adjusted Age-Specific Fertility Rates for Malawi and subAreas: 1998

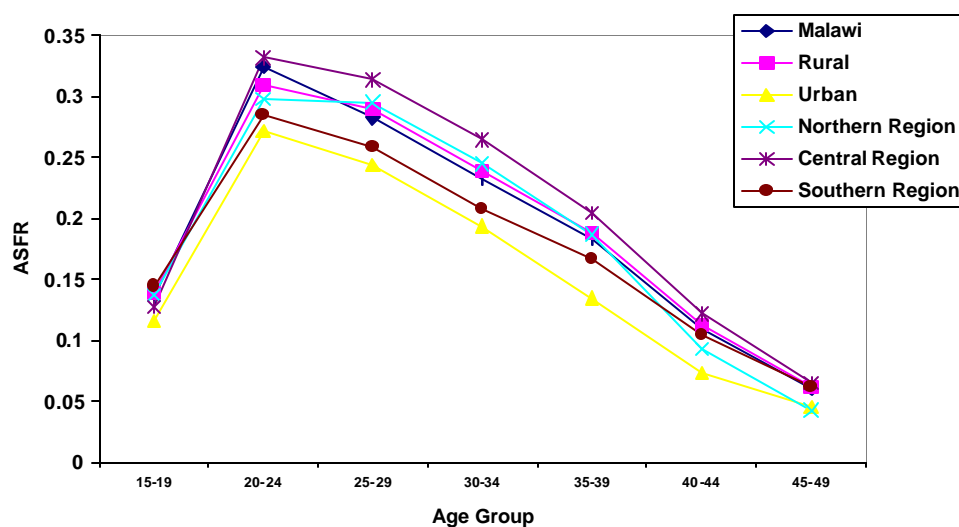


Figure 6.3 demonstrates that although teenage females contribute significantly to the level of fertility in Malawi, the peak of childbearing occurs at ages 20-24 and 25-29. Thus about three quarters of the births occur to women in the age group 20-39.

6.2.4 Estimates of Total Number of Births and Crude Birth Rate for Malawi

The reported number of births given by women age 15-49 years during the 12-month period prior to the census was 368,740. This represents an increase of 12 percent over the total number of births reported in 1987 Population and Housing Census. The crude birth rate (CBR) for Malawi in 1998 was 37.1 births per 1,000 population. After applying indirect techniques to adjust the level of fertility due to underreporting of births the estimated number of births in Malawi during the 12-month period prior to the census was 496,524 giving an adjusted CBR of 50.0 births per 1,000 population. The corresponding crude birth rates for rural and urban areas in 1998 were 50.4 and 47.5 births per 1,000 population respectively. The estimated numbers of births in rural and urban areas were 428,409 and 68,115 respectively (Table 6.9).

Table 6.9: Estimated Number of Births for Malawi, Rural/Urban Residence, and Regions during the 12-Month Period prior to the Census.

Area	Number of Births	Implied CBR	TFR	GRR	Percent of Births Under Reported
Malawi	496524	50.0	6.5	3.4	34.6
Rural	428409	50.4	6.7	3.5	33.2
Urban	68115	47.5	5.4	2.7	44.6
Northern Region	60672	49.2	6.5	3.3	35.4
Central Region	212549	52.3	7.1	3.7	33.1
Southern Region	223303	48.2	6.1	3.2	36.0

The results from Table 6.9 reveal that in the 1998 Population and Housing Census births in Malawi were on overall underreported by 35 percent. It is observed that births in urban areas were more seriously underreported (45 percent) than in rural areas (33 percent). At regional level the number of births was underreported by 35, 33 and 36 percent in the Northern, Central and Southern Regions respectively.

Table 6.10 Estimated Number of Births by Age of Mothers in Malawi: 1987

Age Group	Number of Women	Adjusted ASFR	Estimated Number of Birth	Percent of Birth in Age Group
15-19	560,071	0.1	75,781	15.3
20-24	543,922	0.3	164,492	33.1
25-29	398,552	0.3	112,441	22.6
30-34	298,161	0.2	69,330	14.0
35-39	245,784	0.2	44,812	9.0
40-44	180,542	0.1	19,593	3.9
45-49	166,498	0.1	10,075	2.0
TOTAL	2,393,530	1.3036	496,524	100.0
TFR		6.5		

Table 6.10 shows that teenage women contribute about 15 percent of all the births given by women in the childbearing age group 15-49. It is also observed that women age 20-24 contribute to about one third of all the births and around 70 percent of all the births are given by women in the age range 20-34.

6.3 Reproductivity

Reproductivity considers the extent to which a generation replaces itself. Measures of reproductivity of population replacement are periodic measures of natural increase expressed in terms of a generation rather than a year or other brief period of time.

6.3.1 Gross Reproduction Rate

Gross Reproduction Rate (GRR) is the average number of daughters a woman would have if she survived to the end of her reproductive period (at least age 50) and experienced the given female age-specific fertility rates. The GRR for Malawi in 1998 was 3.4. This shows that as at the time of the 1998 Population and Housing Census a Malawian woman would on average give birth to 3.4 daughters by the time she completes her childbearing as compared to 3.6 and 3.7 daughters in 1987 and 1977 respectively. Gross reproduction rates for rural and urban areas in 1998 were 3.5 and 2.7 respectively.

6.3.2 Net Reproduction Rate

The Net Reproduction Rate (NRR) is a GRR adjusted for mortality. The adjustment is performed by multiplying each female age-specific fertility rate by the probability of surviving from birth to that age, before summing and multiplying by 5. It is observed that the NRR for Malawi in 1998 was 2.2. This implies that a woman in Malawi would be replaced by 2.2 mothers 28 years later. It is further observed that about 35 percent of the potential mothers fail to survive to motherhood to replace their mothers. In 1987 the NRR for Malawi was 2.5 and was 2.1 in 1977. It is observed that NRR has declined from 2.5 in 1987 to 2.2 in 1998. This could be a consequence of worsening mortality conditions among Malawians in general and Malawian women in particular during the 1987-98 intercensal period.

Table 6.11 shows that the intrinsic rate of growth for females was 2.8 percent per annum and was nearly the same as the adjusted rate of natural increase of about 2.5 percent for the Malawian women for the period 1987-98. However, the observed exponential growth rate for females of 1.9 percent during the same period confirms the impact of international migration (Mozambican refugees, in particular) on the growth of the Malawian population.

Table 6.11: Computation of Intrinsic Rate of Growth for Malawi: 1998

Age Group	Mid Curve (x)	Age Specific Female Fertility Rate f(x)	Stationary Population in Life Table with I(0)=1 L(x)	Moment of Net Reproduction Curve		
				R ₀ f(x).L(x)	R ₁ x.f(x).L(x)	R ₂ x ² .f(x).L(x)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
15-19	17.5	0.1	3.7	0.3	4.5	77.9769
20-24	22.5	0.2	3.5	0.5	12.3	276.5354
25-29	27.5	0.1	3.4	0.5	13.4	367.2345
30-34	32.5	0.1	3.2	0.4	12.4	404.5429
35-39	37.5	0.1	3.0	0.3	10.7	400.0522
40-44	42.5	0.1	2.8	0.2	6.7	284.9792
45-49	47.5	0.0	2.5	0.1	4.0	188.7464
		3.4				

Summary

Gross Reproduction Rate (GRR)	= 3.36
Total Fertility Rate (TFR)	= 6.52
Net Reproduction Rate (NRR)	= 2.20
Intrinsic Rate of Growth for Females per annum (r)	= 0.028
Mean Length of Generation in Years (T)	= 28.16

6.4 Fertility Differentials

6.4.1 Fertility by Rural/Urban Residence

Table 6.12 shows adjusted age-specific fertility rates for Malawi and rural/urban residence. The Table shows an early onset of childbearing in urban areas, reaching a peak in the age group 20-24, before experiencing a very modest decline in the age groups 25-29 and 30-34. Age-specific fertility rates in the age group 35-39 are still substantially high, but as women advance into the forties, the age-specific fertility rates decline quite considerably.

A similar pattern is observed for rural areas. The age-specific fertility rates for rural areas are, however, higher at each age than they are for Malawi as a whole. In the urban areas, although the pattern of childbearing is similar to that of the rural areas or Malawi, the age-specific fertility rates are significantly lower than the age-specific fertility rates for Malawi.

Table 6.12: Age-Specific Fertility Rates and Average Children Ever Born for Rural and Urban Areas: 1998

Age Group	ASFR			Mean CEB		
	Malawi	Rural	Urban	Malawi	Rural	Urban
15-19	0.1	0.1	0.1	0.4	0.4	0.3
20-24	0.3	0.3	0.3	1.7	1.8	1.4
25-29	0.3	0.3	0.2	3.1	3.2	2.5
30-34	0.2	0.2	0.2	4.5	4.6	3.8
35-39	0.2	0.2	0.1	5.5	5.6	4.7
40-44	0.1	0.1	0.1	6.2	6.3	5.7
45-49	0.1	0.1	0.0	6.7	6.7	6.2
TFR	6.5	6.7	5.4			

An examination of the pattern of lifetime fertility by age of women shows that in urban areas women in their late thirties already had given birth to, on average, 2.5 children compared to 3.2 children born by their rural counterparts. By the time they complete their childbearing period, rural women on average had 6.7 children as opposed to 6.2 children by urban women.

6.4.2 Fertility by Regions and Districts

Table 6.13 presents total fertility rates and their component age-specific rates for regions and districts.

The results when compared with similar results from 1987 Population and Housing Census show that fertility declined in each region during the 1987-98 intercensal period. The Southern Region experienced the steepest decline (13 percent) whereas fertility declined in each of the Northern and Central regions by about 11 percent. As was the case in 1987 and 1977, fertility in the Central Region (7.14) was higher than it was in Northern Region (6.48) and Southern Region (6.13).

At district level, Ntchisi (7.96), Mchinji (7.63), Dowa (7.53), Kasungu (7.41), Chitipa (7.19) and Nsanje (7.01) experienced the highest fertility levels. On the other hand, the lowest fertility rates are observed in the Southern region districts of Blantyre (5.38), Chiradzulu (5.86), Zomba (5.88), Mulanje (5.93), Phalombe (5.97) and Thyolo (6.05) and in two districts in the Northern Region; namely, Nkhata Bay (6.01) and Likoma (6.06). All these levels are, however, lower than those observed in 1987.

Table 6.13: Age-Specific Fertility Rates (ASFRs) , Total Fertility Rate (TFR) and Crude Birth Rate (CBR) by Region/District: 1998

AREA/ DISTRICT	CBR	TFR	AGE GROUP						
			15-19	20-24	25-29	30-34	35-39	40-44	45-49
MALAWI	50.0	6.5	0.1	0.3	0.3	0.2	0.2	0.1	0.1
NORTHERN	49.2	6.5	0.1	0.3	0.3	0.2	0.2	0.1	0.0
Chitipa	52.5	7.2	0.1	0.3	0.3	0.3	0.2	0.1	0.0
Karonga	50.6	6.4	0.1	0.3	0.3	0.2	0.2	0.1	0.0
Nkhata Bay	46.9	6.0	0.2	0.3	0.3	0.2	0.2	0.1	0.0
Likoma	46.1	6.1	0.1	0.2	0.3	0.2	0.2	0.1	0.0
Rumphi	51.3	6.6	0.1	0.3	0.3	0.3	0.2	0.1	0.0
Mzimba	49.2	6.5	0.1	0.3	0.3	0.2	0.2	0.1	0.0
CENTRAL	52.3	7.1	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Kasungu	53.4	7.4	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Nkhota kota	54.0	7.5	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Ntchisi	40.4	8.0	0.1	0.4	0.4	0.3	0.2	0.1	0.1
Dowa	54.1	7.5	0.1	0.4	0.3	0.3	0.2	0.1	0.1
Salima	51.1	7.0	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Lilongwe	53.1	7.0	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Mchinji	55.0	7.6	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Dedza	50.6	7.0	0.1	0.3	0.3	0.3	0.2	0.1	0.1
Ntcheu	49.2	6.7	0.1	0.3	0.3	0.2	0.2	0.1	0.0
SOUTHERN	48.6	6.1	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Mangochi	48.0	6.3	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Machinga	48.8	6.4	0.2	0.3	0.3	0.2	0.2	0.1	0.1
Balaka	48.2	6.3	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Zomba	47.0	5.9	0.2	0.3	0.2	0.2	0.2	0.1	0.1
Chiradzulu	46.5	5.9	0.1	0.3	0.3	0.2	0.2	0.1	0.0
Blantyre	46.2	5.4	0.1	0.3	0.2	0.2	0.1	0.1	0.0
Mwanza	49.5	6.6	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Thyolo	49.6	6.1	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Mulanje	49.6	5.9	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Phalombe	48.5	6.0	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Chikwawa	49.5	6.8	0.1	0.3	0.3	0.2	0.2	0.1	0.1
Nsanje	50.1	7.0	0.1	0.3	0.3	0.2	0.2	0.1	0.1

6.4.3 Fertility by Education of Women

The inverse relationship between fertility and education of women has been researched extensively and the results have also been documented widely in literature. It has been concluded that generally the higher the education status of women the lower their fertility.

Table 6.14 shows the total fertility rates of women by highest level of education attended at national, rural/urban and regional levels. The table confirms research findings that fertility is highest among women with no formal education and lowest among those with secondary education or higher. It is also noted that for any given level of education fertility among women in urban areas is lower than that for their rural counterparts.

At regional level, women from the Central Region who had had no formal education exhibited the highest fertility (7.23) as compared to their counterparts from the Northern Region (6.59) and the Southern Region (6.32). Furthermore, women from the Central Region with secondary education or higher also had the highest fertility (4.40) in comparison with similarly educated women from the Northern Region (4.33) and Southern Region (4.17).

Estimates of fertility by education of women have not been done at district level because the small numbers of cases of women with secondary or higher education in some districts would yield inconceivable and biased estimates.

Table 6.14: Age-Specific Fertility Rates and Average Children Ever Born by Level of Education Attended by Women: 1998

AREA/ AGE GROUP	ASFR			AVERAGE CEB		
	None	Primary	Secondary +	None	Primary	Secondary +
MALAWI						
15-19	0.1	0.1	0.1	0.4	0.2	0.2
20-24	0.3	0.3	0.2	1.8	1.3	0.8
25-29	0.3	0.3	0.2	3.3	2.7	1.7
30-34	0.2	0.2	0.2	4.7	4.0	2.8
35-39	0.2	0.2	0.1	5.6	5.1	4.0
40-44	0.1	0.1	0.0	6.3	6.0	4.9
45-49	0.1	0.0	0.0	6.7	6.6	5.4
TFR	6.7	5.9	4.3			
NORTHERN						
15-19	0.1	0.1	0.1	0.4	0.3	0.3
20-24	0.3	0.4	0.2	1.9	1.4	0.8
25-29	0.3	0.3	0.2	3.3	2.9	1.8
30-34	0.2	0.2	0.2	4.6	4.2	3.1
35-39	0.2	0.2	0.1	5.6	5.3	4.2
40-44	0.1	0.1	0.0	6.3	6.1	5.2
45-49	0.0	0.0	0.0	6.6	6.6	5.7
TFR	6.6	6.1	4.3			
CENTRAL						
15-19	0.1	0.1	0.1	0.4	0.2	0.2
20-24	0.3	0.3	0.2	1.9	1.3	0.7
25-29	0.3	0.3	0.2	3.5	2.8	1.7
30-34	0.3	0.2	0.2	5.1	4.2	2.9
35-39	0.2	0.2	0.1	6.1	5.3	4.0
40-44	0.1	0.1	0.0	6.9	6.3	5.0
45-49	0.1	0.0	0.0	7.3	6.8	5.5
TFR	7.2	6.1	4.4			
SOUTHERN						
15-19	0.2	0.1	0.1	0.4	0.3	0.2
20-24	0.3	0.3	0.2	1.8	1.2	0.8
25-29	0.3	0.2	0.2	3.1	2.5	1.6
30-34	0.2	0.2	0.1	4.3	3.8	2.7
35-39	0.2	0.1	0.1	5.2	4.8	3.9
40-44	0.1	0.1	0.0	5.9	5.7	4.7
45-49	0.1	0.0	0.0	6.3	6.4	5.3
TFR	6.3	5.5	4.2			

An examination of the average number of children born to women aged 45-49 is an indication of completed fertility among women. The pattern exhibited by the summary measures of current fertility (i.e. total fertility rate) that women with highest education have the lowest fertility is also confirmed with lifetime fertility measure.

In Malawi, a woman with no formal education had on average given birth to 6.7 children compared to 6.6 and 5.4 children born to women with primary and secondary education or higher respectively. At regional level, women from the Central Region had the highest level of completed fertility and women from the Southern Region had the lowest level of children ever born to women in the age group 45-49.

6.4.4 Fertility by Marital Status of Women

Table 6.15 presents total fertility rates and average children ever born for women by their marital status for Malawi, rural/urban residence and each of the regions. The 1998 Population and Housing Census results reveal that irrespective of area, married women have highest fertility, followed by widows and then those women who were either divorced or separated. Women who had never married have the lowest total fertility rates. For example, the total fertility rate for married women in Malawi was 6.97 compared with a total fertility rate of 6.17 among widowed women, 5.49 among divorced or separated women and 3.72 among unmarried women. It is further observed that

regardless of marital status, total fertility rates in the Central Region are higher than the corresponding rates in the Northern or Southern Regions.

A similar pattern is also observed when mean number of children ever born to women aged 45-49 by marital status is considered. In Malawi, married women had completed fertility of 6.9 children whereas widowed women had on average 6.4 children and those who were either divorced or separated had a completed fertility of 5.8. Women who had never been married experienced a completed fertility level of 4.0 children.

Table 6.15 Age-Specific Fertility Rates and Mean Children Ever Born by Marital Status of Women: 1998

AREA/ AGE GROUP	ASFR				AVERAGE CEB			
	Married	Widowed	Divorced/ Separated	Never Married	Married	Widowed	Divorced/ Separated	Never Married
MALAWI								
15-19	0.2	0.1	0.1	0.1	0.8	0.9	0.9	0.1
20-24	0.2	0.2	0.3	0.1	1.9	2.0	1.7	0.6
25-29	0.3	0.3	0.2	0.1	3.3	3.1	2.8	1.2
30-34	0.2	0.2	0.2	0.1	4.7	4.2	3.9	2.0
35-39	0.2	0.2	0.1	0.1	5.7	5.2	4.8	2.7
40-44	0.2	0.1	0.1	0.1	6.4	5.9	5.4	3.3
45-49	0.1	0.1	0.1	0.1	6.9	6.4	5.8	4.0
TFR	6.9	6.2	5.5	3.7				
NORTHERN								
15-19	0.2	0.1	0.1	0.1	0.8	1.0	0.9	0.1
20-24	0.2	0.2	0.3	0.1	1.9	2.0	1.5	0.5
25-29	0.3	0.3	0.2	0.1	3.2	3.0	2.5	1.2
30-34	0.2	0.2	0.1	0.2	4.6	4.2	3.6	1.9
35-39	0.2	0.2	0.1	0.2	5.6	5.2	4.4	2.5
40-44	0.2	0.1	0.1	0.1	6.4	5.9	5.1	3.2
45-49	0.1	0.1	0.0	0.0	6.8	6.2	5.4	3.0
TFR	6.9	5.9	4.8	3.7				
CENTRAL								
15-19	0.2	0.1	0.2	0.1	0.8	0.9	0.9	0.1
20-24	0.2	0.2	0.3	0.1	1.9	2.1	1.8	0.5
25-29	0.3	0.3	0.2	0.2	3.5	3.2	2.9	1.2
30-34	0.3	0.2	0.2	0.2	5.0	4.4	4.2	2.0
35-39	0.2	0.2	0.1	0.1	6.1	5.5	5.2	2.8
40-44	0.3	0.1	0.1	0.1	6.9	6.3	6.0	3.5
45-49	0.1	0.1	0.1	0.1	7.4	6.8	6.3	4.4
TFR	7.6	6.5	5.9	4.0				
SOUTHERN								
15-19	0.188	0.1	0.1	0.1	0.8	0.9	1.0	0.1
20-24	0.222	0.2	0.3	0.1	1.9	2.0	1.7	0.6
25-29	0.252	0.3	0.2	0.1	3.1	3.0	2.7	1.2
30-34	0.216	0.2	0.2	0.1	4.3	4.1	3.8	2.0
35-39	0.174	0.2	0.1	0.1	5.3	5.0	4.6	2.8
40-44	0.144	0.1	0.1	0.1	6.0	5.7	5.2	3.3
45-49	0.097	0.1	0.1	0.1	6.4	6.1	5.6	4.0
TFR	6.46	6.0	5.3	3.6				

6.4.5 Fertility by Economic Activity Status

Tables 6.16A and 6.16B below respectively present total fertility rates and average number of children born to women by age and their economic activity status. In the 1998 Population and Housing Census, six different categories of economic activity status were used. These are 'mlimi' (subsistence farmer), employees, family business workers, self-employed, employer and unemployed. The unemployed category comprises all those women who had worked before and were seeking work, those women who had worked before and were not seeking work, and those women who had never worked before and not seeking work.

It is noted that women who were 'mlimi' had the highest fertility levels as indicated by total fertility rates as well as average number of children born to women in the age group 45-49 years. Fertility among women who were

unemployed was more or less at the same level as that for 'mlimi'. Women who were working in their family business and those who were self-employed had more or less similar levels of fertility at all area levels. The lowest fertility was, however, observed among women employers and employees (Note that total fertility rates or completed fertility rates among women who were employers may not be reliable as the number of such women at some area levels may not be adequate enough to yield accurate fertility estimates).

Table 6.16A: Fertility by Economic Activity Status of Women: 1998

AREA/ AGE GROUP	ASFR					
	Mlimi	Employee	Family Business Worker	Self- Employed	Employer	Employed
MALAWI						
15-19	0.2	0.1	0.2	0.2	0.1	0.1
20-24	0.3	0.2	0.3	0.3	0.2	0.3
25-29	0.3	0.2	0.2	0.2	0.2	0.3
30-34	0.2	0.2	0.2	0.2	0.2	0.3
35-39	0.2	0.1	0.1	0.1	0.1	0.2
40-44	0.1	0.1	0.1	0.1	0.1	0.1
45-49	0.1	0.0	0.0	0.0	0.0	0.1
TFR	6.6	4.8	5.8	5.6	4.9	6.3
NORTHERN						
15-19	0.2	0.2	0.2	0.2	-	0.1
20-24	0.3	0.2	0.3	0.3	0.1	0.3
25-29	0.3	0.2	0.3	0.2	0.3	0.3
30-34	0.2	0.2	0.2	0.2	0.2	0.3
35-39	0.2	0.1	0.1	0.1	0.1	0.2
40-44	0.1	0.0	0.1	0.0	0.1	0.1
45-49	0.0	0.0	0.0	0.0	-	0.1
TFR	6.4	4.5	5.9	5.7	-	6.5
CENTRAL						
15-19	0.2	0.1	0.2	0.2	0.2	0.1
20-24	0.3	0.2	0.3	0.3	0.3	0.3
25-29	0.3	0.2	0.3	0.2	0.2	0.3
30-34	0.2	0.2	0.2	0.2	0.2	0.3
35-39	0.2	0.1	0.2	0.1	0.1	0.2
40-44	0.1	0.1	0.1	0.1	0.1	0.1
45-49	0.1	0.0	0.0	0.0	-	0.1
TFR	7.1	5.1	6.2	6.1	4.8	6.6
SOUTHERN						
15-19	0.2	0.1	0.2	0.2	0.1	0.1
20-24	0.3	0.2	0.31	0.2	0.2	0.3
25-29	0.2	0.2	0.2	0.2	0.2	0.3
30-34	0.2	0.1	0.22	0.1	0.2	0.2
35-39	0.2	0.1	0.1	0.1	0.1	0.2
40-44	0.1	0.1	0.1	0.11	0.0	0.1
45-49	0.1	0.0	0.1	0.0	0.0	0.1
TFR	6.1	4.5	5.5	5.3	5.0	6.0

Table 6.16A further demonstrates that at regional level, total fertility by economic activity status in the Central Region is higher than it is among women of the same activity status in the Northern or Southern Regions. The Southern Region exposed the lowest TFRs.

A further examination of Table 6.16B also confirms the finding that fertility in the Central Region by economic activity status is the highest of the three regions.

Table 6.16B: Fertility (Number of Children Ever Born) by Economic Activity Status of Women: 1998

AREA/ AGE GROUP	AVERAGE CEB					
	Mlimi	Employee	Family Business Worker	Self- Employed	Employer	Unemployed
MALAWI						
15-19	0.6	0.4	0.7	0.8	0.6	0.2
20-24	1.9	1.2	1.7	1.8	1.3	1.3
25-29	3.3	2.0	2.9	2.9	2.2	2.8
30-34	4.7	3.2	4.1	4.1	3.6	4.2
35-39	5.7	4.3	5.1	5.1	4.5	5.2
40-44	6.4	5.1	5.9	5.8	4.7	6.1
45-49	6.7	5.7	6.5	6.4	5.6	6.4
NORTHERN						
15-19	0.7	0.6	0.7	0.8	0.5	0.2
20-24	1.8	1.3	1.8	1.8	1.3	1.3
25-29	3.3	2.1	2.9	2.9	2.3	2.9
30-34	4.6	3.3	4.3	4.2	4.2	4.3
35-39	5.6	4.3	5.3	5.2	5.1	5.4
40-44	6.3	5.2	6.0	6.1	4.2	6.2
45-49	6.7	5.8	6.6	6.3	4.9	6.5
CENTRAL						
15-19	0.6	0.4	0.6	0.6	0.6	0.2
20-24	1.9	1.3	1.8	1.8	1.4	1.3
25-29	3.6	2.1	3.1	3.1	2.0	3.0
30-34	5.1	3.4	4.5	4.5	3.5	4.5
35-39	6.2	4.5	5.6	5.4	4.8	5.5
40-44	6.9	5.5	6.3	6.2	4.8	6.4
45-49	7.3	5.9	7.1	6.8	5.5	6.8
SOUTHERN						
15-19	0.7	0.3	0.7	0.7	0.5	0.2
20-24	1.8	1.2	1.8	1.8	1.3	1.3
25-29	3.2	1.9	2.9	2.8	2.4	2.7
30-34	4.4	3.0	4.0	4.0	5.6	4.0
35-39	5.3	4.1	5.0	4.9	4.3	4.9
40-44	5.9	4.9	5.8	5.6	4.6	5.7
45-49	6.3	5.5	6.3	6.2	5.8	6.2

Table 6.17A: Fertility by Occupation of Women: 1998

AREA/ AGE GROUP	ASFR						
	Professional/ Technical	Admin/ Managerial	Sales Clerical	Service workers	Agr/Fish/ Forestry	Production	
MALAWI							
15-19	0.1	0.2	0.2	0.2	0.1	0.2	0.2
20-24	0.2	0.2	0.2	0.3	0.3	0.3	0.3
25-29	0.2	0.1	0.2	0.2	0.2	0.3	0.2
30-34	0.1	0.0	0.1	0.2	0.2	0.2	0.2
35-39	0.1	0.1	0.1	0.1	0.1	0.2	0.1
40-44	0.0	0.0	0.0	0.1	0.1	0.1	0.1
45-49	0.0	0.0	0.0	0.0	0.1	0.1	0.1
TFR	4.3	3.0	3.7	5.5	5.1	6.5	5.7
NORTHERN							
15-19							
20-24	0.2	-	0.2	0.2	0.1	0.2	0.2
25-29	0.2	0.3	0.1	0.2	0.2	0.3	0.3
30-34	0.2	-	0.2	0.2	0.2	0.3	0.3
35-39	0.1	-	0.1	0.2	0.2	0.2	0.2
40-44	0.1	-	0.1	0.1	0.1	0.2	0.1
45-49	0.0	-	0.0	0.1	0.0	0.1	0.1
TFR	0.0	-	0.0	0.0	0.1	0.0	0.0
CENTRAL	4.2	-	3.7	5.6	5.3	6.4	6.0
15-19							
20-24	0.1	-	0.1	0.2	0.1	0.2	0.2
25-29	0.2	0.1	0.1	0.3	0.3	0.3	0.3
30-34	0.2	0.2	0.2	0.2	0.3	0.3	0.3
35-39	0.2	0.0	0.1	0.2	0.2	0.2	0.2
40-44	0.1	0.1	0.1	0.1	0.2	0.2	0.1
45-49	0.0	0.0	0.0	0.1	0.0	0.1	0.1
TFR	0.0	-	0.0	0.0	0.1	0.1	0.1
SOUTHERN	4.3	-	3.7	5.7	5.2	7.1	6.2
15-19							
20-24	0.1	0.3	0.2	0.2	0.1	0.2	0.2
25-29	0.2	0.1	0.2	0.2	0.2	0.3	0.3
30-34	0.2	0.0	0.2	0.2	0.2	0.2	0.2
35-39	0.1	0.0	0.1	0.2	0.2	0.2	0.1
40-44	0.1	0.1	0.1	0.1	0.1	0.2	0.1
45-49	0.0	0.0	0.0	0.1	0.1	0.1	0.1
TFR	0.0	0.0	0.0	0.1	0.1	0.1	0.0
	4.2	3.0	3.6	5.4	4.7	6.1	5.4

6.4.6 Fertility by Occupation

Table 6.17A shows that in Malawi women who were working in agriculture and related activities had the highest fertility rates (6.52), followed by women in the production industry (5.72). The lowest fertility is noted for women who were either manageresses or administrators (3.02). However, it should be noted that because of small numbers of cases of such women, the estimated fertility rates for this sub-group of women might be biased.

At regional level, women with the highest fertility rates were those who were engaged in agriculture, fishing and forestry, followed closely by those in the production sector. However, fertility levels among women in the Central Region were the highest and the levels among women in the Southern Region were the least. Table 6.17B shows the lifetime fertility among women in Malawi and its regions. The results reveal a similar pattern as that observed in Table 6.17A.

Table 6.17B: Fertility (Number of Children Ever Born) by Occupation of Women: 1998

AREA/ AGE GROUP	AVERAGE CEB						
	Professional/ Technical	Admin/ Managerial	Clerical	Sales workers	Service workers	Agr/Fish/ Forestry	Production
MALAWI							
15-19	0.4	-	0.4	0.7	0.2	0.6	0.6
20-24	1.0	0.8	0.9	1.7	1.2	1.9	1.7
25-29	1.8	1.3	1.5	2.8	2.1	3.3	2.8
30-34	2.9	2.0	2.7	4.0	3.3	4.7	4.2
35-39	4.1	3.4	3.8	5.0	4.4	5.7	5.2
40-44	5.0	4.0	4.5	5.8	5.3	6.4	6.0
45-49	5.5	4.2	5.1	6.4	5.9	6.7	6.4
NORTHERN							
15-19	0.6	-	0.5	0.7	0.4	0.7	0.8
20-24	1.1	1.6	0.9	1.6	1.3	1.8	1.9
25-29	2.0	1.4	0.9	2.8	2.0	3.2	3.1
30-34	3.1	2.5	2.9	4.1	3.6	4.6	4.4
35-39	4.2	3.0	4.0	5.1	4.8	5.6	5.5
40-44	5.2	4.2	4.6	5.9	5.6	6.3	6.2
45-49	5.7	5.4	5.2	6.4	5.9	6.7	6.4
CENTRAL							
15-19	0.4	-	0.3	0.6	0.2	0.6	0.5
20-24	1.0	0.7	0.7	1.6	1.2	1.9	1.7
25-29	1.7	1.6	1.5	2.9	2.2	3.6	3.0
30-34	2.9	2.2	2.6	4.2	3.5	5.1	4.6
35-39	4.1	3.3	3.9	5.3	4.5	6.2	5.5
40-44	5.1	4.1	4.5	6.9	5.5	6.9	6.4
45-49	5.6	3.8	5.0	6.7	5.9	7.3	6.8
SOUTHERN							
15-19	0.4	-	0.4	0.7	0.2	0.7	0.6
20-24	1.1	0.71	0.8	1.7	1.2	1.8	1.7
25-29	1.8	1.19	1.5	2.7	2.1	3.1	2.7
30-34	2.9	1.91	2.6	3.9	3.2	4.4	4.0
35-39	3.9	3.41	3.7	4.8	4.2	5.3	5.0
40-44	4.9	3.94	4.5	5.6	5.0	5.9	5.7
45-49	5.4	4.35	5.1	6.2	5.9	6.3	6.2

CHAPTER 7

MORTALITY

M. Palamuleni

7.0 Introduction

This chapter attempts to establish the levels, trends and differentials of mortality for Malawi in 1998. This is done through the examination of reported death statistics and the application of indirect methods to the 1998 census data on children ever born and children surviving by age of the mother and the reported age distribution. The chapter has relied on data from the 1998 Malawi Population and Housing Census. However, in order to present more plausible estimates of mortality conditions in Malawi, previous demographic surveys and censuses were also examined.

7.0.1 Sources and Quality of Mortality Data

The 1998 Malawi Population and Housing Census provide data on deaths in the household in the last 12 months, age distribution of the population by sex and child survival. The question on deaths in the household in the last 12 months will allow us to calculate "direct" measures of mortality where as with the other data the estimation of mortality will be based on application of demographic techniques for indirect estimation.

Data on child survival are of two types: a) births and survival status of children born in the 12 months prior to the census; and b) children ever born and children surviving to each mother. The two types of data are respectively designated "current" and "retrospective" mortality data. The data on the survival status of births that occurred in the 12-month period preceding the date of the inquiry are useful to estimate infant mortality. However, they suffer from error in relating the events correctly to the specific period of 12 months as well as from under-enumeration of births that die within a short period after birth and before the enumeration. The under-enumeration is likely to have substantial effect on the estimated level of infant mortality. Data on children ever born and children surviving are more useful for the estimation of infant and early childhood mortality rates since they are not subject to timing errors. In fact, these data can be used to estimate mortality rates up to 20 years ago. Children ever born and child surviving data are also not immune to error, because respondents have to recall events that occurred several years ago. This phenomenon leads to underreporting of dead children more than surviving children and therefore to underestimation of the level of infant and early childhood mortality rates. However, estimates based on retrospective data are more reliable than those based on current data because cumulating generally minimizes the adverse effects of error on the estimates.

7.1 Current Mortality/Direct Estimates of Mortality

7.1.1 Crude Death Rate

The Crude Death Rate (CDR) is a rough indicator of the overall level of mortality in a population. The rate is computed by dividing the number of deaths occurring in a year by the mid-year population and multiplying the results by 1000. The unadjusted CDR for Malawi, Regions and Districts are given in Table 7.1. The rates were: urban areas 16 per 1000, rural areas 22 per 1000 and Malawi as a whole 21 per 1000. At regional level CDR is lowest in the Northern Region, followed by the Central Region and highest in Southern Region. The districts of Nkhata Bay, Machinga, Mulanje, Zomba, Chiradzulu, Mangochi, Phalombe have values higher than the national average.

Table 7.1 Unadjusted Crude Death Rate by Sex for Malawi, Regions and Districts: 1998

Malawi/Regions/District	Both Sexes	Male	
	Female		
Malawi	20.9	23.4	18.6
Northern Region	17.5	19.6	15.5
Chitipa	15.4	17.9	13.2
Karonga	18.5	20.7	16.5
Nkhata Bay	30.6	32.7	28.5
Rumphi	18.4	20.4	16.5
Mzimba	13.9	15.9	12.0
Likoma	20.9	24.7	17.7
Central Region	18.4	20.5	16.3
Kasungu	17.9	18.7	17.0
Nkhotakota	19.4	20.4	18.4
Ntchisi	14.1	16.0	12.2
Dowa	15.9	18.1	13.7
Salima	18.2	21.1	15.3
Lilongwe	18.1	20.1	16.1
Mchinji	17.3	18.6	15.9
Dedza	21.6	25.4	18.2
Ntcheu	21.1	25.4	18.2
Southern Region	24.1	25.4	18.2
Mangochi	24.7	28.1	21.7
Machinga	30.6	36.2	25.3
Zomba	28.6	31.9	25.5
Chiradzulu	26.3	31.9	25.5
Blantyre	19.9	21.3	18.5
Mwanza	22.6	25.6	19.9
Thyolo	21.3	23.8	19.0
Mulanje	30.6	34.5	27.3
Phalombe	24.1	28.0	20.6
Chikwawa	19.3	21.4	17.3
Nsanje	15.8	18.1	13.6
Balaka	22.4	25.0	20.0

7.1.2 Age Specific Death Rates

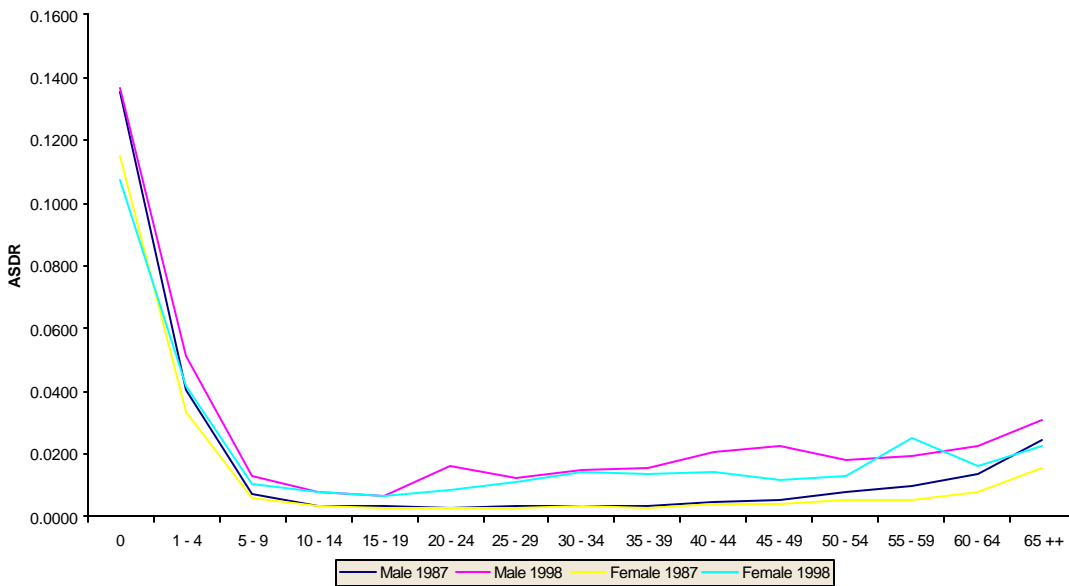
The Age Specific Death Rate is the number of deaths in a given age group divided by the total population in the specified age group and the result multiplied by 1000. For the under 1 age group the specific death rate is the same as the infant mortality rate. Mortality is very high in the first years of life; declines rapidly thereafter, reaching its lowest levels between 10 and 19 years of age. Thereafter, the rates increase somewhat with increasing age group. Age specific Death Rates for Malawi for Males and Females are given in Table 7.2 and Figure 1.

It should be mentioned that the number of deaths in the household reported in a census or survey is subject to considerable degree of error resulting from confusion about the reference period, forgetfulness, unwillingness to talk about a dead person in a household or the absence of anybody to report the dead person when no relatives are left. These factors usually lead to underestimation of mortality and overestimation of life expectancy.

Table 7.2: Reported Age Specific Death Rates (ASDR) for Malawi 1998

Age Groups	Both Sexes	Male	Female
0	122.0	136.9	107.4
1 - 4	46.4	51.2	41.6
5 - 9	11.6	12.9	10.4
10 - 14	7.8	7.9	7.8
15 - 19	6.6	6.5	6.6
20 - 24	12.0	16.0	8.8
25 - 29	11.7	12.3	11.1
30 - 34	14.6	14.8	14.5
35 - 39	14.5	15.4	13.7
40 - 44	17.6	20.6	14.5
45 - 49	16.9	22.3	11.6
50 - 54	15.4	18.0	12.8
55 - 59	22.1	19.3	25.0
60 - 64	19.1	22.4	16.1
65 - 69	19.3	19.1	19.5
70 - 74	22.7	30.0	16.5
75 - 79	24.4	29.3	19.7
80-84	33.2	41.1	26.8
85 ++	51.7	60.6	44.1

Figure 1 Age Specific Death Rates for Malawi 1987 and 1998



7.1.3 Reported Life Tables for Malawi 1998

Based on the reported ASDRs presented in section 7.2.3 above, preliminary life tables were constructed for Malawi. These life tables are referred to as "preliminary" because they are based on reported statistics that are deemed to be affected by various errors and are in most cases not reliable. In preparing preliminary life tables for Malawi the following steps were followed.

STEP I. ${}_nq_x$ the probability of dying between exact ages x and $x+n$,

$${}_1q_0 = \frac{4M_1}{1 + 0.7 \cdot 4M_1} \quad (\text{for age 0})$$

$${}_4q_1 = \frac{4 \cdot 4M_1}{1 + 2.4 \cdot 4M_1} \quad (\text{for age group 1 to 4 years})$$

$${}_nq_x = \frac{2 \cdot n \cdot {}_nM_x}{2 + n \cdot {}_nM_x} \quad (\text{for all age groups})$$

STEP II. ${}_nd_x$ the number of deaths between exact ages x and $x+n$

$${}_nd_x = l_x - l_{x+n}$$

STEP III. l_x the number of survivors at exact age x , out of the initial hypothetical birth cohort $l_0=100,000$

$$l_{x+n} = l_x - {}_nd_x$$

STEP IV. ${}_nL_x$ the number of person-years lived between ages x and $x+n$ years, by the survivors at exact age x , l_x , in the life table population

$$\begin{aligned} L_0 &= 0.3l_0 + .7l_1 \\ {}_4L_1 &= 1.6l_1 + 2.4l_5 \\ {}_nL_x &= 2.5(l_x + l_{x+n}) \\ L_{80+} &= T_{80+} = l_{80} @ \log(l_{80}) \end{aligned}$$

STEP V. T_x the total number of person-years lived by l_x people at ages x and beyond

$$T_x = \sum {}_nL_x$$

STEP VI. E_x is the expectation of life at age x , e_x ,

$$E_x = T_x / l_x$$

The equations presented in the above-mentioned steps differ slightly from those used in the analysis of the 1977 and 1987 population censuses. The analysis of the previous censuses used formulae based on Regional Model Life Tables. Results from other African countries indicate that these formulas give somewhat implausible results (Kpedekpo, 1981). Therefore, in this report, the formulas recommended by the United Nations were used (Kpedekpo (1981)). The reported life tables for Malawi are given in Tables 7.3, 7.4 and 7.5.

The reported life tables suggest that life expectancy at birth for both sexes, males and females were 42, 39 and 45 years respectively. Similar estimates from the 1987 census were 51, 53 and 49 years respectively. This indicates that the 1998 estimates are lower than those calculated from the 1987 Census. Therefore, other things being equal, this indicates that mortality conditions in Malawi are getting worse. Probably, this is due to increased mortality as a result of the HIV/AIDS epidemic that is claiming a lot of lives, especially in the productive age groups.

Table 7.3: Reported Life Tables for Malawi: Both Sexes 1998

Age	nq_x	nd_x	l_x	nL_x	T_x	e_x
0	0.1124	11,238	100,000	92,470.3	4,193,460.1	41.9
1 – 4	0.1669	14,819	88,762	316,518.4	4,100,989.7	46.2
5 – 9	0.0564	4,170	73,943	359,290.6	3,784,471.4	51.2
10 – 14	0.0383	2,676	69,773	342,176.3	3,425,180.8	49.1
15 – 19	0.0322	2,163	67,097	330,078.8	3,083,004.5	45.9
20 – 24	0.0581	3,770	64,934	315,244.5	2,752,925.7	42.4
25 – 29	0.0569	3,483	61,164	297,110.8	2,437,681.2	39.9
30 – 34	0.0706	4,071	57,681	278,226.2	2,140,570.3	37.1
35 – 39	0.0700	3,754	53,610	258,664.5	1,862,344.1	34.7
40 – 44	0.0842	4,196	49,856	238,790.5	1,603,679.6	32.2
45 – 49	0.0813	3,712	45,660	219,022.0	1,364,889.1	29.9
50 – 54	0.0741	3,109	41,949	201,969.7	1,145,867.1	27.3
55 – 59	0.1047	4,067	38,839	184,030.1	943,897.4	24.3
60 – 64	0.0911	3,166	34,773	165,947.6	759,867.4	21.9
65 – 69	0.0923	2,916	31,606	150,741.6	593,919.8	18.8
70 – 74	0.1075	3,084	28,690	135,740.6	443,178.1	15.4
75 – 79	0.1151	2,946	25,606	120,663.5	307,437.6	12.0
80-84	0.1534	3,475	22,660	104,609.3	186,774.0	8.2
85 +	1.0000	19,184	19,184	82,164.7	82,164.7	4.3

Table 7.4: Reported Life Tables for Malawi: Male 1998

Age	nq_x	nd_x	l_x	nL_x	T_x	e_x
0	0.1254	12,536	100,000	91,600.9	3,896,526.5	39.0
1 – 4	0.1807	15,806	87,464	308,759.3	3,804,925.6	43.5
5 – 9	0.0623	4,467	71,658	347,119.1	3,496,166.3	48.8
10 – 14	0.0386	2,592	67,190	329,471.3	3,149,047.2	46.9
15 – 19	0.0319	2,063	64,598	317,833.6	2,819,575.9	43.6
20 – 24	0.0768	4,800	62,535	300,674.3	2,501,742.3	40.0
25 – 29	0.0598	3,450	57,735	280,048.1	2,201,068.0	38.1
30 – 34	0.0713	3,870	54,285	261,747.9	1,921,019.9	35.4
35 – 39	0.0741	3,735	50,415	242,736.0	1,659,272.0	32.9
40 – 44	0.0980	4,574	46,680	221,963.1	1,416,536.0	30.3
45 – 49	0.1055	4,444	42,105	199,417.3	1,194,572.9	28.4
50 – 54	0.0860	3,239	37,661	180,211.0	995,155.6	26.4
55 – 59	0.0922	3,175	34,423	164,175.9	814,944.6	23.7
60 – 64	0.1062	3,317	31,247	147,944.3	650,768.7	20.8
65 – 69	0.0914	2,552	27,930	133,272.4	502,824.4	18.0
70 – 74	0.1394	3,538	25,379	118,048.3	369,552.0	14.6
75 – 79	0.1365	2,981	21,841	101,750.2	251,503.7	11.5
80-84	0.1863	3,513	18,859	85,514.2	149,753.5	7.9
85 +	1.0000	15,346	15,346	64,239.4	64,239.4	4.2

Table 7.5: Reported Life Tables for Malawi: Female 1998

Age	q_x	$n d_x$	l_x	nL_x	T_x	e_x
0	0.1002	10,016	100,000	93,289.0	4,514,660.3	45.1
1 – 4	0.1503	13,525	89,984	324,769.2	4,421,371.2	49.1
5 – 9	0.0505	3,861	76,458	372,640.6	4,096,602.0	53.6
10 – 14	0.0381	2,768	72,598	356,068.8	3,723,961.5	51.3
15 – 19	0.0325	2,271	69,830	343,471.6	3,367,892.7	48.2
20 – 24	0.0428	2,895	67,559	330,557.7	3,024,421.2	44.8
25 – 29	0.0542	3,502	64,664	314,566.2	2,693,863.4	41.7
30 – 34	0.0698	4,272	61,162	295,130.8	2,379,297.2	38.9
35 – 39	0.0661	3,758	56,890	275,055.7	2,084,166.4	36.6
40 – 44	0.0701	3,727	53,132	256,343.1	1,809,110.7	34.0
45 – 49	0.0564	2,788	49,405	240,054.3	1,552,767.6	31.4
50 – 54	0.0619	2,888	46,617	225,864.0	1,312,713.4	28.2
55 – 59	0.1177	5,145	43,729	205,782.8	1,086,849.4	24.9
60 – 64	0.0774	2,985	38,584	185,458.6	881,066.6	22.8
65 – 69	0.0931	3,313	35,599	169,713.9	695,608.0	19.5
70 – 74	0.0792	2,558	32,286	155,037.6	525,894.1	16.3
75 – 79	0.0939	2,792	29,729	141,663.4	370,856.5	12.5
80-84	0.1256	3,384	26,937	126,222.1	229,193.1	8.5
85+	1.0000	23,552	23,552	102,971.0	102,971.0	4.4

7.1.4 Selecting Suitable Model Life Table for Malawi

Previous analysis of the available demographic data in Malawi has indicated that the pattern of mortality in the country closely resembles that depicted by the North family of the Regional Model Life Tables (Malawi Government, 1984). This observation has however not deterred researchers from using other existing systems of model life tables. The reported nq_x values were compared with corresponding values in five families of the United Nations (UN) Model Life Tables as well as in the four families of Coale and Demeny System of Model Life Tables using a procedure called *COMPAR* in the *MORTPAK* package. The results suggest that the North family of Coale and Demeny system is still more suitable to represent mortality conditions in Malawi. Therefore, in this report, largely for comparability, the North family will be assumed to be applicable to Malawi.

7.2 Indirect Estimates of Mortality

7.2.1 Infant and Childhood Mortality Estimates based on Children Ever Born and Children Surviving Data

From data on children ever born and children surviving per woman for each five-year age group between ages 15-49, indirect estimates of child mortality rates have been computed through the application of the Brass, Sullivan and Trussel methods.

In Brass method, the estimates of the proportion surviving out of the children born per woman reported in each five-year age group in the reproductive span are computed by dividing children surviving per woman by corresponding estimate of children ever born per woman. These proportions are then subtracted from one to get proportions dead, denoted $D(i)$, which are further multiplied by factors, $K(i)$, developed by Brass to estimate the probability of dying from birth to different ages. In particular, q_x the probability of dying before age x is calculated using the equation

$$q_x = D(i)K(i) \dots\dots\dots (i)$$

The multipliers, $K(i)$, are selected according to the value of P_1/P_2 and P_2/P_3 , which are good indicators of the slope of the fertility curve at the beginning of the reproductive period. In case of Trussel method, $K(i)$ is calculated by fitting regression coefficients $a(i)$, $b(i)$ and $c(i)$ into the following equation:

$$K(i) = a(i) + b(i)P_1/P_2 + c(i)P_2/P_3 \dots\dots\dots (ii)$$

Where K(i) is as defined above and P₁, P₂ and P₃ are the mean parities for the respective age groups 15-19, 20-24 and 25-29. The values of the coefficients a(i), b(i) and c(i) are given in the UN(1983,77).

Sullivan

Tables 7.6, 7.7 and 7.8 show the proportions of children dead as well as the estimates of probabilities of dying before certain childhood ages from the 1998 Malawi Population and Housing Census data using Brass, Sullivan and Trussell techniques.

Table 7.6: Estimation of Infant and Child Mortality in Malawi using Brass Method: 1998

Age Group	Children Ever Born	Children Surviving	x	Proportion Dead	Estimated Multipliers	Implied ${}_xq_0$	Level
15-19	0.372	0.310	1	0.167	0.965	0.161	9.6
20-24	1.686	1.376	2	0.184	1.003	0.184	10.8
25-29	3.119	2.498	3	0.199	0.960	0.191	11.7
30-34	4.512	3.549	5	0.213	0.973	0.208	12.3
35-39	5.517	4.257	10	0.228	0.980	0.224	12.9
40-44	6.249	4.638	15	0.258	0.953	0.246	12.7
45-49	6.659	4.772	20	0.283	0.951	0.269	
P ₁ /P ₂	0.221						
P ₂ /P ₃	0.541						

Table 7.7: Estimation of Infant and Child Mortality in Malawi using Sullivan Method: 1998

Age Group	Children Ever Born	Children Surviving	x	Proportion Dead	Estimated Multipliers	Implied ${}_xq_0$	Level
20-24	1.686	1.376	2	0.184	0.959	0.176	11.3
25-29	3.119	2.498	3	0.199	0.900	0.179	12.4
30-34	4.512	3.549	5	0.213	0.923	0.197	12.8

Table 7.8: Estimation of Infant and Child Mortality in Malawi using Trussell Method: 1998

Age Group	Children Ever Born	Children Surviving	x	Proportion Dead	Estimated Multipliers	Implied ${}_xq_0$	Level
15-19	0.372	0.31	1	0.167	0.926	0.154	10.1
20-24	1.686	1.376	2	0.184	0.939	0.173	11.4
25-29	3.119	2.498	3	0.199	0.919	0.183	12.1
30-34	4.512	3.549	5	0.213	0.966	0.206	12.4
35-39	5.517	4.257	10	0.228	1.033	0.236	12.5
40-44	6.249	4.638	15	0.258	1.022	0.264	12.1
45-49	6.659	4.772	20	0.283	0.944	0.268	

It may be mentioned that estimates of infant and child mortality have been worked out with the help of a computer program developed by United Nations called *MORTPAK* and *Q-Five*.

In order to estimate the level of mortality, the levels obtained using each of the three methods were examined and a median was selected. An average of mortality levels at exact ages 3 and 5 for each of the methods was calculate (11.7 for Brass, 12.6 for Sullivan and 12.3 from Trussell). The median of the three values was taken as the level of mortality in Malawi (12.3).

Two things can be said about the estimated level of mortality. First, relative to the 1987 census, the estimated mortality level in 1998 indicates that infant and childhood mortality in Malawi has been improving. The rate of improvement is somewhat slower than that estimated in previous studies (Malawi Government, 1984). Second, following this observation, it can be suggested that the increased overall mortality as observed from the reported statistics is largely due to an increase in mortality in the productive age groups. This aspect will be examined in detail in the following section.

For mortality estimates to make sense, it is necessary to calculate the time to which they refer. The basic argument is that there is a time, t years before the survey, at which these estimates were equivalent to the probabilities of dying. Procedures for estimating t were developed by Feeney (1980) and further simplified by Brass and Bangboye (1981). The UN (1983) provides a method of calculating t using Trussell regression equations. Since the Trussell regression equations were used for calculating the mortality estimates, the same approach is used for estimating t . The regression equation applied is:

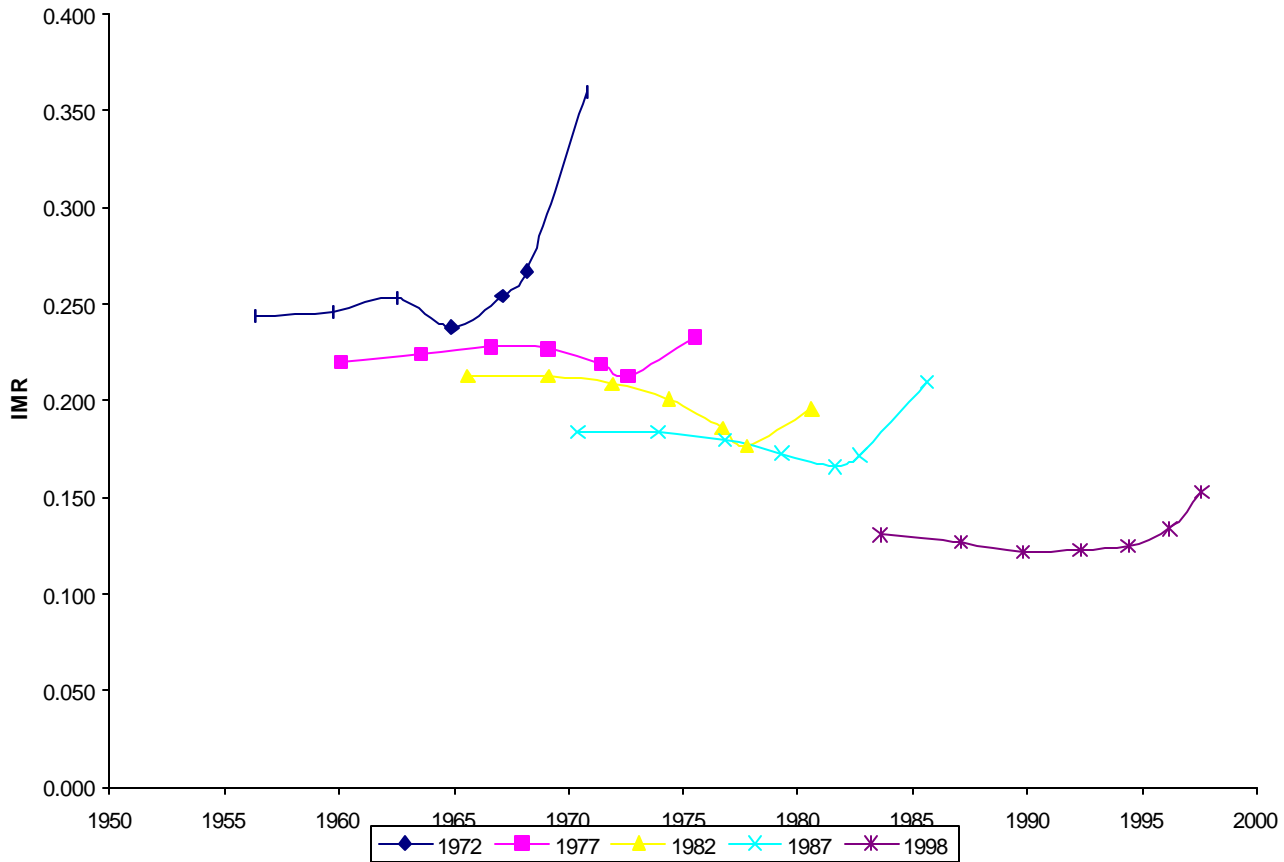
$$t(x) = a(i) + b(i)P_1/P_2 \dots\dots\dots (iii)$$

where the coefficients $a(i)$ and $b(i)$ are provided in UN(1983) and the ratio P_1/P_2 takes into account the shape of the fertility distribution at the beginning of childbearing. The implied infant and childhood mortality and life expectancy at birth together with the time to which they refer are given in Table 7.9 below. By plotting the q_x estimates versus t it is then possible to examine the time trends in childhood mortality.

**Table 7.9: Time location of Infant and childhood Mortality
Estimates for Malawi 1972-1998**

Census/ Survey	Reference Date	${}_1q_0$	${}_4q_1$	level	e_0
1972	1970.8	0.360	0.489	<1 Nc	
	1968.2	0.267	0.383	4.4	28.56
	1967.1	0.254	0.366	5.9	32.22
	1964.9	0.238	0.346	7.2	35.56
	1962.5	0.253	0.366	6.8	34.59
	1959.7	0.246	0.357	7.2	35.46
	1956.3	0.244	0.354	3.3	25.65
1977	1975.5	0.233	0.341	5.7	31.74
	1972.6	0.213	0.315	7.1	35.35
	1971.4	0.219	0.323	7.5	36.35
	1969.1	0.227	0.333	7.7	36.78
	1966.6	0.228	0.334	7.8	37.09
	1963.6	0.224	0.329	8.0	37.5
	1960.1	0.220	0.324	8.2	37.89
1982	1980.6	0.196	0.293	7.7	35.22
	1977.8	0.177	0.268	9.0	38.43
	1976.7	0.186	0.280	9.2	38.92
	1974.4	0.201	0.299	8.9	38.18
	1971.9	0.209	0.310	8.7	37.68
	1969.1	0.213	0.315	8.5	37.19
	1965.6	0.213	0.315	8.5	37.19
1987	1985.6	0.210	0.299	7.8	
	1982.7	0.172	0.261	9.6	
	1981.6	0.166	0.253	10.3	
	1979.3	0.173	0.262	10.2	
	1976.8	0.180	0.271	9.9	
	1973.9	0.184	0.277	9.6	
	1970.4	0.184	0.277	9.6	
1998	1997.6	0.153	0.124	10.1	41.2
	1996.2	0.134	0.105	11.4	44.8
	1994.4	0.125	0.097	12.1	46.4
	1992.3	0.123	0.095	12.4	46.8
	1989.8	0.122	0.094	12.5	47.0
	1987.1	0.127	0.098	12.1	46.1
	1983.6	0.131	0.103		45.2

Figure 7.2 Time Trending Infant Mortality in Malawi 1972-1998



7.2.2 Estimation of Adult Mortality

There is limited information to estimate adult mortality from the 1998 census using indirect techniques. Such information might have been obtained from questions on the survivorship of parents, siblings or spouses. Under these circumstances, the analysis of adult mortality in Malawi has relied on the reported age-sex distribution. In this section, three procedures for estimating adult mortality will be exploited in order to establish the level of adult mortality in Malawi.

7.2.2(i) Estimation of Adult Mortality by Chaining the 10-year Survivorship Ratios

The idea of matching intercensal survivorship ratios with comparable model life table functions was introduced by the UN in the early 1950s (UN,1956). Carrier and Hobcraft (1971) developed a method of estimating the level of mortality during the intercensal period by chaining survivorship ratios. In particular, according to this method, the expectation of life at birth in years, e_0 , is expressed as a linear function of the number of survivors in the age groups 0-4 and 5-9 years. This is expressed as follows:

$$e_0 = \alpha L_{0-4} + \beta L_{5-9} \dots\dots\dots (ix)$$

where α and β are the functions of the survivorship ratios and L_{0-4} and L_{5-9} stand for the survivors in the age groups 0-4 and 5-9 respectively in a life table with unit radix. To apply this method, the values of α and β are obtained from the available population distribution in five year age groups in the two censuses ten years apart, and L_{0-4} and L_{5-9} are taken from a hypothetical life table which is expected to represent the average mortality condition in the population under study during the intercensal period.

The technique was applied using the reported female population of Malawi. In order to apply the method, the distribution of females by age in 1987 was advanced to 1988 so that the time interval between the 1988 and 1998 distributions could be exactly ten years. The 1987 distribution was advanced using the average intercensal annual growth rate for females by 1.1 years. The survival ratios for a ten-year period were then calculated. These are shown in Table 7.10 below. Although the survival ratio for one age group exceeded unity, the method was still used to estimate the level of adult mortality. The values of α and β are estimated to be 5.3297 and 4.4047 respectively. This means that equation (ix) now becomes

$$e_0 = 5.3297 L_{0-4} + 4.4047 L_{5-9} \dots\dots\dots (iv)$$

Table 7.10: Estimation of the Level of Adult Mortality using Intercensal Survival Ratio for Malawi 1998

Age Group	1988	1998	Survival Ratios	L_{0-4}	L_{5-9}
0-4	719,769	836,765	0.8559	1.0000	
5-9	676,573	725,540	0.8278		1.0000
10-14	491,979	616,055	1.1056	0.8929	
15-19	410,669	560,071	0.9705		0.9457
20-24	377,598	543,922	0.7896	0.9872	
25-29	315,032	398,552	0.7802		0.9178
30-34	233,857	298,161	0.7720	0.7795	
35-39	226,170	245,784	0.7362		0.7161
40-44	154,642	180,542	0.7673	0.6018	
45-49	138,934	166,498	0.6141		0.5271
50-54	108,681	118,653	0.7438	0.4617	
55-59	91,846	85,317	0.8021		0.3237
60-64	79,131	80,833	0.6665	0.3434	
65-69	68,449	73,665	0.4870		0.2596
70-74	42,047	52,739	0.5978	0.2289	4.6900
75-79	25,625	33,334		5.2954	
80-84	17,805	25,137			
85+	23,960	24,737			

Note: The survival ratio for the open age group 75+ to 85+ is 0.3671.

The relationship in equation (x) was examined with three sets of "hypothetical" life tables for females that were deemed to be appropriate for Malawi. The first set involved the use of Brass model life tables as prepared by Carrier and Hobcraft (1971). The second involved the use of North family of the Regional Model life tables (Coale and Demeny, 1983). In these two cases, different pairs of L_{0-4} and L_{5-9} were obtained from selected model life tables and e_0 was estimated using equation (iv). It must be mentioned that the pair of L_{0-4} and L_{5-9} used in equation (iv) should relate to the same level of e_0 and that different pairs yield different estimates of e_0 . The estimated e_0 was compared with the given value of e_0 from the life table from which the pair of L_{0-4} and L_{5-9} has been obtained. The life table whose estimated e_0 equals the actual e_0 is accepted to represent the mortality condition in the population during the intercensal period.

According to Table 7.11 below and using Brass model life table, the estimated e_0 is higher than 30 years but lower than 35. By interpolation e_0 is estimated to be 34.75 years. Using the same logic and the North family of Regional Model Life Tables e_0 is estimated to be 34 years implying mortality level of 6.6.

The third approach used the hypothetical life tables for females that were estimated by the National Statistical Office in 1984 (Malawi Government, 1984). These were based on projecting the mortality conditions as observed in the 1977 census. In the present analysis, the life tables for the period 1992-97 and 1997-2002 were assumed to closely resemble the mortality conditions in Malawi. This approach allowed us to obtain an estimate of mortality that is comparable to the one obtained from the analysis of the 1987 census (Malawi Government, 1994). The estimated e_0 for females was 40 years. However, the hypothetical life tables upon which this estimate is based were based on the assumption that mortality conditions in Malawi continue to improve an assumption that may not be relevant in view of the HIV/AIDS epidemic. It suffices to mention however that comparing the estimate obtained using this approach and similar estimate obtained from the 1987 census, one notices that estimated e_0 has declined from 56 to 40 years for the respective intercensal periods 1977-87 and 1987-98. The decline in the estimated e_0 could be attributed to HIV/AIDS epidemic that has greatly affected the adult population in Malawi.

Table 7.11: Estimated Mortality using Carrier-Hobcraft Method for various Model Life Tables: 1998

Model Life Tables	Model e_0	L_{0-4}	L_{5-9}	Estimated e_0
Brass	30.0	3.5053	2.9769	31.8
	35.0	3.7931	3.3287	34.9
North	32.5	3.5729	2.9392	32.0
	35.0	3.6870	3.0949	33.3
	37.5	3.7938	3.2427	34.5
	40.0	3.8941	3.3833	35.7
NSO	48.9	4.2690	3.9327	40.1
	51.8	4.3463	4.0500	41.0

7.2.2(ii) Estimation of Adult Mortality using Preston-Bennett Method

Preston-Bennett method estimates the level of mortality for ages 5 years and over during the intercensal period (Preston and Bennett, 1983; Arriaga, 1994). Life expectancies for the ages 5 years and above are obtained based on the age distribution of the population from two consecutive censuses. Based on the population distribution by five-year age groups from the two censuses, intercensal growth rates for each age group are calculated. These growth rates are used, together with the information on population, to estimate the population equivalent to the life table L_x values. The population at exact ages is also estimated, representing l_x values of the life table. With estimates of these two functions, life expectancies at ages 5 years and above are calculated. These are then converted into e_0 estimates implied by the west family of the Regional Model Life tables.

In order to use this method, the 1987 female population was advanced forward by 1.1 years to obtain the 1988 female population. Using the 1988 estimated and the smoothed 1998 female population, the Preston and Bennett method was applied to the Malawian data set.

The results of this exercise are given in Table 7.12 below. These were obtained with the assistance of the spreadsheet, PREBEN, developed by the United States Bureau of the Census (Arriaga, 1994). The estimated e_0 were then arranged in ascending order and the median e_0 value estimated to be 35.6 years. This suggests a mortality level of 7.24.

Table 7.12: Estimated Expectation of Life at Birth using Preston and Bennett method for Malawi 1988-98

Age	Estimated e_0	RMLT West Implied e_0
10	42.59	33.52
15	41.27	37.60
20	34.10	30.33
25	28.65	25.14
30	27.42	28.09
35	25.49	29.87
40	23.92	33.55
45	22.91	40.86
50	20.05	43.21
55	19.76	59.81
60	18.51	71.54
65	15.32	73.38
70	12.89	77.54

7.2.2 (iii) Estimation of Adult Mortality using Projection Method

This method compares a census population with a projected one, using most of the age groups. It estimates the level of mortality during the intercensal period and it requires the age distribution from two censuses. The smoothed 1987 female population by age was advanced by 1.1 years so that when compared with the corresponding population in 1998, the time interval between the two populations was exactly ten years. This distribution of female population by age in 1988 was projected to 1998 using ten-year survival ratios belonging to the north family of the Regional Model Life tables (see United Nations, 1983, 292). The projected population by age was then cumulated from age x upwards and were compared with similarly derived cumulated distribution of females based on the 1998 population census. The level of mortality providing the best fit was recorded. These are given in Table 12 below. The recommended procedure is to adopt the median estimated level to represent the mortality condition in the population. Therefore, according to this procedure, we can assume that female mortality in Malawi during 1988-98 intercensal period could be represented by the life table at level 8.93, implying life expectancy at birth of 39.82 years.

Table 7.13 also indicates worsening mortality conditions for the adult population in Malawi. This is shown by the decrease in mortality level from 13.45 in 1987 to 8.9 in 1998.

Table 7.13: Estimated Level of Mortality Using Projection of the Population Method for Malawi 1987 and 1998

Age	1987	1998
0+ - 10+	18.9	4.8
5+ - 15+	22.2	5.5
10+ - 20+	23.8	5.8
15+ - 25+	21.9	6.7
20+ - 30+	18.6	7.4
25+ - 35+	16.5	7.9
30+ - 35+	14.8	8.5
35+ - 40+	13.8	9.4
45+ - 55+	13.2	10.1
50+ - 60+	12.2	11.6
55+ - 65+	10.9	17.2
60+ - 70+	7.5	19.6
65+ - 75+	7.9	20.2
70+ - 80+	8.5	22.7
	10.6	
Median Level	13.5	8.9

7.3 Final Estimates of Mortality

The 1998 life table for Malawi obtained by splicing the life tables corresponding to the estimated levels of child mortality of 12.3 and the adult mortality of 8. This is done using the North model probabilities of dying between exact age (x) and ($x+n$) years, ${}_nq_x$, at exact ages 0, 1, 5, 10, 15, 20, and 25 corresponding to the estimated level of child mortality (C) and the ${}_nq_x$ values at exact ages 10, 15, 20, 25, 30, ..., 80 corresponding to the estimated level of adult mortality (A). These two sets of ${}_nq_x$ values were then blended using the following multiplying factors for females and males:

Age Groups	Females	Males
0-4, 5-9	1.00(C)	1.00 (C)
10-14	0.75(C)+0.25(A)	0.80(C)+0.20(A)
15-19	0.50(C)+0.50(A)	0.40(C)+0.60(A)
20-24	0.25(C)+0.75(A)	1.00(A)
25-29, 30-34	1.00(A)	

These multiplying factors are the same as those used for constructing the life tables for Malawi in 1977 and 1987 population censuses.

The resulting estimated life tables for Malawi in 1998 for males and females, respectively, are presented in Tables 7.14 and 7.15 below. The life tables give expectation of life at birth of 40 and 43 years for males and females, respectively.

Table 7.14 Estimated Life Tables for Malawi: Female 1998

Age	nq_x	nd_x	nm_x	l_x	nL_x	T_x	e_x
0	114.0	0.1239	11,404	100,000	92017.6	4323432.1	43.23
1	94.9	0.0252	8,408	88,597	334207.7	4231414.6	47.76
5	40.9	0.0083	3,278	80,189	392748.4	3897206.9	48.60
10	26.3	0.0053	2,026	76,911	379488.4	3504458.4	45.57
15	32.0	0.0065	2,398	74,885	368429.7	3124970.1	41.73
20	41.2	0.0084	2,988	72,487	354964.1	2756540.4	38.03
25	52.9	0.0109	3,676	69,499	338303.7	2401576.3	34.56
30	61.7	0.0127	4,059	65,823	318967.6	2063272.6	31.35
35	70.6	0.0146	4,357	61,764	297927.4	1744305.0	28.24
40	76.1	0.0158	4,370	57,407	276109.2	1446377.7	25.20
45	82.0	0.0171	4,347	53,037	254316.1	1170268.5	22.07
50	98.8	0.0208	4,811	48,690	231418.8	915952.4	18.81
55	132.4	0.0284	5,810	43,878	204865.3	684533.6	15.60
60	186.7	0.0412	7,108	38,068	172570.4	479668.3	12.60
65	269.0	0.0622	8,327	30,960	133981.9	307097.9	9.92
70	385.1	0.0954	8,716	22,633	91373.4	173116.0	7.65
75	519.0	0.1402	7,222	13,917	51527.7	81742.7	5.87
80	663.7	0.1987	4,443	6,694	22365.0	30215.0	4.51
85	813.8	0.2744	1,832	2,252	6676.8	7849.9	3.49
90	925.2	0.3444	388	419	1126.3	1173.2	2.80
95	1000.0	1.0000	31	31	46.9	46.9	1.50

Table 7.15 Estimated Life Tables for Malawi: Male 1998

Age	nq_x	nd_x	nm_x	l_x	nL_x	T_x	e_x
0	134.0	0.1479	13,404	100,000	90617.1	4011920.3	40.12
1	99.6	0.0265	8,626	86,596	325682.3	3921303.2	45.28
5	42.2	0.0086	3,292	77,970	381621.6	3595620.9	46.12
10	25.4	0.0051	1,893	74,678	368657.9	3213999.4	43.04
15	35.0	0.0071	2,546	72,785	357558.3	2845341.4	39.09
20	57.5	0.0118	4,037	70,238	341100.7	2487783.1	35.42
25	60.7	0.0125	4,018	66,202	320963.0	2146682.5	32.43
30	64.7	0.0134	4,024	62,183	300857.2	1825719.5	29.36
35	73.7	0.0153	4,288	58,159	280078.7	1524862.3	26.22
40	88.2	0.0185	4,753	53,872	257478.4	1244783.6	23.11
45	105.2	0.0222	5,168	49,119	232676.1	987305.2	20.10
50	128.1	0.0274	5,631	43,951	205676.6	754629.1	17.17
55	164.0	0.0357	6,284	38,320	175887.9	548952.5	14.33
60	218.1	0.0490	6,987	32,036	142710.4	373064.6	11.65
65	298.5	0.0702	7,477	25,049	106550.5	230354.1	9.20
70	424.6	0.1078	7,461	17,572	69204.9	123803.6	7.05
75	569.5	0.1592	5,757	10,110	36158.4	54598.7	5.40
80	702.5	0.2166	3,058	4,353	14120.2	18440.3	4.24
85	840.1	0.2897	1,088	1,295	3755.5	4320.1	3.34
90	937.4	0.3529	194	207	550.2	564.7	2.73
95	1000.0		13	13	14.4	14.4	1.11

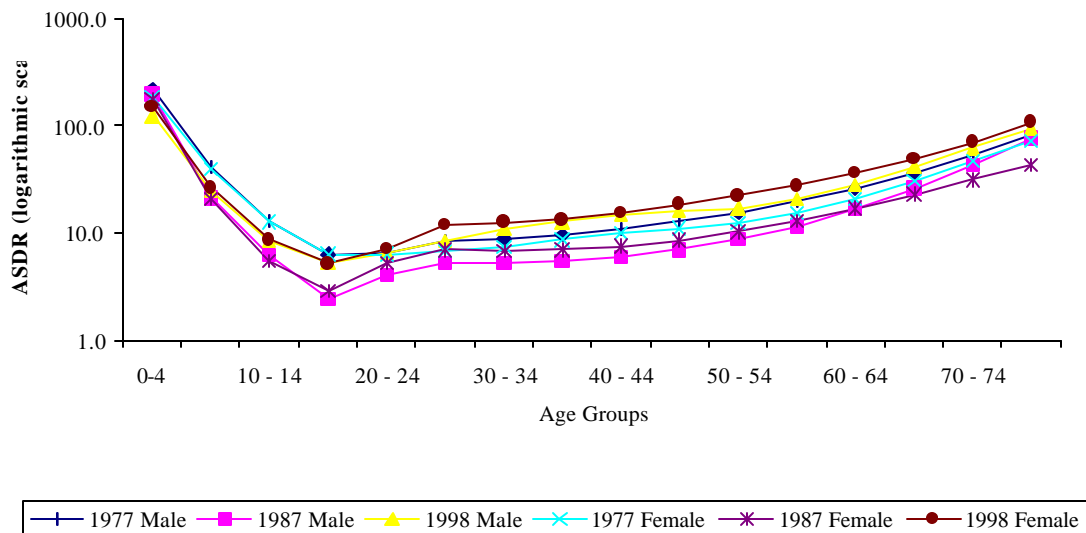
7.3.1 Level, Trends and Age-Sex Pattern of Mortality

Table 7.16 presents the age pattern of mortality for Malawi as estimated from the 1977, 1987 and 1998 population censuses. Except for the age group 0-4, ASDRs are higher in 1998 than in 1987. The differences between 1987 and 1998 increase with increasing age. This could be attributed to the HIV/AIDs epidemic.

Table 7.16: Estimated Age Specific Death Rates by Sex for Malawi: 1977-1998

Age Groups	1977		1987		1998	
	M	F	M	F	M	F
0-4	217.7	181.8	196.7	178.0	147.9	123.9
5-9	41.2	39.2	21.3	20.7	26.5	25.2
10-14	12.9	12.7	6.2	5.4	8.6	8.3
15-19	6.3	6.3	2.4	2.9	5.1	5.3
20-24	6.5	6.3	4.0	5.3	7.1	6.5
25-29	8.4	6.9	5.3	7.0	11.8	8.4
30-34	8.9	7.5	5.3	6.9	12.5	10.9
35-39	9.5	8.7	5.4	7.0	13.4	12.7
40-44	10.8	10.0	6.0	7.6	15.3	14.6
45-49	13.0	11.1	7.0	8.6	18.5	15.8
50-54	15.7	12.2	8.8	10.3	22.2	17.1
55-59	20.0	15.2	11.6	13.0	27.4	20.8
60-64	26.1	20.6	16.8	17.0	35.7	28.4
65-69	36.7	30.3	26.0	22.9	49.0	41.2
70-74	53.4	46.4	42.8	31.4	70.2	62.2
75-79	82.1	72.2	76.1	43.5	107.8	95.4

Figure 7.3 Estimated Age Specific Death Rates for Malawi (Males) 1977-98



7.3.2 Rural-Urban Differentials

As expected, mortality rates are lower in urban than in rural areas. The same pattern is also observed in all regions. This is attributed to the differences in social and economic characteristics of the two areas.

Table 7.17: Selected Estimates of Mortality for Urban and Rural Areas for Malawi and Regions: 1998

	CDR	E(o)		E(0)		
		Male	Female	2q ₀	3q ₀	5q ₀
Malawi Total	20.9	38.9	45.1	0.164	0.177	0.215
Urban	15.5	44.8	49.2	0.134	0.109	0.125
Rural	21.9	37.8	44.4	0.207	0.170	0.207
Northern Region	17.5	43.3	49.5	0.116	0.150	0.176
Urban	16.0	42.9	51.4	0.067	0.106	0.124
Rural	17.8	43.1	49.1	0.164	0.148	0.189
Central Region	18.4	44.0	51.0	0.172	0.169	0.217
Urban	14.1	47.3	52.6	0.136	0.138	0.143
Rural	19.1	43.4	50.6	0.164	0.213	0.231
Southern Region	24.1	34.3	40.3	0.217	0.181	0.205
Urban	16.5	43.2	46.2	0.143	0.115	0.157
Rural	25.5	32.7	39.4	0.164	0.207	0.202

7.3.3 District and Regional Differentials

Table 18 below gives infant and child mortality rates and life expectancy at birth estimated from children ever born and children surviving data for Malawi, Regions and Districts. Among the three regions, Northern Region experienced the lowest level of mortality, followed by Southern Region, with the Central Region having the highest mortality. This observation differs somewhat with what the reported death statistics seem to portray in that Central and Southern Regions have swapped their position. Although this observation requires further analysis, this could in part be explained by the severity of HIV/AIDS epidemic. It is possible that the Southern Region, being the most developed region in the country, experiences higher adult mortality than Central Region.

At the district level, it is observed that all the districts in the Northern Region have infant and childhood mortality rates that are lower than those of Malawi as a whole. At the same time, with exception of Dedza and Ntcheu in the Central Region and Blantyre and Mwanza in the Southern Region, all the remaining districts have mortality rates higher than the national average.

Table 7.18: Estimates of Infant and Childhood Mortality and Life Expectancy at Birth for Malawi, Regions and Districts obtained from Children Ever Born and Children Surviving Method: 1998

	Implied IMR			Implied 4q1			Eo		
	20-24	25-29	30-34	20-24	25-29	30-34	20-24	25-29	30-34
Malawi	0.134	0.125	0.123	0.105	0.097	0.095	44.8	46.4	46.8
Northern Region	0.107	0.103	0.101	0.079	0.074	0.073	50.1	51.1	51.5
Chitipa	0.103	0.095	0.093	0.075	0.067	0.065	51.1	52.8	53.3
Karonga	0.108	0.104	0.106	0.080	0.076	0.077	49.9	50.8	50.5
Nkhata Bay	0.116	0.103	0.095	0.087	0.074	0.067	48.4	51.1	52.9
Rumphi	0.094	0.091	0.087	0.066	0.063	0.059	53.0	53.8	54.8
Mzimba	0.107	0.105	0.105	0.079	0.077	0.077	50.1	50.6	50.6
Likoma	0.106	0.059	0.080	0.077	0.033	0.052	50.5	61.7	56.5
Central Region	0.136	0.131	0.131	0.107	0.102	0.102	44.3	45.4	45.3
Kasungu	0.136	0.134	0.134	0.107	0.106	0.106	44.4	44.7	44.7
Nkhotakota	0.146	0.136	0.135	0.117	0.107	0.106	42.6	44.3	44.6
Ntchisi	0.152	0.145	0.141	0.123	0.116	0.113	41.4	42.7	43.3
Dowa	0.134	0.129	0.133	0.105	0.100	0.104	44.7	45.7	44.9
Salima	0.136	0.126	0.130	0.107	0.097	0.102	44.3	46.3	45.4
Lilongwe	0.136	0.129	0.130	0.108	0.100	0.101	44.3	45.7	45.5
Mchinji	0.136	0.131	0.127	0.107	0.102	0.099	44.3	45.4	46.0
Dedza	0.132	0.130	0.131	0.104	0.101	0.103	45.0	45.5	45.2
Ntcheu	0.130	0.125	0.125	0.102	0.096	0.097	45.5	46.5	46.4
Southern Region	0.138	0.126	0.122	0.109	0.098	0.093	44.0	46.3	47.1
Mangochi	0.130	0.123	0.125	0.101	0.095	0.097	45.5	46.8	46.4
Machinga	0.135	0.124	0.121	0.106	0.095	0.103	44.6	46.7	45.2
Zomba	0.139	0.124	0.120	0.110	0.095	0.091	43.8	46.7	47.5
Chiradzulu	0.145	0.131	0.122	0.116	0.102	0.093	42.7	45.3	47.2
Blantyre	0.116	0.099	0.092	0.087	0.070	0.064	48.4	52.0	53.6
Mwanza	0.126	0.123	0.128	0.097	0.094	0.090	46.4	46.9	47.9
Thyolo	0.153	0.133	0.123	0.124	0.105	0.094	41.2	44.8	46.9
Mulanje	0.168	0.148	0.137	0.139	0.119	0.109	38.7	42.1	44.1
Phalombe	0.147	0.136	0.130	0.119	0.107	0.101	42.2	44.4	45.4
Chikwawa	0.137	0.131	0.130	0.108	0.103	0.101	44.2	45.2	45.4
Nsanje	0.157	0.145	0.147	0.129	0.116	0.119	40.5	42.7	42.2
Balaka	0.128	0.123	0.122	0.099	0.095	0.093	45.9	46.8	47.1

7.4 Conclusion

The estimates of mortality presented in this chapter indicate that the level of mortality in Malawi remains high. Mortality has also worsened during the intercensal period 1987-98. This is attributed to the HIV/AIDS epidemic. Infant and childhood mortality continues to show modest improvement whereas adult mortality is increasing. There are some interesting differences in terms of rural-urban, regional and districts differences.

HOUSEHOLDS AND HOUSING CHARACTERISTICS

Jameson Ndawala

8.0 Introduction

The study of housing characteristics is important in virtually all settings involving human beings. The 1998 Malawi Population and Housing Census implicitly acknowledges the important role played by housing in collecting and presenting a vast array of data on various aspects of the country's housing condition and stock.

The 1998 Malawi Population and Housing Census collected information on housing characteristics and access to facilities apart from the population characteristics information. This information was also collected in 1987 Census. This chapter presents information on households and housing characteristics.

8.1 Household Characteristics**8.1.1 Households and Average Household size**

In the Census enumeration a household was defined as consisting of one or more persons, related or unrelated, who live together and make common provision for food. They regularly take all their food from the same pot, and/or share the same grain store (*Nkhokwe*) or pool their incomes for purpose of purchasing food. These persons may live in one or more dwelling units. Similarly, a dwelling unit was defined as any structure, permanent or temporary, where people sleep. It could be a hut, a house, a store with sleeping room or rooms at the back or side, a shelter of reeds or straw such as those used by fishermen, or any other structure where people sleep.

Table 8.2 presents the average household size for Malawi, regions and districts in 1987 and 1998 censuses. About 2.3 million households were enumerated in Malawi in 1998 as compared 1.9 million in 1987. The distribution of households by region and districts is quite similar to that of the population. On average there were 4.3 persons per household in 1998 compared to 4.0 in 1987. There has been an increase in the average household sizes in the last 10 years or so. At regional level, the average is high in the North with 5.1 persons per household than in the Central with 4.5 persons and the South with 4.1 persons per household. Mzimba and Likoma with 5.2 persons per household have the highest average household sizes in the country and least is Phalombe with 3.9 persons per household.

8.1.2 Distribution of Households by Size

The number of persons who live in that household determines household size. Table 8.1 shows that the largest household size was three with 19 percent followed by four 16 percent and two 15 percent. About 4 percent of household was 10 + number of household number.

At regional level in the North the largest was three and four members of household with 15 percent of all household each while in the central and south the largest was three with 19 percent and 20 percent respectively. There was more household in the north with 10 plus members (7 percent) compared to the central (4 percent) and south (3 percent).

Table 8.1 Distribution of Households Size by Area

Household Size	Malawi	Northern	Central	Southern
Total	100.0	100.0	100.0	100.0
One	8.6	6.9	7.5	9.9
Two	15.4	11.6	14.2	17.2
Three	18.7	14.9	18.5	19.6
Four	16.5	14.9	17.0	16.5
Five	13.1	13.5	13.8	12.6
Six	9.9	11.4	10.4	9.1
Seven	6.9	8.8	7.3	6.1
Eight	4.5	6.3	4.7	3.8
Nine	2.7	4.2	2.8	2.3
Ten and Over	3.7	7.4	3.7	2.9

Table 8.2: Average household size for Malawi, Regions and districts, 1987 and 1998

Area	Average number of persons per household	
	1987	1998
MALAWI	4.0	4.3
NORTHERN	4.8	5.1
Chitipa	4.9	4.9
Karonga	5.3	4.9
Nkhata Bay	4.7	4.9
Rumphi	4.7	5.0
Mzimba	4.6	5.2
Likoma	5.3	5.2
CENTRAL	4.3	4.5
Kasungu	4.4	4.9
Nkhotakota	4.0	4.6
Ntchisi	4.6	4.7
Dowa	4.5	4.5
Salima	3.9	4.2
Lilongwe	4.3	4.3
Mchinji	4.4	4.6
Dedza	4.3	4.3
Ntcheu	4.4	4.3
SOUTHERN	3.7	4.1
Mangochi	4.0	4.0
Machinga	4.1	4.1
Zomba	4.0	4.0
Chiradzulu	4.2	4.0
Blantyre	4.0	4.1
Mwanza	4.3	4.3
Thyolo	4.2	4.1
Mulanje	4.2	4.1
Phalombe	4.1	3.9
Chikwawa	4.5	4.5
Nsanje	4.3	4.5
Balaka	4.1	4.2

8.1.3 Characteristics of Heads of Household

A head of household is a person among the household members who is acknowledged by other members of the same household as their head. This individual is the spokesperson of the household members and is often the one who makes most decisions concerning the welfare of the members of the household

8.3.1 Distribution of household heads by Region and Rural/Urban Areas.

The percent distribution of household heads by sex, age, rural and urban areas as well as regions in Malawi is given in Table 8.3 and 8.4. It is evident that household headship increases with age. In Malawi, males head 69 percent of households. When headship is considered by age, in almost all age groups there are more male heads except in the age group 15 – 19 years where 52 percent of the heads are females.

Considering the age distribution, for Malawi, the highest percent of heads is in the age group 25- 39 years where 37 percent of all the heads are. The proportion of heads under 15 is quite small, less than point five of a percent while about 2.3 percent of the heads are in the age group 15-19 years.

Table 8.3: Percentage Distribution of heads of Households by Age and sex for Malawi

Age group	Total	Female	Male
Total	100	30.7	69.3
Under 15 years	100	47.1	52.9
15-19 years	100	52.1	47.9
20-24 years	100	34.1	65.9
25-29 years	100	24.3	75.7
30-34 years	100	25.5	74.5
35-39 years	100	28.0	72.0
40-44 years	100	29.3	70.7
45-49 years	100	29.6	70.4
50-54 years	100	30.1	69.9
55-59 years	100	29.8	70.2
60-64 years	100	35.3	64.7
65-69 years	100	36.4	63.6
70-74 years	100	39.9	60.1
75-79 years	100	37.8	62.2
80-84 years	100	43.4	56.6
85 years +	100	43.0	57.0

When you consider the sex pattern of the headship by age, there are more young female heads under age 20 years, 4.4 percent as compared to 2 percent. From age 25 years to 59 years there are consistently more males heads than females. After age 60 years, the situation is different; there are more female heads than males. In urban and rural areas the distribution of heads is noted to be similar to that observed for Malawi. There are fewer heads aged less than 15 years, and the highest percentage of household heads is 20.4 percent in the age group 25-29 years. After age group 25-29 years, the percentage of heads is declining with increasing age and is 0.4 for those aged 85 years and over in the urban areas and 1.6 percent in the rural areas.

At regional level, a similar pattern is observed as the one in rural-urban areas. In the Northern Region there are 2 percent of heads aged less than 20 years compared to 2.2 percent in the Central and 3.2 percent in the South. There are also older heads in the Southern region 3.3 aged 80 years and over compared to 2.6 in the Central Region and 2.6 in the North.

8.1.4 Distribution of Heads by Age and Sex

The distribution of Heads by Age and Sex at National level from the graph depicts that there are more male heads than females. The exception can be traced only in the first age group i.e. (Less than 15 and 15 -19) it's where at least the magnitude percentage of females' outstands. From the age group of 20-64, the percentage is lower as compared to that of males. It (the percentage) tries to match at the age groups of 65 to 85 and over. This show that the distribution average age and sex of males is outnumbering that of females even the average percentage for males is above 50 and for females is below 50 percent as per the chart.

**Table 8.4: Percentage Distribution of Heads of Households
By age Sex Rural and Urban Areas and Regions**

Age group (in years)	Total	Female	Male	Urban	Rural	North	Central	South
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under15	0.4	0.6	0.3	0.5	0.4	0.2	0.3	0.5
15-19	2.3	3.8	1.6	2.8	2.2	1.8	1.9	2.7
20-24	9.0	10.0	8.5	12.2	8.5	7.7	9.3	9.0
25-29	13.2	10.5	14.5	20.4	12.2	11.8	13.7	13.2
30-34	12.4	10.3	13.3	17.0	11.7	12.6	12.8	12.0
35-39	11.5	10.5	12.0	13.3	11.3	11.4	11.7	11.4
40-44	9.8	9.3	10.0	10.0	9.8	10.3	10.1	9.4
45-49	9.9	9.6	10.1	8.1	10.2	9.5	9.9	10.1
50-54	7.6	7.4	7.6	5.5	7.9	8.3	7.6	7.4
55-59	5.9	5.7	6.0	3.5	6.2	6.7	6.0	5.6
60-64	5.0	5.7	4.7	2.4	5.4	6.1	4.8	4.9
65-69	4.7	5.6	4.3	1.8	5.1	5.4	4.6	4.7
70-74	3.3	4.2	2.8	1.1	3.6	3.8	3.0	3.4
75-79	2.2	2.7	2.0	0.6	2.4	2.2	2.1	1.6
80-84	1.4	2.0	1.2	0.4	1.6	1.3	1.3	1.6
85+	1.4	2.0	1.2	0.4	1.6	1.3	1.3	1.7

8.2 Economic Activity of Heads of Households

8.2.1 Heads of Households by Economic Activity Status

The census results show that in Malawi 95 percent of all heads of households were economically active and only 5 percent were not economically active. Almost all the economically active heads were employed (94 percent) with 70 percent working as subsistence farmer (*mlimi*), 15 percent are employees, 7 percent are self-employed and 2 percent are family business workers. Of those heads not economically active 2 percent are home workers, 1 percent have never worked but are seeking work and 1 percent are student.

Table 8. 5 Heads by Economic Activity Status

Economic Activity Status	Number	Percent
Total	2919411	100.0
Economically Active	2782029	95.3
Employed	2761246	94.6
Mlimi	2054508	70.4
Employee	425468	14.6
Family Business Worker	70927	2.4
Self employed	202536	6.9
Employer	7807	0.3
Unemployed	20783	0.7
Worked, seeking work	8269	0.3
Worked, not seeking work	7473	0.3
Never worked, seeking work	5077	0.2
Not Economically Active	137382	4.7
Never worked, not seeking work	30473	1.0
Home worker	53860	1.8
Student	36627	1.3
Other	16422	0.6

8.2.2 Heads of Dwelling Units by Occupation

Table 8.6 below presents the distribution of heads of dwelling units by their current occupation. It is observed that 75 percent of all heads are in Agriculture, Animal husbandry and forestry workers, fishermen and hunters and related occupations. This is followed operators and labourers, and sales (at 6 percent each), production and related (5 percent) and professional, technical; and related at 3 percent.

Table 8. 6 Heads of Households by Occupation

Occupation	Number	Percent
Total	2922411	100.0
Professional, Technical & related	82799	2.8
Administrators & Managers	6073	0.8
Clerical and related	39271	1.3
Sales	165176	5.7
Services	96278	3.3
Agricultural, animal	2197247	75.2
Production and related	153470	5.3
Transport equipment operators	3208	0.1
Operators and labourers	178889	6.1

8.3 Dwelling Units Characteristics

8.3.1 Dwelling Units by Type of Structure

Structures can be classified according to the materials used for construction for wall, floor and roof. In the 1998 census a structure was defined as any unit of construction which has four walls or an all round wall and at least one door irrespective of the type of construction materials used. The structure was classified as permanent, semi-permanent and traditional structures. A permanent structure is the one having a roof made of iron sheets, concrete or asbestos, and walls made of burnt bricks, concrete or stones. A semi-permanent structure is the one lacking one of the construction materials of a permanent structure for wall or roof. This category includes for example structure, which have iron sheet roof and sun dried bricks or burnt brick walls with thatched roof. A traditional structure is one having thatched roof with mud walls, or walls made of mud and wattle.

Of all structures in Malawi 16 percent are permanent structures, 18 percent semi-permanent structures and 16 percent traditional structures. The pattern is rather different between rural and urban areas. In urban areas 37 percent of the structures are permanent compared to 12 percent in rural areas. Also 24 percent of structures in urban areas are traditional compared to 73 percent in rural areas. At regional level, there are slightly more permanent structures in the southern region (17 percent) compared to the north (16 percent) and central is 15 percent. At district level Likoma has the lowest number of permanent structures, (7 percent) followed by Ntchisi (8 percent), Chitipa and Machinga (10 percent).

8.3.2 Dwelling Units by Tenure

Three types of tenancy status were collected during the census. The respondents were asked whether the dwelling unit is being occupied the individual/ family who owns it or whether it is being rented or is of other tenancy status (rent-free). According to the 1998 Census data, the majority of the population in Malawi about 86 percent live in their own houses while 11 percent are renting and about 3 percent are rent-free. In urban areas about 48 percent live in rented houses followed by 47 percent owning their own homes and only 5 percent live in rent-free homes. In rural areas 93 percent live in their houses, about 5 percent are renting and 3 percent are rent-free.

The distribution at regional and district level is almost similar to that observed for Malawi.

Table 8.7 Dwelling Units by type of structure

	Total Persons	Permanent	Semi- Permanent	Traditional
Malawi	100.0	15.8	18.4	65.8
Urban	100.0	36.8	39.7	23.6
Rural	100.0	12.3	14.9	72.8
Northern	100.0	16.1	17.9	65.9
Urban	100.0	40.0	22.1	37.9
Rural	100.0	12.6	17.3	70.0
Chitipa	100.0	9.7	6.3	84
Karonga	100.0	17.6	22.9	59.5
Nkhata Bay	100.0	15.7	30.4	53.8
Rumphi	100.0	16.5	19.9	63.6
Mzimba	100.0	17.1	15	67.9
Likoma	100.0	6.8	21.7	71.6
Central	100.0	14.7	13.9	71.3
Urban	100.0	35.8	37.4	26.8
Rural	100.0	11.3	10.2	78.5
Kasungu	100.0	14.4	9.1	76.5
Nkhotakota	100.0	18.0	23.4	58.6
Ntchisi	100.0	7.6	4.3	88.1
Dowa	100.0	12.0	7.6	80.4
Salima	100.0	11.8	10.0	78.2
Lilongwe	100.0	18.9	21.3	59.8
Mchinji	100.0	13.8	9.9	76.3
Dedza	100.0	9.6	6.4	84.0
Ntcheu	100.0	13.5	15.3	71.1
Southern	100.0	16.7	22.4	60.9
Urban	100.0	36.9	45.4	17.7
Rural	100.0	13.1	18.4	68.5
Mangochi	100.0	10.7	20.1	69.2
Machinga	100.0	9.5	14.9	75.6
Zomba	100.0	18.4	16.3	65.3
Chiradzulu	100.0	16.9	18.2	64.9
Blantyre	100.0	27.1	43.4	29.6
Mwanza	100.0	12.2	10.0	77.8
Thyolo	100.0	17.0	20.6	62.5
Mulanje	100.0	19.6	27.5	52.9
Phalombe	100.0	10.8	12.2	77.0
Chikwawa	100.0	14.1	10.0	75.9
Nsanje	100.0	14.3	11.2	74.5
Balaka	100.0	13.1	26.4	60.5

Table 8.8: Distribution of Dwelling Units by Type of Tenure

	Total Persons	Owning	Renting	Rent-free
Malawi	100.0	86.1	10.8	3.1
Urban	100.0	47.2	48.1	4.6
Rural	100.0	92.6	4.6	2.8
Northern	100.0	87.1	10.2	2.7
Urban	100.0	54.1	41.9	4.0
Rural	100.0	91.9	5.6	2.5
Chitipa	100.0	91.2	6.0	2.7
Karonga	100.0	88.7	8.9	2.4
Nkhata Bay	100.0	88.0	7.8	4.2
Rumphi	100.0	85.7	10.8	3.5
Mzimba	100.0	85.7	12.1	2.2
Likoma	100.0	90.6	6.6	2.9
Central	100.0	86.5	10.4	3.1
Urban	100.0	47.3	48.3	4.4
Rural	100.0	92.8	4.3	2.9
Kasungu	100.0	85.6	9.0	5.4
Nkhotakota	100.0	82.3	6.2	11.6
Ntchisi	100.0	94.1	4.4	1.5
Dowa	100.0	93.6	5.1	1.3
Salima	100.0	89.5	8.8	1.7
Lilongwe	100.0	78.0	19.3	2.7
Mchinji	100.0	89.9	6.8	3.4
Dedza	100.0	94.2	4.1	1.7
Ntcheu	100.0	94.4	3.8	1.8
Southern	100.0	85.6	11.2	3.2
Urban	100.0	45.7	49.3	5.0
Rural	100.0	92.6	4.5	2.9
Mangochi	100.0	90.7	5.9	3.4
Machinga	100.0	94.3	4.3	1.4
Zomba	100.0	86.9	10.4	2.7
Chiradzulu	100.0	93.6	4.4	2.0
Blantyre	100.0	61.2	34.9	3.9
Mwanza	100.0	91.2	6.5	2.4
Thyolo	100.0	87.7	7.7	4.6
Mulanje	100.0	91.6	4.9	3.5
Phalombe	100.0	94.9	3.3	1.8
Chikwawa	100.0	88.0	6.5	5.5
Nsanje	100.0	92.6	6.1	1.3
Balaka	100.0	93.2	4.9	1.9

Table 8.9 Dwelling Units by Numbers of Rooms

Area	Total	Number of Rooms					
		One	Two	Three	Four	Five	Six
Malawi	100.0	15.5	33.1	27.2	15.2	5.4	3.5
Urban	100.0	9.5	28.9	27.5	17.9	9.3	6.9
Rural	100.0	16.5	33.8	27.2	14.8	4.2	2.9
Northern	100.0	6.9	28.5	28.8	20.6	9.2	6.0
Urban	100.0	4.4	16.4	29.4	25.6	15.1	9.0
Rural	100.0	7.3	30.2	28.7	19.9	8.3	5.6
Chitipa	100.0	4.6	37.4	33.2	16.1	5.2	3.6
Karonga	100.0	6.4	29.2	24.1	19.7	11.8	8.8
NkhataBay	100.0	8.1	19.9	29.6	24.3	10.6	7.4
Rumphu	100.0	5.5	21.3	25.8	26.6	11.8	8.9
Mzimba	100.0	7.6	30.5	29.9	19.5	8.1	4.5
Likoma	100.0	1.4	5.2	17.9	31.0	23.0	21.6
Central	100.0	16.3	33.6	27.6	14.3	5.1	3.1
Urban	100.0	10.1	29.9	26.8	16.6	9.4	7.1
Rural	100.0	17.3	34.2	27.7	13.9	4.4	2.5
Kasungu	100.0	12.5	36.7	28.5	14.3	4.9	3.1
Nkhotakota	100.0	14.9	29.5	30.0	17.0	5.9	2.7
Ntchisi	100.0	12.9	27.1	29.5	20.2	7.0	3.0
Dowa	100.0	18.1	32.0	27.8	15.0	4.5	2.6
Salima	100.0	24.5	39.3	20.8	10.3	3.2	1.8
Lilongwe	100.0	18.1	32.9	26.8	13.1	5.4	3.8
Mchinji	100.0	10.5	35.2	31.6	14.9	4.9	2.9
Dedza	100.0	16.8	34.6	27.7	14.1	4.4	2.4
Ntcheu	100.0	14.1	33.1	27.3	16.0	6.3	3.3
Southern	100.0	17.1	33.8	26.5	14.6	4.7	3.1
Urban	100.0	10.1	30.9	27.6	17.3	7.8	6.3
Rural	100.0	18.4	34.4	26.3	14.2	4.2	2.5
Mangochi	100.0	27.8	39.1	19.6	9.5	2.5	1.4
Machinga	100.0	31.2	35.7	18.3	10.0	3.2	1.5
Zomba	100.0	12.0	32.5	29.2	17.4	5.5	3.4
Chiradzulu	100.0	9.1	32.5	34.0	16.8	4.8	2.8
Blantyre	100.0	9.0	30.9	29.1	17.7	7.5	5.7
Mwanza	100.0	21.6	36.6	22.9	12.3	4.2	2.5
Thyolo	100.0	10.8	31.4	31.1	17.8	6.1	4.3
Mulanje	100.0	10.1	29.2	32.5	17.8	4.8	2.5
Phalombe	100.0	12.5	33.0	29.6	17.9	4.8	2.5
Chikwawa	100.0	12.5	38.1	23.7	11.5	2.7	1.5
Nsanje	100.0	26.9	34.5	22.2	11.1	3.2	2.0
Balaka	100.0	25.9	36.9	22.5	10.5	2.4	1.9

A room in the census was defined as a partition or part of a dwelling unit enclosed by four walls, a floor and a roof. A dwelling unit with no partition was considered as having one room. Table 8.9 gives the percentage distribution of dwelling units by number of rooms for Malawi, regions and districts. For Malawi it is noted that the majority of dwelling units in Malawi have two rooms (33 percent) followed by three rooms (27 percent), only 4 percent have 6 and over rooms. In urban and rural areas and even at regional levels the pattern is similar to that of Malawi.

8.4 Access to Dwelling Unit Facilities

The 1998 Population and Housing Census collected information on access to facilities. These included; source of drinking water, source of energy, availability of toilet facilities, availability of radio, ox carts and bicycles. This section discusses these.

8.4.1 Source of Drinking Water

Sources of drinking water tend to vary by season during the year. During the Census source of drinking water was collected both for dry and wet season. The sources referred to; piped water inside dwelling unit, piped water outside dwelling unit, communal standpipe, protected well, unprotected well, borehole, spring, stream/river, lake/dam and rainwater

8.4.1 (i) Source of Water in Wet Season

Table 8.10 presents the percent distribution of population by source of drinking water in the wet season. Looking at Malawi as a whole, about 26 % of the population uses boreholes and 25 % of them use unprotected wells as main sources of drinking water. Only 2.5 % of the population use piped water inside DU. 7 percent use outside DU and 13 percent use communal standpipe. In Malawi about 12 percent of the population obtain their source of drinking water from stream/river.

In urban areas of Malawi, 36 percent use the communal standpipe followed by 30 percent piped outside DU and 14 percent piped inside DU. The situation is quite different in rural areas where 30 percent use boreholes, 12 percent protected wells and 9 percent communal standpipe. The population using unsafe water in rural areas is quite high, 29 percent use unprotected wells and 14 percent use stream/river. At regional level, in the central region 29 percent use unprotected well and 10 percent use stream/river, in the north 22 percent use unprotected well and 19 percent use stream/river, and in the southern region 22 percent use unprotected well while 12 percent use stream/river.

At district level, in Kasungu 48 percent use unprotected well and 14 percent use stream/river, in Nkhosvota 39 percent use unprotected well, 7 percent use stream/river and 4 percent lake/dam. Over 30 percent of the population use unprotected wells in Ntchisi, Dowa, Dedza, Nkhosvota bay and Machinga. The use of communal standpipe is highest in Balaka (34 percent) followed by Phalombe (26 percent) Blantyre (25 percent), Rumphu (24 percent), Mulanje (23 percent) and Ntcheu (21 percent).

The use of lake/ dam as a source of drinking water is highest in Likoma where 73 percent of the population uses this source. Lake/dam is also notable in Mangochi (9 percent), Karonga (5 percent), Nkhosvota Bay, Rumphu, Nkhosvota and Salima (4 percent each).

Table 8.10: Source of drinking water wet season

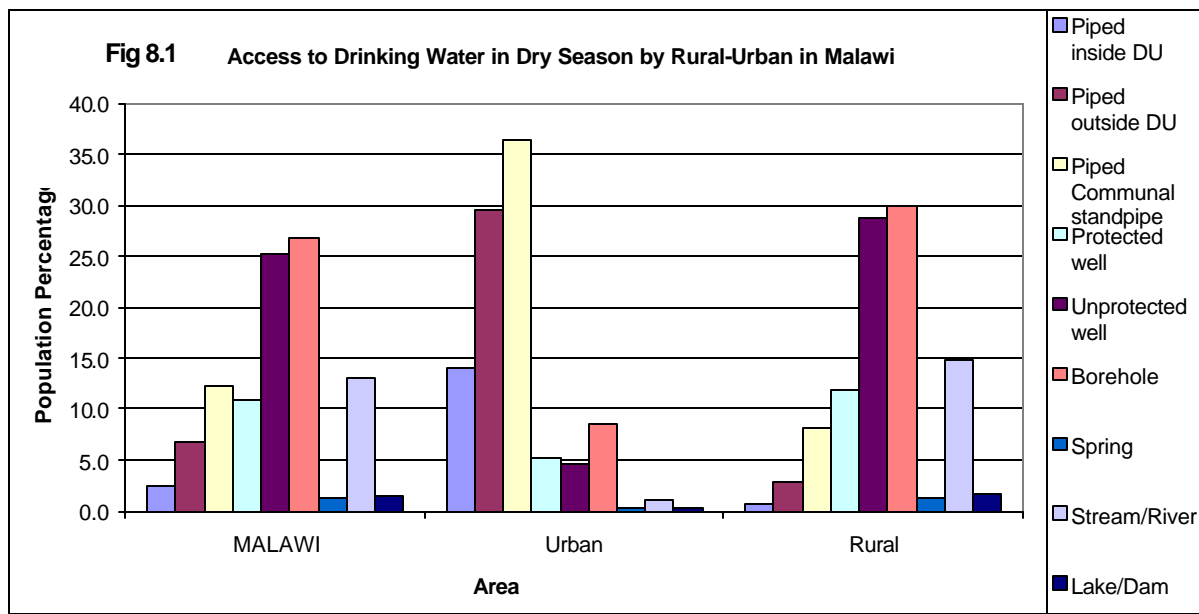
	Total Persons	Piped In side DU	Piped Out side DU	Communal Standpipe	Protected Well	Un-protected Well	Borehole	Spring	Stream or River	Lake or Dam	Rain water
MALAWI	100.0	2.6	7.0	13.2	10.8	25.1	26.4	1.2	12.3	1.3	0.1
Urban	100.0	14.1	29.8	36.5	5.1	4.5	8.2	0.3	1.0	0.3	0.1
Rural	100.0	0.6	3.2	9.3	11.8	28.5	29.5	1.4	14.2	1.5	0.1
NORTHERN	100.0	2.2	7.1	16.0	7.9	22.4	21.9	1.4	18.7	2.4	0.1
Urban	100.0	12.0	27.1	41.2	4.1	5.0	9.0	0.0	1.1	0.5	0.0
Rural	100.0	0.7	4.2	12.3	8.4	25.0	23.7	1.5	21.3	2.6	0.2
Chitipa	100.0	0.6	6.6	11.8	3.0	15.0	18.0	4.6	39.5	0.8	0.1
Karonga	100.0	1.9	8.6	15.5	7.3	10.3	38.5	1.0	11.4	5.1	0.2
NkhataBay	100.0	1.5	6.7	10.1	8.1	31.2	19.2	2.4	16.8	3.9	0.1
Rumphi	100.0	1.8	10.1	23.8	4.4	9.1	17.3	1.5	28.1	3.6	0.2
Mzimba	100.0	2.9	6.4	17.1	9.6	28.5	19.1	0.5	15.6	0.2	0.1
Likoma	100.0	0.4	0.5	0.0	13.4	0.1	12.4	0.0	0.0	73.1	0.0
CENTRAL	100.0	2.5	4.9	9.5	14.5	28.8	28.0	0.9	10.4	0.6	0.1
Urban	100.0	14.6	25.3	35.9	6.9	5.6	10.2	0.3	0.9	0.2	0.1
Rural	100.0	0.5	1.6	5.2	15.7	32.5	30.8	1.0	11.9	0.7	0.1
Kasungu	100.0	1.3	4.1	6.8	9.4	48.2	15.8	0.4	13.7	0.2	0.2
Nkhotakota	100.0	1.7	3.1	10.8	7.5	39.0	27.6	0.1	6.7	3.5	0.1
Ntchisi	100.0	0.4	2.2	4.6	7.5	34.7	23.6	1.3	25.5	0.1	0.0
Dowa	100.0	0.9	2.6	2.5	20.3	32.1	19.2	1.5	20.8	0.1	0.0
Salima	100.0	2.1	3.0	7.5	8.6	20.0	38.2	0.8	15.5	4.2	0.1
Lilongwe	100.0	5.6	9.0	12.6	17.0	24.4	25.7	0.5	5.0	0.1	0.1
Mchinji	100.0	0.7	3.4	9.0	22.4	25.1	33.8	1.4	3.8	0.2	0.2
Dedza	100.0	0.5	1.5	2.8	16.7	33.4	36.6	1.1	6.7	0.7	0.0
Ntcheu	100.0	0.4	2.8	21.0	6.8	9.9	40.7	1.6	16.6	0.1	0.1
SOUTHERN	100.0	2.7	8.8	15.7	8.5	22.5	26.3	1.5	12.3	1.6	0.2
Urban	100.0	14.2	34.0	36.0	3.9	3.5	6.5	0.4	1.1	0.3	0.1
Rural	100.0	0.7	4.3	12.1	9.3	25.9	29.8	1.6	14.3	1.9	0.2
Mangochi	100.0	0.9	3.8	5.5	11.9	25.7	28.9	1.1	12.6	9.4	0.2
Machinga	100.0	0.9	4.9	16.0	5.4	36.7	26.8	1.3	7.2	0.7	0.1
Zomba	100.0	3.3	8.9	19.1	9.8	21.9	23.9	1.5	10.5	0.7	0.2
Chiradzulu	100.0	0.9	2.0	2.7	10.5	19.5	44.4	2.8	17.0	0.2	0.0
Blantyre	100.0	9.4	25.3	25.0	5.6	10.7	17.2	0.8	5.8	0.1	0.1
Mwanza	100.0	0.9	3.5	5.6	9.5	19.1	30.7	3.6	26.1	1.0	0.0
Thyolo	100.0	1.4	3.3	3.2	16.0	47.3	18.9	2.1	7.6	0.2	0.0
Mulanje	100.0	0.9	8.5	22.8	9.3	21.0	16.8	1.4	18.7	0.2	0.3
Phalombe	100.0	0.4	4.2	26.0	6.7	25.9	18.0	2.5	15.0	1.3	0.2
Chikwawa	100.0	1.4	5.7	14.9	4.8	18.4	33.1	1.3	19.5	0.6	0.3
Nsanje	100.0	0.8	2.0	0.6	1.9	6.2	68.6	0.8	19.0	0.0	0.1
Balaka	100.0	0.7	6.8	33.9	4.8	10.6	29.4	1.0	11.9	1.0	0.1

8.4.1 (ii) Source of Drinking Water in Dry Season

Table 8.11 presents the distribution of source of drinking water during the dry season. The pattern is generally the same to that observed in the wet season.

Table 8.11 Source of drinking water dry season

	Total Persons	Piped Inside DU	Piped Outside DU	Communal Stand pipe	Protected Well	Un-protected Well	Borehole	Spring	Stream or river	Lake or Dam
MALAWI	100.0	2.5	6.7	12.2	10.9	25.3	26.8	1.2	12.9	1.5
Urban	100.0	14.0	29.5	36.3	5.2	4.7	8.5	0.4	1.1	0.4
Rural	100.0	0.6	2.9	8.1	11.8	28.7	29.9	1.3	14.9	1.7
NORTHERN	100.0	2.1	7.1	15.3	7.9	23.1	22.3	1.2	17.7	3.2
Urban	100.0	11.9	27.1	41.1	4.1	5.0	9.1	0.0	1.1	0.5
Rural	100.0	0.7	4.2	11.5	8.4	25.8	24.2	1.4	20.1	3.6
Chitipa	100.0	0.5	7.5	12.6	3.3	16.9	18.5	4.0	35.7	0.9
Karonga	100.0	1.9	8.6	15.8	7.2	11.1	38.7	0.7	10.9	5.2
NkhataBay	100.0	1.5	6.2	6.7	8.1	31.5	19.0	2.4	16.5	8.0
Rumphu	100.0	1.8	9.6	22.4	4.1	10.5	18.8	1.5	26.1	5.1
Mzimba	100.0	2.8	6.3	16.7	9.8	29.0	19.7	0.5	14.8	0.3
Likoma	100.0	0.4	0.5	0.0	7.0	0.1	3.1	0.0	0.0	88.9
CENTRAL	100.0	2.5	4.8	9.3	14.5	28.8	27.9	0.9	10.6	0.7
Urban	100.0	14.5	25.1	36.1	6.8	5.6	10.4	0.3	0.9	0.2
Rural	100.0	0.5	1.6	5.0	15.7	32.6	30.7	1.0	12.2	0.8
Kasungu	100.0	1.3	4.1	6.7	9.7	47.7	15.8	0.4	14.0	0.4
Nkhotakota	100.0	1.7	3.0	9.8	8.4	37.9	27.9	0.1	7.2	4.0
Ntchisi	100.0	0.4	2.3	4.5	7.6	35.1	23.4	1.4	25.3	0.1
Dowa	100.0	0.9	2.7	2.5	20.3	32.2	19.2	1.5	20.7	0.1
Salima	100.0	2.1	2.9	7.5	8.5	20.1	38.2	0.8	15.6	4.3
Lilongwe	100.0	5.5	9.0	12.7	16.9	24.8	25.4	0.5	5.1	0.1
Mchinji	100.0	0.7	3.4	8.4	22.1	25.1	34.0	1.5	4.4	0.5
Dedza	100.0	0.5	1.3	2.7	16.6	33.4	36.4	1.1	7.1	0.9
Ntcheu	100.0	0.4	2.8	19.9	7.2	10.2	40.8	1.6	17.1	0.2
SOUTHERN	100.0	2.7	8.2	13.9	8.5	22.7	27.1	1.4	13.7	1.8
Urban	100.0	14.0	3.6	35.5	4.1	3.9	6.8	0.5	1.2	0.5
Rural	100.0	0.6	3.8	10.1	9.3	26.0	30.7	1.6	15.9	2.0
Mangochi	100.0	0.9	3.8	5.3	11.4	25.9	39.0	1.1	12.9	9.7
Machinga	100.0	0.9	4.6	14.3	5.6	36.2	27.1	1.3	8.9	1.1
Zomba	100.0	3.3	7.7	16.6	9.8	22.0	26.6	1.5	11.7	1.0
Chiradzulu	100.0	0.9	2.0	2.5	10.4	19.2	44.6	2.7	17.6	0.2
Blantyre	100.0	9.3	25.0	24.8	5.7	10.9	14.3	0.8	6.0	0.2
Mwanza	100.0	0.9	3.7	5.6	9.1	17.8	30.9	3.6	27.2	1.1
Thyolo	100.0	1.2	3.3	3.1	16.0	47.0	18.7	2.0	8.4	0.3
Mulanje	100.0	0.7	6.0	16.3	10.0	23.0	18.1	1.7	23.5	0.5
Phalombe	100.0	0.4	3.5	21.8	6.5	23.9	21.6	2.3	17.8	2.2
Chikwawa	100.0	1.4	5.6	13.4	4.6	19.1	32.9	1.1	21.1	0.8
Nsanje	100.0	0.8	2.0	0.6	1.9	7.3	68.1	0.8	18.5	0.1
Balaka	100.0	0.7	6.2	28.1	5.4	11.0	32.1	0.8	15.3	0.5



8.4.2 Source of Energy

Main source of energy was collected during the Census both for lighting and for cooking. This discussion will first look at energy for lighting and then energy for cooking.

8.4.2 (i) Source of Energy for Lighting

Six main sources of energy for lighting were collected during the census in Malawi. These include firewood, electricity, paraffin, gas, candles and grass. An individual uses at least one of these energy sources with some few differences depending on places of residence; in terms of rural or urban; and region. Of the six energy sources, paraffin is used mostly used in Malawi in all regions and districts. Table 8.12 presents the distribution of population by source of energy for lighting. For Malawi, it is noted that 90 percent use paraffin for lighting followed by 5 percent using electricity and 2 percent each for firewood and grass.

The pattern is quite different between rural and urban areas. In urban areas 68 percent use paraffin, 28 percent use electricity and 3 percent use candles for lighting compared to rural areas where 94 percent use paraffin, 2 percent each use grass and firewood and only 1 percent use electricity for lighting. These results show that paraffin is a main source of energy for lighting in both rural and urban areas and the use of electricity in Malawi is restricted in urban areas.

Table 8.12 Source of energy for lighting

	Total	Firewood	Electricity	Paraffin	Gas	Candles	Grass	None
Malawi	100.0	1.8	4.9	90.1	0.1	0.5	2.1	0.5
Urban	100.0	1.0	27.5	68.2	0.1	2.6	0.5	0.2
Rural	100.0	1.9	1.1	93.8	0.1	0.1	2.4	0.5
NORTHERN	100.0	1.7	3.3	91.9	0.1	0.2	2.2	0.5
Urban	100.0	0.8	20.3	77.3	0.4	0.9	0.1	0.2
Rural	100.0	1.9	0.9	94.1	0.1	0.1	2.5	0.5
Chitipa	100.0	4.2	1.2	89.7	0.0	0.2	3.9	0.8
Karonga	100.0	1.6	2.6	95.0	0.0	0.1	0.5	0.2
NkhataBay	100.0	1.2	2.2	95.3	0.0	0.1	1.0	0.1
Rumphi	100.0	1.4	2.4	93.4	0.5	0.2	1.8	0.4
Mzimba	100.0	1.5	4.6	90.1	0.1	0.3	2.8	0.6
Likoma	100.0	0.1	1.0	98.9	0.0	0.0	0.0	0.0
CENTRAL	100.0	1.3	4.4	89.6	0.1	0.6	3.4	0.5
Urban	100.0	1.0	26.5	68.0	0.0	3.5	0.8	0.2
Rural	100.0	1.4	0.9	93.1	0.1	0.2	3.8	0.5
Kasungu	100.0	1.4	2.2	91.6	0.1	0.3	4.0	0.5
Nkhotakota	100.0	0.7	2.7	94.2	0.0	0.1	2.1	0.2
Ntchisi	100.0	0.9	0.9	89.6	0.2	0.1	7.4	0.9
Dowa	100.0	1.2	1.6	88.6	0.3	0.1	7.6	0.6
Salima	100.0	1.3	3.7	90.5	0.1	0.1	3.8	0.4
Lilongwe	100.0	1.1	9.8	84.3	0.1	1.5	2.8	0.5
Mchinji	100.0	0.6	1.4	94.1	0.0	0.3	2.0	0.5
Dedza	100.0	2.3	1.3	93.6	0.1	0.1	2.2	0.5
Ntcheu	100.0	1.4	0.9	95.0	0.0	0.5	1.8	0.3
SOUTHERN	100.0	2.2	5.7	90.1	0.1	0.5	1.0	0.5
Urban	100.0	1.0	29.9	66.3	0.1	2.2	0.3	0.2
Rural	100.0	2.4	1.4	94.3	0.1	0.1	1.1	0.5
Mangochi	100.0	1.9	2.0	94.5	0.0	0.1	1.0	0.5
Machinga	100.0	1.8	1.4	93.2	0.1	0.1	2.5	0.9
Zomba	100.0	0.8	5.8	92.2	0.1	0.3	0.6	0.3
Chiradzulu	100.0	0.6	1.5	96.4	0.0	0.1	1.1	0.4
Blantyre	100.0	0.9	20.9	75.7	0.1	1.8	0.4	0.2
Mwanza	100.0	1.8	1.8	93.6	0.2	0.3	1.4	0.8
Thyolo	100.0	1.2	2.5	95.7	0.1	0.1	0.3	0.2
Mulanje	100.0	1.2	2.0	95.7	0.1	0.2	0.3	0.6
Phalombe	100.0	1.1	0.5	96.6	0.1	0.1	1.2	0.6
Chikwawa	100.0	5.8	3.1	88.2	0.1	0.1	1.8	0.9
Nsanje	100.0	17.0	1.8	79.3	0.0	0.1	1.2	0.6
Balaka	100.0	1.2	1.8	94.6	0.0	0.6	1.5	0.4

8.4.2 (ii) Source of Energy for Cooking

Table 8.13 presents the distribution of source of energy for cooking. The sources collected were firewood, charcoal, electricity, paraffin, gas, dung and grass. The census results shows that firewood is the main source of energy for cooking in Malawi (94 percent) followed by charcoal and electricity (2 percent each). In rural areas, 98 percent of the population uses firewood. While in urban areas 69 percent use firewood, 16 percent use charcoal, 13 percent use electricity and 2 percent use paraffin. This pattern is similar throughout the country at regional and district levels.

Table 8.13 Source of energy for cooking

	Total	Firewood	Charcoal	Electricity	Paraffin	Gas	Dung	Grass	None
Malawi	100.0	94.3	2.5	2.2	0.4	0.0	0.0	0.4	0.1
Urban	100.0	69.0	15.5	13.3	1.8	0.1	0.0	0.1	0.2
Rural	100.0	98.5	0.4	0.4	0.2	0.0	0.0	0.4	0.1
NORTHERN	100.0	98.0	0.6	1.1	0.2	0.0	0.0	0.0	0.1
Urban	100.0	88.2	3.8	7.1	0.6	0.0	0.0	0.0	0.2
Rural	100.0	99.5	0.1	0.2	0.1	0.0	0.0	0.0	0.1
Chitipa	100.0	98.5	1.2	0.1	0.0	0.0	0.0	0.0	0.1
Karonga	100.0	98.8	0.3	0.7	0.1	0.0	0.0	0.0	0.1
NkhataBay	100.0	99.0	0.3	0.4	0.2	0.0	0.0	0.0	0.1
Rumphi	100.0	98.7	0.4	0.6	0.2	0.0	0.0	0.0	0.1
Mzimba	100.0	97.3	0.7	1.7	0.2	0.0	0.0	0.0	0.1
Likoma	100.0	99.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0
CENTRAL	100.0	96.3	0.5	2.3	0.6	0.0	0.0	0.2	0.1
Urban	100.0	79.4	2.9	14.4	2.9	0.1	0.1	0.1	0.2
Rural	100.0	99.0	0.2	0.4	0.2	0.0	0.0	0.2	0.1
Kasungu	100.0	98.7	0.2	0.7	0.3	0.0	0.0	0.0	0.1
Nkhotakota	100.0	97.6	0.3	1.6	0.3	0.0	0.0	0.0	0.1
Ntchisi	100.0	99.4	0.1	0.2	0.2	0.0	0.0	0.0	0.1
Dowa	100.0	98.7	0.1	0.6	0.3	0.0	0.0	0.0	0.1
Salima	100.0	96.8	0.3	1.5	0.2	0.0	0.0	1.1	0.1
Lilongwe	100.0	91.5	1.2	5.7	1.3	0.0	0.0	0.2	0.1
Mchinji	100.0	98.9	0.4	0.4	0.2	0.0	0.0	0.0	0.2
Dedza	100.0	98.8	0.2	0.2	0.2	0.0	0.0	0.5	0.1
Ntcheu	100.0	99.3	0.3	0.2	0.2	0.0	0.0	0.0	0.1
SOUTHERN	100.0	91.6	4.8	2.5	0.3	0.0	0.0	0.6	0.2
Urban	100.0	56.3	28.3	13.9	1.2	0.1	0.1	0.0	0.3
Rural	100.0	97.9	0.6	0.4	0.2	0.0	0.0	0.8	0.1
Mangochi	100.0	98.7	0.3	0.6	0.2	0.0	0.0	0.0	0.1
Machinga	100.0	99.0	0.2	0.3	0.2	0.0	0.0	0.2	0.1
Zomba	100.0	96.0	0.7	2.6	0.2	0.0	0.0	0.3	0.1
Chiradzulu	100.0	92.3	0.3	0.5	0.2	0.0	0.0	6.4	0.3
Blantyre	100.0	62.8	25.6	10.3	0.9	0.1	0.1	0.0	0.2
Mwanza	100.0	98.2	1.1	0.5	0.2	0.0	0.0	0.0	0.1
Thyolo	100.0	98.5	0.3	0.6	0.2	0.0	0.0	0.3	0.1
Mulanje	100.0	98.0	0.3	0.4	0.2	0.0	0.0	0.9	0.1
Phalombe	100.0	98.5	0.2	0.1	0.2	0.0	0.0	1.0	0.1
Chikwawa	100.0	97.1	0.3	1.1	0.2	0.0	0.0	1.0	0.3
Nsanje	100.0	98.7	0.1	0.2	0.2	0.0	0.0	0.6	0.2
Balaka	100.0	98.7	0.6	0.4	0.2	0.0	0.0	0.0	0.1

8.4.3 Availability of Toilet Facilities

There are four main categories of toilets facilities that were collected in the census and these are flush toilets, VIP latrines, pit latrines and no toilets. According to the results it is clear that in Malawi as the whole very large population percentage of about 74% use pit latrines both in urban and rural areas. About 22% of the population has no toilets in Malawi. As 3 percent of the population does not have toilets in urban areas, 25 percent do not have in rural areas. Flush toilets (18 percent) and VIP latrines (4 percent) are restricted to urban areas.

At regional level, the central region has the highest proportion with no toilets (24 percent) followed by the south (21 percent) and the north (19 percent). At district level, only Chitipa (7 percent), Blantyre (8 percent), and Rumphu (10 percent) have the least with no toilets. On the other hand Chikwawa (58 percent), Nsanje (54 percent), Salima (39 percent), Nkhoskhota (36 percent), Mchinji (33 percent) and Phalombe (32 percent) have the highest proportion of their population with no toilets.

Since 1987 there has been a general improvement in the availability of toilets facilities. For Malawi 33 percent had no toilets in 1987 compared to 22 percent in 1998. At regional level, in 1987 about 30 percent in the north and in the south had no toilets and 36 percent in the central had no toilets. At district level Chikwawa had 69 percent no toilets in 1987 compared to 58 percent in 1998, Nsanje had 62 percent no toilets in 1987 compared to 54 percent in 1998.

Table 8.14 Access to Toilet facilities

	Total Persons	Flush	VIP Latrines	Traditional Pit latrine	None
Malawi	100.0	3.4	1.3	73.5	21.8
Urban	100.0	18.2	4.1	74.3	3.4
Rural	100.0	0.0	0.8	74.3	24.9
NORTHERN	100.0	2.6	1.6	77.3	18.5
Urban	100.0	15.1	4.4	75.7	4.7
Rural	100.0	0.8	1.2	77.5	20.5
Chitipa	100.0	1.0	1.3	91.2	6.6
Karonga	100.0	2.7	1.7	76.8	18.8
NkhataBay	100.0	1.9	1.9	78.7	17.5
Rumphi	100.0	2.0	1.8	86.6	9.5
Mzimba	100.0	3.3	1.5	72.1	23.1
Likoma	100.0	0.9	2.2	81.8	15.1
CENTRAL	100.0	3.3	0.9	72.3	23.5
Urban	100.0	17.5	3.1	75.6	3.9
Rural	100.0	1.0	0.6	71.7	26.6
Kasungu	100.0	1.6	0.7	76.3	21.4
Nkhotakota	100.0	6.5	0.9	56.4	36.2
Ntchisi	100.0	0.7	0.3	77.0	22.0
Dowa	100.0	1.4	0.7	68.3	29.7
Salima	100.0	3.0	1.3	57.1	38.7
Lilongwe	100.0	6.5	1.3	71.6	20.6
Mchinji	100.0	1.0	1.0	65.0	33.0
Dedza	100.0	0.9	0.6	82.5	16.1
Ntcheu	100.0	0.6	0.8	84.5	14.0
SOUTHERN	100.0	3.7	1.5	73.5	21.2
Urban	100.0	19.5	4.8	72.9	2.8
Rural	100.0	0.9	0.9	73.6	24.5
Mangochi	100.0	1.4	1.2	79.8	17.7
Machinga	100.0	1.1	1.0	74.1	23.7
Zomba	100.0	4.9	1.2	80.2	13.7
Chiradzulu	100.0	1.3	0.8	86.6	11.4
Blantyre	100.0	12.3	3.7	75.9	8.1
Mwanza	100.0	1.2	0.9	73.9	24.0
Thyolo	100.0	1.6	1.3	83.7	13.4
Mulanje	100.0	1.2	0.7	77.4	20.7
Phalombe	100.0	0.6	0.6	67.3	31.6
Chikwawa	100.0	2.9	1.5	38.1	57.6
Nsanje	100.0	1.1	0.9	43.7	54.3
Balaka	100.0	1.1	1.1	77.0	20.8

8.5 Access Household Assets

8.5.1 Access to Radio

Table 8.15 presents the distribution of persons with at least one radio, at least one bicycle and at least one oxcart. It is noted from this table about 50 percent of the population in Malawi has at least one radio this is a tremendous increase from 19 percent in 1987. However more radios are found in urban areas 76 percent than in rural areas 46 percent. At district level, the highest percent with radios are in Blantyre (68 percent), Rumphi (60 percent), Kasungu (56 percent) Zomba, Mzimba and Nkhotakota (53 percent), Lilongwe and Chikwawa (52 percent) and lowest percent with radios in Dedza (36 percent).

8.5.2 Access to Bicycles and Oxcarts

As a mode of transport, information on bicycles and oxcarts was also collected. In Malawi 41 percent of persons has access to a bicycle. This is higher in rural areas 42 percent than in urban areas 31 percent. At regional level is the highest with 43 percent followed by the south 40 percent and lastly the north 37 percent.

At district level the highest is Machinga, Phalombe and Mchinji (56 percent) followed by Chikwawa (54 percent) and Kasungu (52 percent). Oxcarts in Malawi are available to only 5 percent of the population. Oxcarts are also predominant in rural areas (6 percent) than urban areas (2 percent). At regional level, 8 percent of the population in the north has an access to oxcarts compared to 7 percent in the central and 2 percent in the south. At district level, Kasungu and Mchinji with 12 percent of either population having access to oxcart is the highest. Mzimba and Dowa follow this at 10 percent and then Ntchisi and Dedza (9 percent).

Table 8.15 Percentage Distribution of persons with at least one radio, at least one bicycle and at least one oxcart

	Total Persons	With at least One radio	With at least One bicycle	With at least One oxcart
Malawi	100.0	49.9	40.7	5.2
Urban	100.0	75.7	30.7	2.5
Rural	100.0	45.6	42.4	5.6
NORTHERN	100.0	51.1	36.8	7.5
Urban	100.0	74.9	42.5	4.8
Rural	100.0	47.6	36.0	7.9
Chitipa	100.0	39.6	30.9	2.6
Karonga	100.0	46.7	44.2	5.7
NkhataBay	100.0	50.5	21.3	3.2
Rumphi	100.0	60.5	40.1	7.3
Mzimba	100.0	52.9	39.6	10.4
Likoma	100.0	57.3	4.2	1.6
CENTRAL	100.0	47.6	42.7	7.3
Urban	100.0	73.8	31.8	2.4
Rural	100.0	43.4	44.4	8.1
Kasungu	100.0	56.3	52.3	11.8
Nkhotakota	100.0	52.5	38.6	1.5
Ntchisi	100.0	44.7	37.6	9.0
Dowa	100.0	44.3	42.4	10.0
Salima	100.0	41.3	44.2	3.3
Lilongwe	100.0	52.3	41.4	5.5
Mchinji	100.0	46.1	56.0	11.5
Dedza	100.0	35.6	40.4	9.0
Ntcheu	100.0	42.4	30.6	4.6
SOUTHERN	100.0	51.6	40.0	2.6
Urban	100.0	77.3	27.1	2.1
Rural	100.0	47.0	42.3	2.7
Mangochi	100.0	42.2	41.4	2.5
Machinga	100.0	48.2	55.8	3.7
Zomba	100.0	53.0	46.3	2.8
Chiradzulu	100.0	46.9	35.1	1.6
Blantyre	100.0	68.2	23.1	2.0
Mwanza	100.0	47.4	32.6	5.1
Thyolo	100.0	49.8	27.0	1.6
Mulanje	100.0	46.3	45.6	1.6
Phalombe	100.0	44.6	55.5	3.2
Chikwawa	100.0	52.2	53.9	3.4
Nsanje	100.0	46.7	39.3	5.6
Balaka	100.0	51.1	44.1	2.6

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