

PREFACE



The Malawi Growth and Development Strategy (MGDS) was launched in July 2007 and shall run for five years. The MGDS is the overarching development strategy for the country. The Government of Malawi is fully cognisant of the need for quality statistics in policy formulation, decision making, targeting of resources and in the monitoring and evaluation of the MGDS and the attainment of Millennium Development Goals (MDGs). The Government, through the National Statistical Office, conducts a Population and Housing Census every 10 years in order to address the data requirements of these frameworks.

Malawi has regularly participated in the United Nations decennial census programs and her fifth and latest participation was through the successful conduct of the Population and Housing Census by the National Statistical Office (NSO) in June 2008. As a primary source of socio-economic and demographic data, the Census provides the country with important information to foster national development, good governance and decentralization.

I would like to acknowledge the support received from our development partners and individuals during the post-enumeration period. Specifically, I wish to thank the United Nations Population Fund (UNFPA) for providing funding and technical assistance and for its role in coordinating all other development partners: the Department for International Development (DFID) of the British Government, the Irish Aid from the Irish Government, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) from the German Government, the European Commission (EC), the African Development Bank (AfDB) and United Nations Statistical Division (UNSD). I would also like to express my gratitude to other government ministries and departments for their cooperation and support during the census process.

Finally, I would like to thank staff from the National Statistical Office for their professionalism and dedication in undertaking the post-enumeration activities especially data analysis and preparation of thematic reports. This fertility report is among such reports that will be prepared by the NSO.

Abbie Marambika Shawa, MP
Minister of Development Planning and Cooperation

FOREWORD



This fertility report presents analytical results based on data from the 2008 Population and Housing Census that was conducted from 8th to 28th June 2008 by the National Statistical Office. The enumeration was successfully conducted by large teams of enumerators and supervisors after undergoing rigorous training prior to deployment. The planning and organizational structure put in place ensured high household coverage. The report provides the status, trends and differentials of fertility and fertility related issues in Malawi. Specific results are given on: age-sex data quality assessment; reported fertility data; indirect estimation of fertility; differentials in current fertility; fertility and nuptiality; lifetime fertility; reproduction; adolescent motherhood; infertility and childlessness.

Where possible, the 2008 Census results have been compared with those from previous other sources of data, mainly the 1977, 1987 and 1998 censuses as well as the 2004 Malawi Demographic and Health Survey.

The NSO has produced other census reports, including the Census Preliminary Report, released in November 2008 and the Main Census Report, released in November 2009. In order to increase the utility of the census data, the NSO has prepared thematic reports providing detailed analytical findings of the 2008 Census. The thematic reports have been prepared by teams of local experts in the different disciplines.

This fertility thematic report is among a series that have been produced by the NSO. Others include: evaluation of the census data quality; population structure by sex and age; spatial distribution of the population (including urbanization); economic characteristics of the population; mortality; migration; marital status and nuptiality; household and living conditions; population projections; women in Malawi; children and youth; population with disability; elderly; and literacy and education. Other census products include demographic atlas, district monographs, and poverty maps.

In carrying out fertility data analysis for this report, differentials by sex and rural-urban residence were undertaken. Other differentials undertaken include socio-economic characteristics as well as spatial distribution of the population.

I wish to acknowledge the dedication and professionalism of all the team members and others who spent many hours in analyzing data and preparing this report.

Charles Machinjili
Commissioner of Statistics

EXECUTIVE SUMMARY

Fertility is one of the dynamics of population change in all countries including Malawi. Estimates on levels, patterns and trends of fertility are important for socio-economic planning, monitoring and evaluation of development programmes, policies and projects.

The 2008 census collected information on children ever born and births in households during the preceding 12 months.. The data was analyzed and provides estimates on levels and trends of fertility in the country. Considering that information on number of births is not very reliable, both direct and indirect techniques are used in the analysis of fertility.

The census revealed that the Total Fertility Rate (TFR) for 2008 is 6.0 compared to 7.5 in 1977, 7.4 in 1987 and 6.5 in 1998. Estimates based on the Demographic and Health survey (DHS) show almost similar patterns: the TFR was 6.7 in 1992, 6.3 in 2000 and 6.0 in 2004. This shows that TFR is generally high in Malawi although it has been declining over the past three decades. The decline however is minimal compared to several programmes that Government has been implementing over the same period.

The data shows that there are differentials between the urban and rural areas. The TFR is higher in rural areas (6.3) than in urban areas (4.6). With regard to regional differentials, the estimates are 6.1 in northern region, 6.4 in central region and 5.7 in southern region. At district levels, the highest TFR were recorded in Ntchisi (7.1), Mchinji (6.9), Kasungu (6.8), and Nsanje (6.8) and the lowest were in Likoma (4.6), Blantyre rural (5.4), Chiradzulu (5.5) and Thyolo (5.6).

It was observed that differences in fertility were mainly due to different socio-economic characteristics of the women. These include a woman's age, marital status, level of education, area of residence and other background characteristics. Extended formal education is one of the main reasons for the postponement of marriage among educated women. Fertility is highest among women with no formal education and lowest among those with university education or higher. At national level, women with no formal education have a TFR of 6.5; women who went up to preschool level have 6.5, women with primary education have 6.2, women with secondary education have a TFR of 4.3 and women with university or higher education have a TFR of 3.0.

In Malawi marriage is nearly universal and 2008 census results reveal that married women have a higher fertility rate as opposed to women of other marital status. This is as expected since married women are highly exposed to risk of pregnancy and childbearing.

The total fertility rate according to marital status was 5.9 for married women, 5.0 for the widowed, 4.8 for the divorced/ separated and 2.5 for women who have never married.

The census also showed that estimated mean age at first marriage was 21.8 years, with males at 23.9 years and females 19.8 years. In urban areas, mean age at first marriage for females is 21.9 years while for males is at 25.9. For rural areas, the estimate is 19.8 years for females and 23.4 years for males.

Gross Reproductive Rate (GRR), Net Reproductive Rate (NRR) and General Fertility Rate (GFR) were also analysed according to residence and age. The GFR was 3.0 and there are differences between urban (2.3) and rural (3.1). With regard to NRR, the national average is 2.3, of which 1.8 is urban and 2.3 is rural. GFR for Malawi has increased from 150 in 1998 to 173. Estimates on adolescent fertility show that by the time a woman reaches the age of 20 in Malawi, she would have borne 1 child. These estimates differ among the urban and rural areas and also among regions. The estimates (on adolescent fertility) for urban and rural areas are 0.68 and 1.02 respectively.

The report also analysed childlessness and infertility. The proportion of childlessness decreases rapidly with age; from 75.7 percent in the age group 15-19 to 8.1 percent in the age group 25-29. The estimates for infertility were 3.6 percent in 2008 as compared to 4.1 and 3.8 in 1987 and 1998 respectively. There are minimal differences between the urban and rural areas whose estimates are 4.0 and 3.6 respectively.

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ABBREVIATIONS

AfDB	African Development Bank
AIDS	Acquired Immunodeficiency Syndrome
ASFR	Age –Specific Fertility Rate
CBR	Crude Birth Rate
CEB	Children Ever Born
DHS	Demographic and Health Survey
DfID	Department for International Development
EC	European Commission
GFR	General Fertility Rate
GIS	Geographic Information System
GRR	Gross Reproduction Rate
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HIV	Human Immune Virus
MGDS	Malawi Growth and Development Strategy
MICS	Multiple Indicator Cluster Survey
NRR	Net Reproduction Rate
NSO	National Statistical Office
OMR	Optical Mark Reader
PAS	Population Analysis Spreadsheets
SMAM	Singulate Mean Age at Marriage
TFR	Total Fertility Rate
UNFPA	United Nations Population Fund
UNSD	United Nations Statistical Division
WHO	World Health Organisation

CHAPTER 1 SOURCES AND QUALITY OF FERTILITY DATA

1.1 INTRODUCTION

Censuses and surveys are fundamental sources of demographic data in Malawi. Registration of vital events such as births and deaths is still in its infancy. The registration of these vital events in the long run offers a complete picture of the population at any given time. In the absence of such a system, Malawi has relied on population censuses and demographic sample survey to provide data used in analysis of key demographic indicators on areas such as fertility, mortality and migration. This chapter presents the sources of demographic data in Malawi

1.2 POPULATION AND HOUSING CENSUSES

1.2.1 History of censuses in Malawi

Malawi has conducted several censuses, the first attempt being in 1891 when Malawi was then a British Protectorate. The population count for that year completely excluded Africans. The second population census done in 1901 attempted to include Africans. However, there is very little information regarding these two censuses. The other pre-independence censuses were conducted in 1911, 1921, 1926, 1931 and 1945. Censuses conducted from 1921 to 1931 were people permanently resident in the villages, which was *de jure* in principle. The 1945 census enumerated those present at home on the night of the census making it a *de facto* census.

The first post independence census that included extensive training of enumerators and complete demarcation of enumeration areas was carried out in 1966. The other subsequent censuses which were all *de facto* took place in 1977, 1987 and 1998. The most recent census was conducted in 2008.

1.2.2 The 2008 Population and Housing Census

The 2008 census is the fifth in the post independence period and is part of the United Nations 2010 World Population and Housing Census programme. This census was unique in that it was both *de jure* and *de facto* thus it included both persons absent from their households and people temporarily visiting other households in addition to the present residents.

The 2008 census enumeration lasted for three weeks commencing from 8th to 28th June 2008. Enumerators were deployed to cover the entire country and administered the questionnaire to the household head in regular households. Special arrangements were made for special groups which included those in institutions like schools, hospitals and the homeless.

One of the notable developments in the 2008 census process was the use of scanning technology for data capture. Optical Mark Reader (OMR) scanning technology was used which led to drastic reduction in the time taken for data capture compared to the previous censuses.

The 2008 census collected the usual census attributes such as sex, age, place of birth and residence, parental survivorship, education and literacy status, employment status and industry, marital status, children ever born and children surviving, household amenities and assets and housing conditions. In addition, information was collected that has never been obtained before in Malawi censuses. This information was on disability, maternal deaths in the household and emigrants.

The census collected data on fertility using a question on Children Ever Born (CEB) and a question on births to women in the last twelve months prior to the census. Information on CEB was collected from all women aged 12 years and older, while information on births in the last 12 months prior to the census was collected from all women aged 12-49 years. This information was used to establish the current level of fertility and the levels of lifetime fertility respectively.

1.3 HOUSEHOLD SAMPLE SURVEYS

Household sample surveys are commonly used to obtain demographic data. This is due to the flexibility in the content of survey questionnaires i.e. they cover a wider range of questions hence are able to provide more detailed information. Secondly, these surveys are also able to provide demographic estimates during the inter censal period. . Thirdly they are cheaper sources of demographic data as only part of the households are targeted.

Malawi has been conducting several demographic surveys that have provided enormous demographic information. One of them is the Demographic and Health Survey (DHS) which collects information on fertility using birth histories, children ever born and children surviving, reproductive health, maternal health, child health, immunization and survival, HIV/AIDS, maternal mortality, child mortality, malaria, and nutrition among women and stunted children. Malawi conducted the first DHS in 1992 followed by another DHS in 2000 both of which provided information at national and regional level. The 2004 DHS provided sub regional geographical information for a few districts and it provided estimates for HIV and anaemia prevalence.

Other demographic surveys that have been conducted include the 1971-72 Malawi Population Change Survey, the 1982 Malawi Demographic Survey, the 1984 Malawi Family Formation Survey, the 1994 Malawi Knowledge, Practices and Attitudes in Health Survey and the 2006 Multiple Cluster Indicator Survey.

1.4 QUALITY OF CENSUS DATA

Quality is one of the most important aspects of data as it enhances its credibility, increases its potential use and benefits to be derived from it. . A population and housing census is a huge undertaking and if no proper planning and implementation is taken, the census data quality can be compromised resulting in poor quality data. The data can have content as well as coverage errors. Content errors arise from omission or duplication of the population while content errors are deficiencies in the data arising from the data collection.

Errors affecting the quality of lifetime fertility data are omission, mainly due to recall lapse particularly by women aged 35 years and above. For example, children who died soon after birth, those born before marriage and not living with the mother are usually omitted. Also, errors in such data can and do occur due to wrongful inclusion of still births and foster children among children ever born. Data on current fertility on the other hand is mostly affected by incorrect dating of recent birth.

During the planning of the 2008 Population and Housing Census lessons from previous censuses were taken into account. Efforts were therefore made and a number of strategies were put in place to ensure that quality of the census data was not compromised due to the use of poor maps, untested methodologies and instruments, inadequate supervision, poor training, inadequate support from general public and inadequacies in data processing.

Precautions were taken by National Statistical Office to ensure data of high quality at all stages of the census planning, cartography, questionnaire design, enumeration and data processing. A number of strategies were put in place for the 2008 Population and Housing Census to address the issues mentioned above to ensure quality census data. These included:

- The up-dating of the 1998 Census maps and demarcating the country into small administrative areas to ensure complete coverage thus avoid omission or double counting during the enumeration.
- In up-dating census maps, the Geographic Information System (GIS) was used and it was the first time Malawi used computerized maps in the census enumeration.
- The development of census questionnaires through a consultative process with government ministries and departments, the private sector, university and research institutions, supporting partners as well as the general public.
- Preparation of comprehensive supervisors' and enumerators' instruction manuals to act as a guide to the census training and enumeration.
- The pre-testing of the questionnaires and other procedures to correct any deficiencies and plan for the enumeration.
- Providing adequate training of field staff at all levels of operations more especially enumerators.
- Intensive supervision at all levels: field, control centre, district, zone and national.

- Providing a comprehensive census advocacy campaign by using all channels available in order to get public support.
- Checking and editing questionnaires in the field.
- Checking and verifying completeness of coverage once the enumeration area had been completed.
- Ensuring that all completed questionnaires and their summaries for all the enumeration areas were accounted for and returned safely to the Census headquarters for processing.
- Use of scanning technology for data capture to shorten the census data capture process so as to avail data sooner.
- Undertaking key corrections and other edits immediately after scanning the data.

CHAPTER 2 LEVELS, TRENDS AND DIFFERENTIALS OF FERTILITY

2.1 INTRODUCTION

Fertility, mortality and migration are the dynamics of population change. Fertility analysis is important in understanding past, current and future trends of population size, composition and growth. Information on fertility levels, patterns and trends experienced by a country is important for socio-economic planning, monitoring and evaluating programs.

In this chapter, fertility estimates are presented at national, rural/urban, regional and district levels. The indices of fertility levels and trends used are average children ever born (CEB), total fertility rate (TFR), age- specific fertility rate (ASFR) and crude birth rate (CBR).

Due to errors of under reporting on fertility information in censuses, it is recommended that indirect demographic techniques of data adjustment be used to reduce substantial errors in direct estimates of fertility levels and trends. The two approaches are presented in this chapter.

2.2 FERTILITY INDICATORS

This section defines the fertility indicators that are frequently used in fertility analysis. The analysis is performed using information on births in the last 12 months prior to the census. This information is collected from all women aged 15-to 49 years.

2.2.1 Crude Birth Rate

The simplest and most common measure of fertility is the crude birth rate (CBR). The CBR is defined as the number of births in a year per 1,000 mid-year population.

$$\frac{B}{P} * 1,000$$

where: **B** is births in a year and **P** is the total population or mid-year population.

In the calculation of CBRs as well as other measures of fertility for the census year, the census count of the population is commonly used as opposed to the mid- year population. Although the CBR is a valuable measure of fertility, particularly in indicating directly the contribution of fertility to the population growth rate, its analytical utility is extremely limited. This is because it is affected by many factors, particularly the specific composition of a population with respect to age, sex and other characteristics.

The CBR is not a good measure in comparing levels of fertility; however, it is used because it is simple to calculate and is easy to explain.

Table 2. 1 Crude birth rate, regions and districts; 1977, 1987, 1998 and 2008

Area	Crude Birth Rate			
	1977	1987	1998	2008
Malawi	48.3	41.2	35.7	39.5
Northern	47	42.4	36.6	39.9
Chitipa	42.5	37.7	35.4	39.4
Karonga	50.4	37.3	38.1	43.5
Nkhata-Bay	43.2	40.5	33.7	38.4
Rumphi	48.7	43.8	36.4	39.5
Mzimba	47.9	45.6	37.3	39.3
Likoma	*	*	29.2	31.2
Central	52.5	44.9	35.4	40.5
Kasungu	51.5	46.3	44.9	40.4
Nkhota kota	49.7	42.5	40.3	42.2
Dowa	57.5	45.2	37.6	39.7
Ntchisi	48.6	44.7	34.8	42.6
Salima	50.4	43	38	43.4
Lilongwe	53.9	45.6	39.2	39.4
Mchinji	51.9	48.4	42.7	44.4
Dedza	52.9	45.4	38.1	40
Ntcheu	47.6	40.7	39.1	38.4
Southern	45.3	38	35.8	38.5
Mangochi	41.8	39.3	39.4	39.7
Machinga	45.8	39.1	38.1	42.5
Zomba	46.8	36.4	37	38.3
Chiradzulu	47.2	38.6	36.1	35.2
Blantyre	39.2	35.9	32	33.5
Mwanza	47.8	43.3	41.4	37.8
Mulanje	49.2	37.1	35.9	38.2
Thyolo	47.7	39	34.8	36.4
Chikwawa	42.4	38.4	34.1	40.6
Nsanje	47.9	38.3	32.9	40.8
Phalombe	*	*	37.1	43.7
Balaka	*	*	35.2	42
Neno	*	*	*	43

**Note: There are districts which were created after a particular census was conducted. In this analysis we are presenting the situation as at the time of each census.*

*Source: 1987 Population and Housing Census Volume II Population Characteristics
1998 Population and Housing Census final report
2008 Population and Housing Census Final Report*

The CBRs for 1977, 1987, 1998 and 2008 censuses per district, region and Malawi as a whole are given in Table 2.1. Caution must be exercised in comparing these rates across years as errors of different magnitude due to underreporting of births are prevalent in all these censuses. For example, it was established that in the 1977 census, births were underreported by 10.1 percent (Malawi Population Census 1977 Analytical Report Vol. II) while in the 1998 census, births were found to be underreported by as much as 35 percent (1998 Census Analytical Report).

It should be noted however, that regardless of the underreporting of births, CBR in Malawi is quite high compared to other sub Saharan African countries. For instance, the CBR for Malawi is 39.5 births per 1,000 persons. At regional level there is not much variation in the CBR. The central region at 40.5, the northern region at 39.9 and the southern region at 38.5 all these indicate high rates. At district level, the following districts have quite high levels of CBR: Mchinji (44.4), Phalombe (43.7), Karonga (43.5), Salima (43.4), Neno (43.0), Machinga (42.5) and Balaka (42). The lowest CBRs are reported for Blantyre (33.5) and Likoma (31.2)

It should also be observed that such high levels have been prevalent for the last 30 years since Malawi started collecting fertility data. These high birth rates may have contributed to the high infant and child mortality and more especially maternal mortality in Malawi.

2.2.2 General Fertility Rate

Age and sex compositions of a population have a strong influence on the level of its CBR. Therefore measures of fertility that are less affected by differences in age and sex composition from one population group to another are more useful for inter-area and inter-group comparisons.

General fertility rate is one such measure and is defined as the number of births per 1,000 women in the childbearing age. It may be presented as follows:

$$\frac{B}{P_{f15-49}}$$

where : **B** is the number of births in a year and **P_{f15-49}** is number of women aged 15 to 49 years.

The total number of births, regardless of the mother's age, is used as the numerator and the female population 15-49 years is used as the denominator. The advantage of the general fertility rate is that the measure relates births to the potential mothers within the female population i.e. those women aged between 15 and 49 years.

In Malawi, the general fertility rate in 2008 was 173 births for every 1,000 women in the reproductive age group (15-49 years). This is compared to 150 births per 1,000 women in 1998. This difference is noted in all areas of analysis, regions and districts. This may not

however, mean an increase in fertility as evidence has shown that during the 1998 census births were underreported by as much as 35 percent and for 2008 births are estimated to have been underreported as well.

Table 2. 2 General fertility rate for Malawi by regions and districts, 1998 and 2008

Area	General Fertility Rate	
	1998	2008
Malawi	150	173
Northern	164	177
Chitipa	154	177
Karonga	155	195
Nkhata-Bay	140	169
Rumphu	150	179
Mzimba	182	173
Likoma	121	150
Central	152	178
Kasungu	199	183
Nkhota kota	175	194
Dowa	164	174
Ntchisi	154	195
Salima	164	195
Lilongwe	165	168
Mchinji	189	203
Dedza	161	176
Ntcheu	163	170
Southern	145	168
Mangochi	162	178
Machinga	156	192
Zomba	150	169
Chiradzulu	144	153
Blantyre	126	134
Mwanza	172	166
Mulanje	137	164
Thyolo	142	157
Chikwawa	146	184
Nsanje	145	187
Phalombe	201	195
Balaka	154	190
Neno	*	192

*Source: 1998 Population and Housing Census final report
2008 Population and Housing Census Final Report*

Using reported data on fertility in 2008 census gives a total fertility rate (TFR) of 5.2 children per woman as shown in Table 2.3 below. The level is higher as compared to the TFR (4.8) from 1998 census.

Table 2. 3: Calculation of TFR using reported fertility data

Age Group	Women 15-49	Births in last 12 months	ASFR
15-19	635,927	70,737	0.111
20-24	678,071	169,406	0.250
25-29	566,350	130,331	0.230
30-34	405,602	79,232	0.195
35-39	298,004	43,747	0.147
40-44	221,274	15,956	0.072
45-49	174,875	5,599	0.032
			1.037
TFR = 5.2			

Faced with the difficulties of obtaining accurate measures of demographic parameters directly from the censuses and surveys, demographers have developed a set of techniques that allow indirect estimation.

2.3 INDIRECT ESTIMATION OF FERTILITY

This section discusses three indirect methods of estimating TFR namely: Arriaga Method, Brass P/F Ratio Method and Gompertz Relational Model Method. The three methods differ not only in the basic assumptions they demand but also in the input data they require. These methods estimate fertility rates based on census 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. The analysis uses microcomputer programs available such as the population analysis spreadsheet (PAS) developed by the U.S. Bureau of the Census for demographic analysis. The following PAS 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.

2.3.1 Brass P/F Ratio Method

This method was developed by William Brass. It 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 per woman) and the number of births during the 12-month period prior to the census or survey. The method seeks to adjust the level of observed ASFR, which is assumed to

represent the true age pattern of fertility, to agree with the level of fertility indicated by average parity of women in age groups lower than 30 or 35.

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

Observed births were adjusted upwards using the average of the P/F ratios for the 25-29 and 30-34 age groups. Using Brass P/F ratio method, the level of fertility is 6.0.

Table 2. 4: Estimation of Total Fertility Rate based on Brass P/F ratio method:Malawi 2008

AGE	Reported ASFR	Average CEB P(i)	Cumulative fertility Phi(i)	F(i)	P/F ratio	Adjusted ASFR's			
						P2/F2	P3/F3	P4/F4	Avg(P3/F3, P4/F4)
15-19	0.111	0.283	0.556	0.248	1.142	0.158	0.152	0.156	0.154
20-24	0.245	1.532	1.781	1.279	1.197	0.297	0.285	0.294	0.289
25-29	0.230	2.849	2.932	2.485	1.147	0.273	0.261	0.269	0.265
30-34	0.195	4.185	3.909	3.536	1.183	0.229	0.219	0.226	0.223
35-39	0.147	5.214	4.643	4.373	1.192	0.169	0.162	0.167	0.164
40-44	0.072	6.034	5.003	4.841	1.246	0.080	0.076	0.079	0.077
45-49	0.032	6.453	5.163	5.126	1.259	0.031	0.030	0.031	0.030
TFR	5.187					6.182	5.920	6.110	6.015

2.3.2 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. It estimates fertility using data on average number of children ever born by 5-year age groups of females for two censuses and the patterns of fertility (ASFR) for those two censuses.

The principal advantage of the 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.

Using the Arriaga method, the estimated level of fertility was 6.2.

Table 2. 5: Estimation of Total Fertility Rate using Arriaga Method: Malawi, 2008

AGE	1998 census		2008 Census		Adjustment factor	Adjusted ASFR based on Age group 25-34
	CEB	ASFR	CEB	ASFR		
15-19	0.4	0.150	0.283	0.111	1.109	0.2187
20-24	1.7	0.218	1.532	0.250	1.173	0.2769
25-29	3.1	0.154	2.849	0.230	1.295	0.2014
30-34	4.4	0.173	4.185	0.195	1.293	0.2226
35-39	5.5	0.135	5.214	0.147	1.277	0.1705
40-44	6.2	0.081	6.034	0.072	1.265	0.0980
45-49	6.7	0.045	6.453	0.032	1.247	0.0484
		4.778		5.163		6.182

2.3.3 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 by fitting the Gompertz function to reported ASFR and the average number of children ever born by age of the mother and the fertility pattern i.e. the number of births during the 12-month period prior to the census.

This technique was applied to the 2008 Census data to estimate total fertility rate. The results are presented in Table 2.6.

Table 2. 6: Relational Gompertz fertility Models fitted to Data on Current Fertility and Average Parities

Age	ASFR	CEB	Based on CEB only		Based on ASFR and CEB	
			2+2 points	3+3 points	2+2 points	3+3 points
15-19	0.111	0.283	5.624	5.716	5.498	4.950
20-24	0.245	1.532	6.491	7.153	6.163	6.518
25-29	0.230	2.849	6.138	6.751	5.862	6.350
30-34	0.195	4.185	6.205	6.680	6.002	6.428
35-39	0.147	5.214	6.169	6.459	6.051	6.327
40-44	0.072	6.034	6.293	6.407	6.250	6.362
45-49	0.032	6.453	6.475	6.492	6.470	6.486
Average			6.199	6.523	6.042	6.203

2+2 points is based on the age group 15-19 to 35-39

3+3 points is based on the age group 15-19 to 45-49

It is noted that the total fertility rate of Malawi using Gompertz Relational Model is 6.0. This is based on data for both ASFR and CEB for age groups 15-39 (2+2 points).

2.3.4 Determining the level of fertility in Malawi

In establishing the level of fertility in the 2008 Census, the results obtained from the three techniques for indirect estimation are indicated in Table 2.7, Arriaga method gives estimated TFR of 6.2, Gompertz Relational Model gives an estimate of 6.2 (using CEB only) and 6.0 (using both CEB and ASFR) and P/F Brass method gives estimates of 6.2 using P2/F2, 5.9 using P3/F3, 6.1 using P4/F4 and 6.0 using an average of P3/F3 and P4/F4.

Table 2. 7: Fertility Estimates based on three Indirect Methods

Brass				Gompertz Relational Model		Arriaga
P2/F2	P3/F3	P4/F4	Avg(P3/F3,P4/F4)	CEB	CEB+ASFR	
6.182	5.920	6.110	6.015	6.199	6.042	6.182

Brass and Gompertz methods yield fertility estimates that are close to each other compared to Arriaga method. For reasons of comparability with previous censuses, the estimates from Gompertz Model are preferred to estimates from the Brass method. The estimated TFR for Malawi in 2008 is 6.0. The estimate of 6.0 is chosen because it is

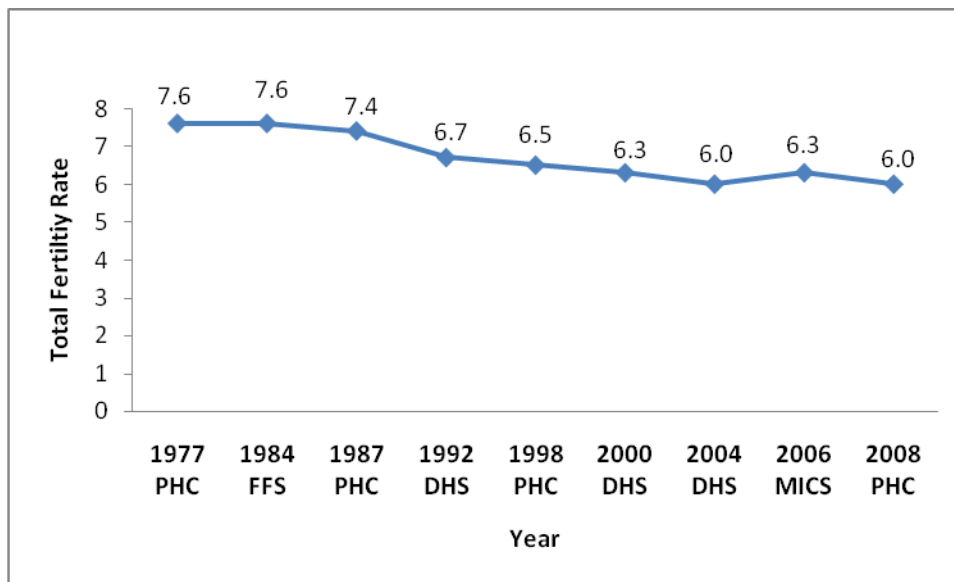
based on the use of a combination of both lifetime and current fertility data. This means that on average a Malawian woman is expected to bear 6 children by the time she completes her child bearing period if she experienced the prevailing age specific fertility rates.

Considering the assumptions, limitations and advantages of each of the above techniques, the Gompertz Relational Model Method is preferred to the other methods and shall be used to estimate fertility levels in Malawi and other fertility differentials.

2.4 FERTILITY PATTERNS AND TRENDS

Information on children ever born and births during the 12-month period prior to census or survey has been collected since the 1977 Census thus making it possible to employ the same estimation procedures to determine the levels of fertility from each source. Information from a total of seven different surveys and censuses is used in this analysis to determine and establish fertility patterns and trends in Malawi during the 30 year period prior to the 2008 census.

Figure 2. 1: Trends in Total Fertility Rate (TFR), 1977 – 2008



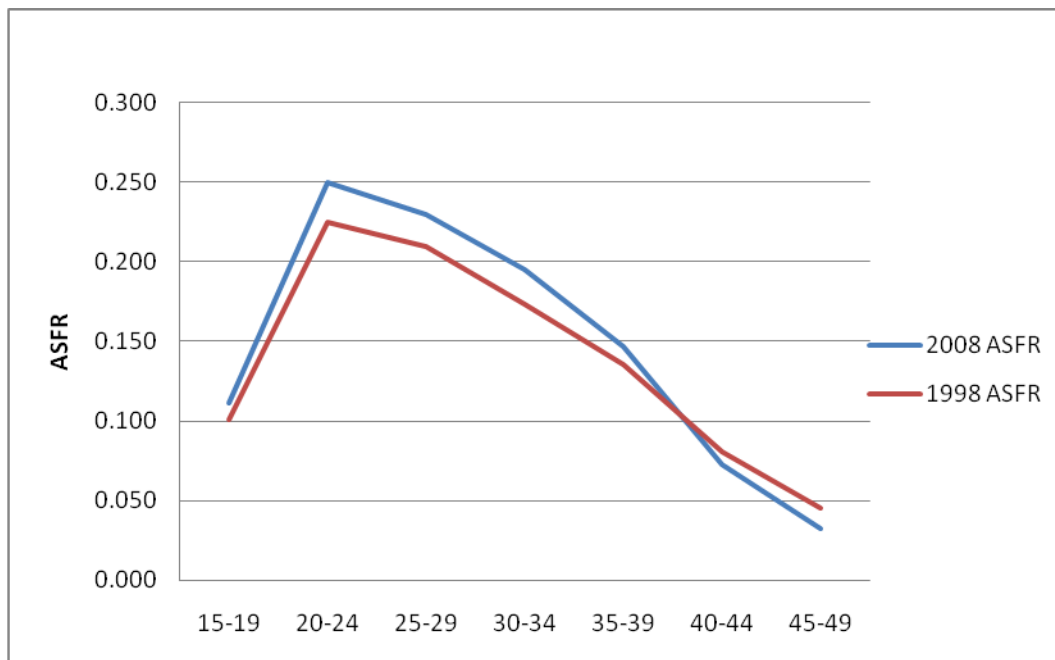
Trends in fertility can be assessed by comparing the current TFR with estimates from previous surveys and censuses. Figure 2.1 shows the pattern and levels of adjusted total fertility rates by year of survey or census. Although the fertility estimates are subject to different reference periods, it is evident that fertility had remained constant prior to 1984, but started to decline from a level of 7.6 children per woman in 1984 to the current level of 6.0 in 2008.

Though Malawi has been experiencing the declining trend, the estimated level of 6.0 children per woman is still too high. The figure further shows that fertility decline since 2000 Demographic and Health survey has been very minimal. TFR only decreased from 6.3 in 2000 to 6.0 in 2008

2.5 AGE SPECIFIC FERTILITY RATE

The shape, structure and age pattern of fertility (the distribution of fertility in childbearing ages) are useful in classifying the different fertility patterns. The shape and structure of the curves are determined by social and biological factors operating within a particular population. The factors also affect the age at which childbearing starts and ends in different populations. Statistically, the curves differ with respect to the mean age at childbearing, the age at which peak occurs and the spread of the curve (Kpedekpo, 1982).

Figure 2. 2: Age -Specific Fertility Rates for Malawi: 2008



The observed distribution of births by women's age in 2008 census shows a pattern of high fertility levels. The pattern observed in 2008 resembles the patterns of age-specific fertility from previous censuses and demographic surveys

2.6 FERTILITY DIFFERENTIALS

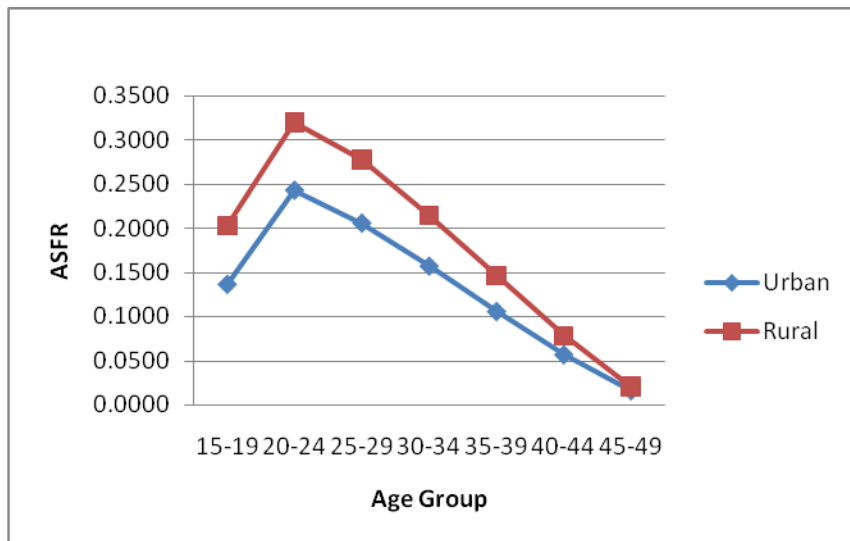
Kpedekpo (1982) observes that fertility varies not only with age and duration of marriage, but also with area of residence that is whether rural or urban, type of marriage (monogamous or polygamous), level of educational attainment, occupation, religion and many other factors. The procedure involves classifying births by a woman's background characteristics. Fertility differentials can be studied in terms of social characteristics at all levels of aggregation.

This section therefore, examines relationships between a woman's background characteristics and her fertility in Malawi. The section will look at fertility by a woman's place of residence: rural / urban, educational background and marital status. The TFR have been calculated using the Gompertz Relational Model fitting data on current ASFR and average CEB of women.

2.6.1 Fertility by rural urban residence

Urbanisation is significantly correlated with fertility. In general, low levels of fertility are often associated with high levels of urbanization that is, fertility becomes lower as the degree of urbanization becomes higher. Figure 2.3 shows age specific fertility rates for Malawi by rural and urban.

Figure 2. 3: Age Specific Fertility Rate by Urban and Rural: 2008



Comparison of ASFR by urban and rural residence indicates lower fertility levels for women in urban areas compared to rural women for all age groups. It has been observed that teenaged women aged between 15 and 19 contributed a higher proportion of births in rural areas than in urban areas. It is further noted that both rural and urban women reach a peak of their fertility at ages 24 through 29. In the urban areas, although the age pattern of childbearing is similar to that of the rural areas, the age-specific fertility rates are lower in urban areas than in rural areas.

Figure 2. 4: Fertility by Urban and Rural Residency

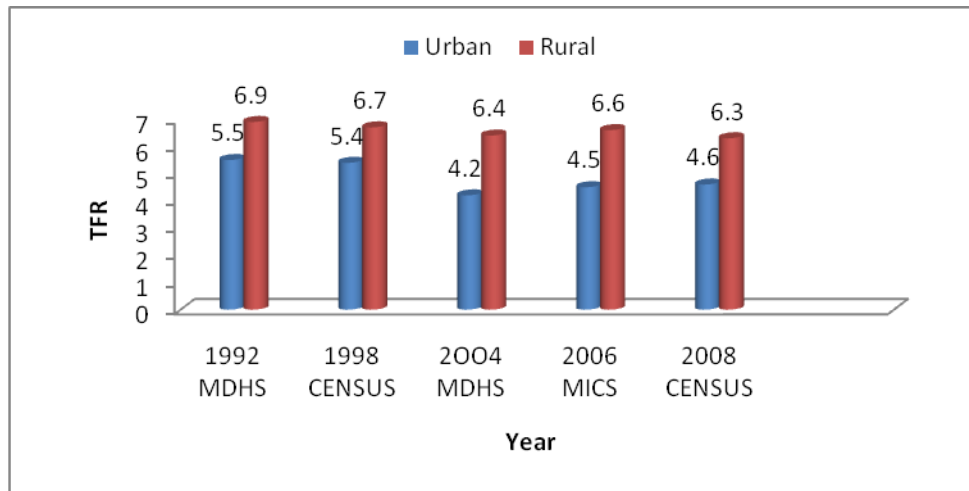


Figure 2.4 shows changes in total fertility rates by urban and rural residency across surveys and censuses conducted since 1992. It further shows that the TFR for rural areas is higher than in urban areas across all censuses and surveys conducted. It can also be seen from the table that Malawi is experiencing a slight decline in fertility at all levels. The 2008 census shows a TFR of 4.6 in urban area and 6.3 in rural area meaning that on average an urban woman is expected to bear 4.6 children and a rural woman is expected to have 6.3 children by the time she completes her child bearing period if she experienced the prevailing age specific fertility rates.

2.6.2 Fertility by region and districts

Table 2.8 presents the TFR and adjusted ASFR at national, regional and district levels for 1998 and 2008 censuses. Malawi is showing a declining TFR and the pattern continues even at regional and district levels. The 2008 census shows a TFR of 6.0, this is a decline from 6.5 in 1998.

At regional level, the central region has the highest TFR of 6.4 children per woman compared to the northern region's 6.1 and the southern region's 5.7. In 1998 the pattern was the same, with the TFR in the central region higher than the northern and the southern regions.

At district level the highest TFR in 2008 was recorded for the following districts: Ntchisi (7.1), Mchinji (6.9), Kasungu (6.8), and Nsanje (6.8). The lowest TFR are recorded in Likoma (4.6), Blantyre rural (5.4), Chiradzulu (5.5) and Thyolo (5.6).

It is further noted that the following districts have a TFR below the overall TFR for Malawi which is 6.0. These are Likoma (4.6), Nkhatabay (5.7), Rumphi (5.8) and Mzimba (5.7) from the northern region; Blantyre rural (5.4), Chiradzulu (5.5), Thyolo (5.6) and Mulanje (5.7) from the southern region. The TFR for the four major cities are: Mzuzu City (5.7), Lilongwe City (4.9), Zomba city (4.9) and Blantyre city (4.3).

Table 2. 8: Total Fertility Rate (TFR) and the Adjusted Age -Specific Fertility Rates (ASFRs) Region/District: 2008

Area	TFR		ASFRA						
	1998	2008	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Malawi	6.5	6.0	0.1932	0.3048	0.2640	0.2040	0.1392	0.0744	0.0192
Urban	5.4	4.6	0.1363	0.2431	0.2057	0.1569	0.1053	0.0563	0.0155
Rural	6.7	6.3	0.2029	0.3200	0.2772	0.2142	0.1462	0.0781	0.0202
Northern Region	6.5	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Chitipa	7.2	6.7	0.2157	0.3404	0.2948	0.2278	0.1554	0.0831	0.0214
Karonga	6.4	6.0	0.1932	0.3048	0.2640	0.2040	0.1392	0.0744	0.0192
Nkhatabay	6.0	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
Rumphi	6.6	5.8	0.1854	0.2952	0.2553	0.1973	0.1347	0.0722	0.0188
Mzimba	6.5	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
Mzuzu City	*	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
Likoma	6.1	4.6	0.1363	0.2431	0.2057	0.1569	0.1053	0.0563	0.0155
Central Region	7.1	6.4	0.2061	0.3251	0.2816	0.2176	0.1485	0.0794	0.0205
Kasungu	7.4	6.8	0.2190	0.3454	0.2992	0.2312	0.1578	0.0843	0.0218
Nkhotakota	7.5	6.6	0.2125	0.3353	0.2904	0.2244	0.1531	0.0818	0.0211
Ntchisi	8.0	7.2	0.2344	0.3597	0.3177	0.2474	0.1679	0.0893	0.0222
Dowa	7.5	6.5	0.2093	0.3302	0.2860	0.2210	0.1508	0.0806	0.0208
Salima	7.0	6.5	0.2093	0.3302	0.2860	0.2210	0.1508	0.0806	0.0208
Lilongwe Rural	7.0	6.6	0.2125	0.3353	0.2904	0.2244	0.1531	0.0818	0.0211
Lilongwe City	*	4.9	0.1451	0.2589	0.2191	0.1671	0.1122	0.0600	0.0165
Mchinji	7.6	6.9	0.2222	0.3505	0.3036	0.2346	0.1601	0.0856	0.0221
Dedza	7.0	6.2	0.1996	0.3150	0.2728	0.2108	0.1438	0.0769	0.0198
Ntcheu	6.7	6.0	0.1932	0.3048	0.2640	0.2040	0.1392	0.0744	0.0192
Southern Region	6.1	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
Mangochi	6.3	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Machinga	6.4	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Zomba rural	5.9	6.0	0.1932	0.3048	0.2640	0.2040	0.1392	0.0744	0.0192
Zomba city	*	4.9	0.1451	0.2589	0.2191	0.1671	0.1122	0.0600	0.0165
Chiradzulu	5.9	5.5	0.1758	0.2800	0.2421	0.1871	0.1277	0.0684	0.0178
Blantyre rural	5.4	5.4	0.1726	0.2749	0.2377	0.1837	0.1254	0.0672	0.0175
Blantyre city	*	4.3	0.1374	0.2189	0.1893	0.1463	0.0998	0.0535	0.0139
Mwanza	6.6	6.3	0.2029	0.3200	0.2772	0.2142	0.1462	0.0781	0.0202
Thyolo	6.1	5.6	0.1790	0.2850	0.2465	0.1905	0.1300	0.0697	0.0181
Mulanje	5.9	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
Phalombe	6.0	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Chikwawa	6.8	6.2	0.1996	0.3150	0.2728	0.2108	0.1438	0.0769	0.0198
Nsanje	7.0	6.8	0.2190	0.3454	0.2992	0.2312	0.1578	0.0843	0.0218
Balaka	6.3	6.2	0.1996	0.3150	0.2728	0.2108	0.1438	0.0769	0.0198
Neno	*	6.3	0.2029	0.3200	0.2772	0.2142	0.1462	0.0781	0.0202

* Not applicable in 1998

2.6.3 Fertility by Women's level of education

Education is one of the socio-economic factors that influence fertility. Apart from the use of contraceptive methods, it has been observed that extended formal education is one of the main reasons for the postponement of marriage among educated women.

Table 2. 9: TFR and Adjusted Age Specific Fertility Rates by Level of Education Attended by women at National and Regional Levels: 2008

Area	TFR	ASFR						
		15-19	20-24	25-29	30-34	35-39	40-44	45-49
Malawi	6.0	0.3768	0.2184	0.1092	0.1704	0.1824	0.1116	0.0252
None	6.5	0.2093	0.3302	0.2860	0.2210	0.1508	0.0806	0.0208
Pre School	6.5	0.2093	0.3302	0.2860	0.2210	0.1508	0.0806	0.0208
Primary	6.2	0.1996	0.3150	0.2728	0.2108	0.1438	0.0769	0.0198
Secondary	4.3	0.1374	0.2189	0.1893	0.1463	0.0998	0.0535	0.0139
University	3.0	0.0840	0.1866	0.1482	0.0996	0.0552	0.0216	0.0036
Northern Region	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
None	6.4	0.2061	0.3251	0.2816	0.2176	0.1485	0.0794	0.0205
Pre School	6.2	0.1996	0.3150	0.2728	0.2108	0.1438	0.0769	0.0198
Primary	6.3	0.2029	0.3200	0.2772	0.2142	0.1462	0.0781	0.0202
Secondary	4.5	0.1260	0.2799	0.2223	0.1494	0.0828	0.0324	0.0054
University	3.4	0.0952	0.2115	0.1680	0.1129	0.0626	0.0245	0.0041
Central Region	6.4	0.2061	0.3251	0.2816	0.2176	0.1485	0.0794	0.0205
None	6.9	0.2222	0.3505	0.3036	0.2346	0.1601	0.0856	0.0221
Pre School	7.1	0.2312	0.3547	0.3133	0.2440	0.1656	0.0880	0.0219
Primary	6.5	0.2093	0.3302	0.2860	0.2210	0.1508	0.0806	0.0208
Secondary	4.4	0.1240	0.2691	0.2151	0.1465	0.0832	0.0341	0.0063
University	3.1	0.0868	0.1928	0.1531	0.1029	0.0570	0.0223	0.0037
Southern Region	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
None	6.3	0.2029	0.3200	0.2772	0.2142	0.1462	0.0781	0.0202
Pre School	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Primary	5.8	0.1854	0.2952	0.2553	0.1973	0.1347	0.0722	0.0188
Secondary	4.0	0.1149	0.2322	0.1893	0.1344	0.0816	0.0378	0.0086
University	2.7	0.0662	0.1749	0.1418	0.0909	0.0464	0.0164	0.0024

Table 2.9 shows fertility differentials by highest level of education attended by women at national and regional levels. The table confirms the findings that fertility is highest among women with no formal education and lowest among those with university education or higher. In general, there is evidence on the impact of educational level on TFR. There are differences in fertility between women with little or no education and women with secondary and above level of education. The higher a woman goes with education, the fewer the number of children she bears.

Relative ASFRs depict a typical early fertility peak especially for women with primary and lower education. There is a consistent drop in proportions of births to women aged 30 years and above which affects all categories of women regardless of their educational background.

At regional level, women from the central region who had no formal education showed the highest fertility (6.9) as compared to their counterparts from the northern region (6.4) and the southern region (6.3). Furthermore, women from the southern region with university education or higher had the lowest fertility (2.7) in comparison with similar educated women from the central region (3.1) and northern region (3.4).

Table 2. 10: Average number of Children Ever Born by women's Level of Education: 2008

Education/ Area	Average CEB by Age Group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Malawi							
None	0.47	1.89	3.34	4.67	5.58	6.31	6.62
Pre School	0.3	1.68	3.06	4.34	5.47	6	6.49
Primary	0.28	1.68	3.02	4.29	5.26	6.08	6.52
Secondary	0.2	0.97	2	2.94	3.7	4.47	5.12
University	0.13	0.38	0.96	1.86	2.53	3.11	3.7
Northern Region							
None	0.53	1.84	3.22	4.61	5.54	6.21	6.53
Pre School	0.36	1.84	2.83	4.18	5.32	6.1	6.61
Primary	0.31	1.72	3.11	4.41	5.39	6.13	6.49
Secondary	0.23	1.07	2.19	3.22	3.99	4.87	5.39
University	0.21	0.5	1.14	2.21	3.23	3.46	4.67
Central Region							
None	0.39	1.82	3.39	4.91	5.98	6.82	7.21
Pre School	0.28	1.66	3.2	4.68	5.79	6.56	6.94
Primary	0.23	1.59	3.06	4.48	5.57	6.54	7.05
Secondary	0.21	0.98	2.05	3.07	3.88	4.65	5.4
University	0.16	0.51	1.08	2.04	2.59	3.32	3.92
Southern Region							
None	0.54	1.95	3.31	4.48	5.25	5.88	6.15
Pre School	0.31	1.65	2.97	4.03	5.12	5.29	5.91
Primary	0.32	1.74	2.96	4.06	4.88	5.55	5.96
Secondary	0.18	0.91	1.89	2.72	3.43	4.15	4.76
University	0.09	0.26	0.82	1.65	2.39	2.87	3.4

Table 2.10 shows the average number of children ever born by the woman's highest level of education. The table shows lower fertility for women with secondary education and higher compared to those with primary and lower education for all age groups. The table clearly shows an early onset of fertility for teenagers, 15-19 years with primary or lower education as opposed to their counterparts with secondary and higher education. By the time they complete their childbearing period, women with no education, primary and university and above education on average had 6.6, 6.5 and 3.7 children respectively.

As was the case during the 1998 census, estimates of fertility by the women's level of education have not been done at district level. This is because the small number of cases of women with secondary or higher education in some districts would yield inconceivable and biased estimates.

2.6.4 Fertility by marital status

Fertility is mainly within marriage, and is strongly related to duration and age at first marriage. It has been found that an early marriage increases the likelihood of pregnancy and childbearing among women.

Table 2. 11: TFR and Adjusted Age Specific Fertility Rate by Marital Status: 2008

Area	TFR	ASFR						
		15-19	20-24	25-29	30-34	35-39	40-44	45-49
Malawi	6.0	0.3768	0.2184	0.1092	0.1704	0.1824	0.1116	0.0252
Never Married	2.5	0.0555	0.1663	0.1365	0.0850	0.0410	0.0133	0.0018
Married	5.9	0.1871	0.3009	0.2598	0.2008	0.1371	0.0736	0.0194
Divorced/Separated	4.8	0.1344	0.2986	0.2371	0.1594	0.0883	0.0346	0.0058
Widowed	5.0	0.1586	0.2550	0.2202	0.1702	0.1162	0.0624	0.0164
Northern Region	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Never Married	2.8	0.0719	0.1790	0.1441	0.0939	0.0493	0.0180	0.0028
Married	5.9	0.1871	0.3009	0.2598	0.2008	0.1371	0.0736	0.0194
Divorced/Separated	4.3	0.1374	0.2189	0.1893	0.1463	0.0998	0.0535	0.0139
Widowed	4.8	0.1344	0.2986	0.2371	0.1594	0.0883	0.0346	0.0058
Central Region	6.4	0.2061	0.3251	0.2816	0.2176	0.1485	0.0794	0.0205
Never Married	3.0	0.0840	0.1866	0.1482	0.0996	0.0552	0.0216	0.0036
Married	6.1	0.1964	0.3099	0.2684	0.2074	0.1415	0.0756	0.0195
Divorced/Separated	5.1	0.1605	0.2606	0.2247	0.1737	0.1186	0.0639	0.0169
Widowed	5.1	0.1605	0.2606	0.2247	0.1737	0.1186	0.0639	0.0169
Southern Region	5.7	0.1781	0.2918	0.2513	0.1943	0.1327	0.0716	0.0192
Never Married	2.2	0.0412	0.1520	0.1270	0.0759	0.0334	0.0092	0.0009
Married	5.6	0.1790	0.2850	0.2465	0.1905	0.1300	0.0697	0.0181
Divorced/Separated	4.7	0.1324	0.2875	0.2297	0.1565	0.0888	0.0365	0.0068
Widowed	4.9	0.1451	0.2589	0.2191	0.1671	0.1122	0.0600	0.0165

Table 2.11 shows total fertility rates for women by their marital status by region. The results show that the women who have never been married women continued to report the lowest ASFR in all the age groups followed by those women who were divorced or separated and widowed. As expected, married women showed the highest TFR compared to their single, widowed or separated counterparts.

The total fertility rate for women based on marital status differentials are as follows: married women (5.9), widowed (5.0), divorced or separated women (4.8) and 2.5 among the never married women. Across the regions, fertility was high in the central region.

CHAPTER 3 OTHER MEASURES OF FERTILITY

The section above analyzed fertility data, estimating the level of fertility for Malawi as a whole, then per regions and per districts. The present section looks at other measures of fertility such as child /woman ratio, gross reproduction rate, net reproduction rate, mean parities or mean children ever born and parity progression ratios.

3.1 CHILD/WOMAN RATIO

The child woman ratio is defined as the ratio of the number of children per 1,000 women of child-bearing ages. Different ages of children have been used like 0-4, 5-9 or 0-9. To allow comparison with the previous censuses, age group 0-4 is used in the present analysis.

$$\frac{P_{0-4}}{P_{f15-49}}$$

Where P_{0-4} refers to a population of children aged below five years and P_{f15-49} refers to the population of women aged 15 – 49 years.

The child woman ratio is usually calculated in situations where there are no universal registration of births and where no questions of fertility were included in a survey or a census. It reflects fertility performance within the last 5 years before the census. Its major weakness is that it does not take into account under - estimation and age misstatements of children and women in the estimation of the ratio and it is affected by level of mortality among those under five. (Kpedepko,1982).

Table 3. 1: Child woman ratio for Malawi for 1998 and 2008

Area	Child Woman Ratio	
	1998	2008
Malawi	702	795
Northern	761	790
Chitipa	738	812
Karonga	686	834
Nkhata-Bay	680	750
Rumphi	724	802
Mzimba	832	779
Likoma	597	752
Central	747	800
Kasungu	796	849
Nkhota kota	783	868
Dowa	758	768
Ntchisi	749	860
Salima	763	849
Lilongwe	723	756
Mchinji	792	863
Dedza	747	808
Ntcheu	690	783
Southern	651	793
Mangochi	711	869
Machinga	708	902
Zomba	635	805
Chiradzulu	597	907
Blantyre	575	649
Mwanza	715	787
Mulanje	579	784
Thyolo	642	772
Chikwawa	725	808
Nsanje	760	829
Phalombe	877	891
Balaka	720	845
Neno	*	847

*Source: 1998 Population and Housing Census final report
2008 Population and Housing Census Final Report*

Table 3.1 presents the child woman ratio for Malawi in general and per regions and per district for 1998 and 2008. It is evident that the child woman ratio is high in 2008 i.e. at 795 children per 1,000 women than in 1998 at 702 children per 1,000 women. For regions, this pattern is maintained, higher in 2008 than 1998. The central region has the highest child woman ratio of 800 children per 1,000 women as compared to the northern (790) and the southern region (793).

At district level the highest child woman ratio is recorded for Chiradzulu (907), Machinga (902), Mangochi (869), Nkhosakota (868) and Mchinji (863). The lowest child woman ratios are recorded in Blantyre (649), Likoma (752) and Lilongwe (756).

The child woman ratio confirms the high levels of child bearing in Malawi. However, there has been a considerable decline in childhood mortality resulting in more children under-five surviving. This may be attributed to a number of health initiatives like immunization campaigns, provision of health services related to children under-five both in terms of infrastructure and preventive campaigns.

3.2 GROSS REPRODUCTION RATE

Gross reproduction rate (GRR) is the average number of daughters a woman would have or bear if she experiences a given set of age specific fertility rates throughout her reproductive ages, with no allowance for mortality over that period. The GRR is calculated like the total fertility rate, the only difference being that only female births are used to calculate the age specific fertility rates. The GRR calculated for Malawi in 2008 shows that on average, a Malawian woman would bear 3.0 daughters at current levels of fertility. In 1977 the estimated average number daughters was 3.7 and in 1987 it was 3.6 and in 1998 it was 3.4

Table 3. 2: GRR and NRR for Malawi 2008

Area	GRR	NRR
Malawi	3.0	2.3
Urban	2.3	1.9
Rural	3.1	2.4
Northern Region	3.0	2.3
Chitipa	3.3	2.7
Karonga	3.0	2.4
Nkhata-Bay	2.8	2.2
Rumphi	2.8	2.3
Mzimba	2.8	2.2
Likoma	2.3	1.8
Mzuzu City	2.8	2.5
Central Region	3.2	2.4
Kasungu	3.3	2.5
Nkhota kota	3.3	2.6
Dowa	3.2	2.4
Ntchisi	3.5	2.4
Salima	3.2	2.0
Lilongwe	3.3	2.4
Lilongwe City	2.4	2.0
Mchinji	3.4	2.6
Dedza	3.1	2.2
Ntcheu	3.0	2.4
Southern Region	2.8	2.1
Mangochi	3.0	2.3
Machinga	3.0	2.4
Zomba	3.0	2.2
Zomba City	2.4	1.9
Chiradzulu	2.7	1.9
Blantyre	2.7	2.1
Blantyre City	2.1	1.8
Mwanza	3.1	2.2
Mulanje	2.8	1.9
Thyolo	2.8	2.0
Chikwawa	3.1	2.4
Nsanje	3.3	2.3
Phalombe	3.0	2.1
Balaka	3.1	2.4
Neno	3.1	2.3

3.3 NET REPRODUCTION RATE

The Net Reproduction Rate (NRR) is the average number of daughters a woman would have or bear if she experiences a given set of age specific fertility rates throughout her reproductive ages and survive to replace her in the next generation assuming a fixed set of mortality rates during the period.

The NRR is calculated like the total fertility rate, the only difference being that only female births are used to calculate the age specific fertility rates. These are then subjected to mortality by using person years lived (denoted by nL_x) obtained from an appropriate life table. The NRR calculated for Malawi in 2008 shows that on average, of the 3.0 daughters born by a Malawian woman at current levels of fertility, 2.3 daughters would survive to replace her in the next generation at current levels of mortality. In 1977 the estimated average number of daughters was 3.7, in 1987 it was 3.6 and in 1998 it was 3.4. In 1977 the estimated NRR was 2.1 and in 1987 it was 2.5.

The NRR is higher in the rural areas where 2.4 daughters are expected to survive and replace their mothers in the next generation than in urban areas where 1.9 daughters will survive. The NRR is also higher in the central region at 2.4 daughters compared to the northern region at 2.3 daughters and the southern region at 2.1 daughters.

3.4 MEAN PARITIES OR MEAN NUMBER OF CHILDREN EVER BORN

Women aged 15 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 at the end of their reproductive period, i.e. in the age group 45-49, would represent a measure of completed fertility.

An examination of the 2008 Census data reveals that the mean number of children born to women in Malawi rises from 0.3 children in age group 15-19 to 6.5 children in the age group 45-49. The mean number of children among women in the same age group from the 1998 Census was around 6.7. Regardless of the underreporting of children, this supports the finding that fertility in Malawi has traditionally been high.

Figure 3.1 demonstrates that the 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. It has been observed that in situations where women underreport children, the numbers start declining at higher ages and when the average number of children ever born is plotted against age of women it tapers from ages 30 or 35 years. For Malawi this is not the case. . Looking at mean parities in Malawi, it is evident that childbearing starts at an early age and women continue to bear children up to very old ages. The mean parities show that by age 30 a Malawian woman would have borne 3 children and will continue to reach 6.5 children by the time she reaches age 50 if accurately reported.

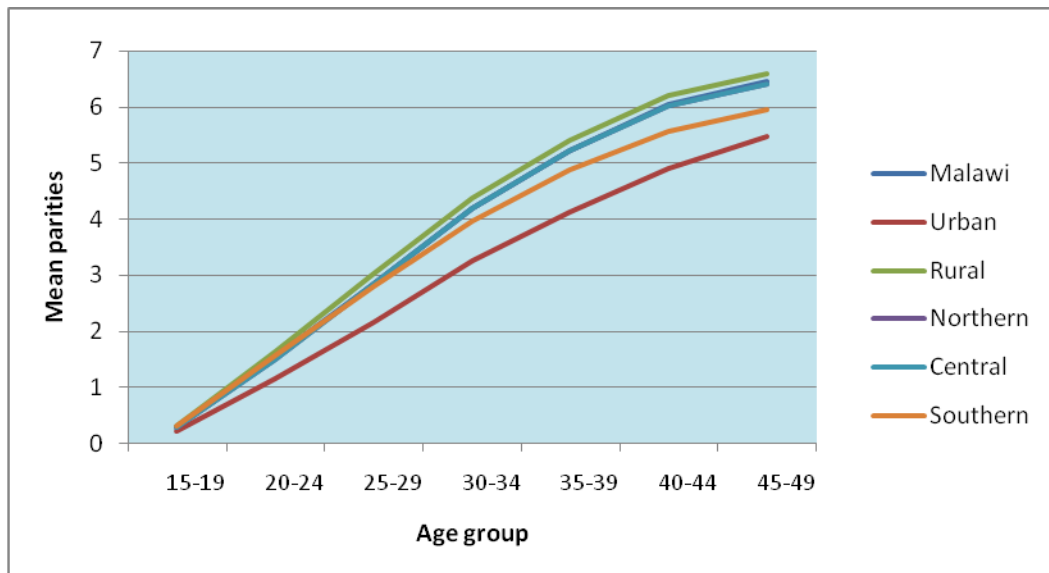
When the mean of children ever born to a woman by age 50 are compared for rural and urban areas, it is noted that women in urban areas had 5.5 children while those in rural areas had 6.5 children.

At regional level, women in the northern and central region had 6.4 children ever born while in the south they had 6.0 children. At district level, the highest average number of children ever born is observed in Ntchisi (7.8), Mchinji (7.7), Kasungu (7.3) and Nkhotakota (7.2). The lowest mean parities are observed in Blantyre city (5.0) and Zomba city (5.2).

Table 3. 3: Average Number of Children Ever Born by age of women for Malawi, urban and rural areas, regions and districts, 2008

Age groups	Mean parities(Mean Number of Children everborn)						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Malawi	0.283	1.532	2.849	4.185	5.214	6.034	6.453
Urban	0.207	1.145	2.162	3.243	4.128	4.894	5.473
Rural	0.299	1.621	3.016	4.376	5.395	6.207	6.585
Northern	0.295	1.505	2.849	4.196	5.221	6.012	6.402
Chitipa	0.252	1.498	3.079	4.564	5.792	6.537	6.961
Karonga	0.402	1.701	3.004	4.301	5.195	5.903	6.218
Nkhata-Bay	0.291	1.501	2.847	4.033	4.924	5.628	5.956
Rumphu	0.301	1.478	2.838	4.163	5.207	6.085	6.487
Mzimba	0.289	1.536	2.923	4.326	5.377	6.171	6.581
Likoma	0.211	1.289	2.513	3.569	4.591	5.745	5.783
Mzuzu City	0.185	1.104	2.154	3.268	4.131	5.029	5.466
Central	0.295	1.505	2.849	4.196	5.221	6.012	6.402
Kasungu	0.240	1.536	3.035	4.615	5.845	6.842	7.280
Nkhota kota	0.309	1.577	3.071	4.591	5.731	6.532	7.160
Dowa	0.201	1.410	2.899	4.447	5.715	6.739	7.107
Ntchisi	0.158	1.462	3.039	4.805	6.143	7.170	7.751
Salima	0.335	1.680	3.129	4.611	5.670	6.523	6.971
Lilongwe	0.217	1.509	3.038	4.591	5.759	6.738	7.191
Lilongwe City	0.214	1.185	2.242	3.386	4.298	5.097	5.722
Mchinji	0.286	1.621	3.159	4.778	6.032	7.077	7.748
Dedza	0.259	1.562	3.026	4.452	5.518	6.436	6.854
Ntcheu	0.318	1.605	2.955	4.315	5.325	6.130	6.526
Southern	0.315	1.580	2.802	3.980	4.886	5.579	5.959
Mangochi	0.320	1.602	2.883	4.088	5.009	5.680	5.967
Machinga	0.354	1.721	3.019	4.182	5.090	5.721	6.007
Zomba	0.344	1.699	2.986	4.135	4.969	5.596	5.976
Zomba City	0.167	1.088	2.048	3.120	3.933	4.661	5.248
Chiradzulu	0.286	1.554	2.773	3.893	4.775	5.420	5.714
Blantyre	0.263	1.448	2.663	3.820	4.708	5.378	5.859
Blantyre City	0.198	1.080	2.002	2.958	3.760	4.492	5.020
Mwanza	0.259	1.548	2.868	4.252	5.386	6.233	6.757
Mulanje	0.355	1.754	2.944	3.993	4.714	5.327	5.557
Thyolo	0.305	1.658	2.880	3.980	4.764	5.428	5.752
Chikwawa	0.374	1.673	3.006	4.372	5.439	6.283	6.786
Nsanje	0.356	1.661	3.153	4.661	5.719	6.682	7.069
Phalombe	0.394	1.919	3.215	4.312	5.079	5.578	5.934
Balaka	0.368	1.736	3.091	4.423	5.338	6.166	6.577
Neno	0.373	1.725	3.090	4.537	5.568	6.326	6.748

Figure 3 1: Mean number of children ever born by age group of women, Malawi, Rural and Urban areas and regions



3.5 PARITY PROGRESSION RATIOS

A cohort total fertility rate can readily be estimated through a census or survey question about parity. Parity refers to the number of children already born to a woman. This includes women who have already completed their childbearing. The mean parity or mean number of children ever born, of a cohort of women who have completed childbearing, is equal to the cohort fertility rate if reporting is accurate and there are no differentials in mortality and migration by parity. The fertility process can be presented not only through a woman's movement from one age to the next but also the movement from one parity to the other. This movement is termed parity progression ratio and was first put forward in 1953 by French demographer L. Henry. Parity progression ratio refers to the proportion of those who have borne more than $(i+1)$ children among a group of women having borne i children, i being any integer, including 0 as shown in the formula below. For example, parity progression ratio is like the probability that a woman with three children will go on to have a fourth child.

Parity progression ratio is expected to decline with each increasing birth order.

$$PPR(i, i+1) = \frac{\text{Number of women at parity } i+1 \text{ or more}}{\text{Number of women at parity } i} = \frac{P_{i+1}}{P_i}$$

The major advantage of using cohort measures is that they provide an indicator of completed fertility when the oldest cohorts are measured. In addition children ever born figures serve as a measure of childbearing status of women who have completed their childbearing. The latter advantage is particularly marked when data for several time periods is studied

Though parity progression ratios can be calculated for each age group and even for total women, the cohort measure is usually calculated only for cohorts that have completed their childbearing. In Malawi for the 2008 Census, the parity progression ratios have been calculated for women aged 45-49 years old and are given in Table 3.4.

Preston (2001) suggests that a cohort fertility rate can be derived entirely from its set of parity progression ratios as follows:

$$TFR(c) = PPR(0,1) + PPR(0,1)*PPR(1,2) + PPR(0,1)*PPR(1,2)*PPR(2,3)$$

Table 3.4 shows that in Malawi, the probability that a woman would have a child is quite high at 0.95 and there are no significant differences between women in rural and urban areas. At regional and district level these high probabilities are also observed. This observation confirms the role of women in childbearing in the Malawian society.

Another interesting feature is that the probabilities remain high, over 0.90 at parity 3 and even at parity 7 the probability is over 0.50. This observation has implications in planning for family planning programmes in Malawi as it shows that there is no deliberate effort to limit the number of children a woman would have.

The cohort fertility rate at 5.2 for women aged 45-49 in Malawi in 2008 also confirms the high fertility prevalent in the country.

Table 3. 4: Parity Progression ratios for women aged 45-49 years and cohort fertility rate, Malawi 2008

Area/District									Cohort
	0	1	2	3	4	5	6	7	TFR
Malawi	0.9502	0.9543	0.9296	0.9038	0.8561	0.7954	0.6887	0.5018	5.2
Urban	0.9533	0.9570	0.9128	0.8662	0.8010	0.7296	0.6212	0.4443	4.8
Rural	0.9497	0.9538	0.9324	0.9098	0.8645	0.8047	0.6974	0.5084	5.2
Northern	0.9800	0.9775	0.9449	0.9232	0.8678	0.7951	0.6994	0.4909	5.6
Chitipa	0.9650	0.9649	0.9471	0.9287	0.8841	0.8336	0.7276	0.5108	5.6
Karonga	0.9631	0.9607	0.9336	0.9123	0.8453	0.7890	0.6675	0.4953	5.3
Nkhata-Bay	0.9593	0.9552	0.9346	0.9018	0.8559	0.7636	0.6692	0.4830	5.2
Rumphu	0.9752	0.9708	0.9596	0.9301	0.8879	0.8156	0.7080	0.4820	5.7
Mzimba	0.9777	0.9753	0.9581	0.9315	0.8834	0.8106	0.6900	0.4949	5.7
Likoma	0.9496	0.9558	0.8611	0.8495	0.8354	0.8636	0.7193	0.3659	4.8
Mzuzu City	0.9770	0.9619	0.9304	0.8954	0.8129	0.7278	0.6019	0.4080	5.1
Central	0.9885	0.9753	0.9595	0.9317	0.8872	0.8275	0.7233	0.5263	5.8
Kasungu	0.9810	0.9699	0.9544	0.9326	0.9068	0.8582	0.7950	0.7070	6.0
Nkhota kota	0.9807	0.9665	0.9470	0.9263	0.8909	0.8486	0.7757	0.6945	5.9
Dowa	0.9789	0.9653	0.9552	0.9307	0.9012	0.8357	0.7866	0.6915	5.9
Ntchisi	0.9860	0.9862	0.9657	0.9514	0.9196	0.8781	0.8107	0.7298	6.3
Salima	0.9749	0.9610	0.9446	0.9162	0.8849	0.8492	0.7910	0.7003	5.8
Lilongwe	0.9819	0.9703	0.9585	0.9344	0.9044	0.8453	0.7767	0.6825	6.0
Lilongwe City	0.9697	0.9351	0.8866	0.8426	0.7922	0.7337	0.6584	0.5993	4.7
Mchinji	0.9856	0.9799	0.9643	0.9443	0.9190	0.8885	0.8172	0.7361	6.3
Dedza	0.9742	0.9664	0.9496	0.9155	0.8859	0.8192	0.7522	0.6555	5.7
Ntcheu	0.9662	0.9479	0.9380	0.9076	0.8728	0.8229	0.7507	0.6465	5.5
Southern	0.9760	0.9648	0.9345	0.9015	0.8500	0.7797	0.6813	0.4929	5.3
Mangochi	0.9614	0.9367	0.9130	0.8822	0.8414	0.8021	0.7403	0.6854	5.1
Machinga	0.9556	0.9328	0.9227	0.8857	0.8425	0.8041	0.7465	0.6943	5.1
Zomba	0.9475	0.9291	0.9124	0.8814	0.8581	0.8038	0.7643	0.6996	5.1
Zomba City	0.9493	0.9205	0.8621	0.8251	0.8025	0.7043	0.6731	0.5952	4.4
Chiradzulu	0.9424	0.9170	0.9159	0.8769	0.8496	0.7981	0.7042	0.6329	4.9
Blantyre	0.9500	0.9301	0.9145	0.8876	0.8427	0.7929	0.7543	0.6266	5.0
Blantyre City	0.9531	0.9015	0.8664	0.8094	0.7602	0.7048	0.6445	0.5613	4.3
Mwanza	0.9792	0.9557	0.9351	0.9058	0.8884	0.8374	0.7691	0.6845	5.6
Mulanje	0.9354	0.9098	0.8952	0.8663	0.8378	0.8041	0.7287	0.6592	4.7
Thyolo	0.9420	0.9266	0.9123	0.8783	0.8469	0.7958	0.7469	0.6623	5.0
Chikwawa	0.9707	0.9649	0.9463	0.9201	0.8816	0.8208	0.7608	0.6823	5.7
Nsanje	0.9801	0.9635	0.9541	0.9290	0.8865	0.8456	0.7775	0.7028	5.9
Phalombe	0.9522	0.9273	0.9159	0.8851	0.8625	0.8058	0.7669	0.6740	5.1
Balaka	0.9581	0.9467	0.9346	0.9040	0.8742	0.8277	0.7636	0.7023	5.4
Neno	0.9715	0.9649	0.9414	0.9102	0.8694	0.8249	0.7636	0.6983	5.6

Source: 2008 Population and Housing Census final report

CHAPTER 4 ADOLESCENT FERTILITY

4.1 INTRODUCTION

Adolescence is defined broadly to embrace physiological features and socio-cultural factors that determine the rites of passage from childhood to adulthood. This chapter will look at adolescent fertility, and for this purpose an adolescent is defined as a person aged 15 to 19 years. From the 6,718,227 women enumerated in the 2008 census, 651,028 were adolescents, making up 9.69 percent. The 2004 Malawi Demographic Health Survey reported that 21.9 percent of adolescents were mothers by age 17 and 53.9 percent by age 19. The same 2004 survey reported variations in adolescent fertility depending on residence, education and wealth quintile. It also said observed that 12.1 percent of 18 year olds and 14.0 percent of 19 year old adolescents were pregnant with their first child. This chapter examines adolescent fertility levels, trends and differentials from the 2008 census.

This chapter examines fertility among young women since adolescent fertility has been increasingly viewed as a source of social and policy concern. Early childbearing has been linked to higher rates of maternal and child morbidity and mortality, truncated educational opportunities and lower future family income. Zabin and Kiragu (1998) reviewed the evidence for the effects of early childbearing and pointed to a number of health consequences including, for the mother, higher than average levels of blood pressure, anaemia, bleeding, obstructed and difficult labour, premature delivery, and death. In addition, children born to teenagers are susceptible to higher incidences of low birth weight, prematurity, stillbirth, and neonatal mortality.

4.2 ADOLESCENT FERTILITY LEVELS AND DIFFERENTIALS

Table 4.1 presents the adjusted ASFRs, Adolescent Fertility Rates and CEB for the age group 15-19 by district from the 2008 census.

The adolescent fertility rate shows the average number of children a woman would have by the end of the reproductive age group 15-19. By the time a woman in Malawi reaches the age of 20 she would have borne 1 child. Ntchisi district has the highest adolescent fertility rate of 1.172, while Likoma district has the lowest adolescent fertility rate of 0.681. The adolescent fertility rates in the four urban areas are lower than for the national average and for the districts. In terms of districts, the central region has an adolescent fertility of 1.03, and the southern region has the lowest adolescent fertility at 0.89.

The age specific fertility rates for adolescents aged 15-19 for Malawi is 0.193 which means that for every 1,000 women aged 15-19 in Malawi there were 193 births. The central region has the highest adolescent age specific fertility rate at 0.206, followed by the northern region at 0.196 and then the southern region at 0.178.

Table 4. 1: Adolescent ASFR, Adolescent Fertility Rate and Mean Parity by district, 2008

Area	ASFR (15-19)	Adolescent fertility rate	Mean parity (15-19)
Malawi	0.193	0.966	0.283
Northern Region	0.196	0.982	0.295
Chitipa	0.216	1.079	0.252
Karonga	0.193	0.966	0.402
Nkhatabay	0.178	0.89	0.291
Rumphi	0.185	0.927	0.301
Mzimba	0.178	0.89	0.289
Mzuzu City	0.178	0.89	0.211
Likoma	0.136	0.681	0.185
Central Region	0.206	1.03	0.246
Kasungu	0.219	1.095	0.24
Nkhotakota	0.213	1.063	0.309
Ntchisi	0.234	1.172	0.158
Dowa	0.209	1.047	0.201
Salima	0.209	1.047	0.335
Lilongwe Rural	0.213	1.063	0.217
Lilongwe City	0.145	0.726	0.214
Mchinji	0.222	1.111	0.286
Dedza	0.199	0.998	0.259
Ntcheu	0.193	0.966	0.318
Southern Region	0.178	0.89	0.315
Mangochi	0.196	0.982	0.32
Machinga	0.196	0.982	0.354
Zomba Rural	0.193	0.966	0.344
Zomba City	0.145	0.726	0.167
Chiradzulu	0.176	0.879	0.286
Blantyre Rural	0.173	0.863	0.263
Blantyre City	0.137	0.687	0.198
Mwanza	0.202	1.014	0.259
Thyolo	0.179	0.895	0.305
Mulanje	0.178	0.89	0.355
Phalombe	0.196	0.982	0.394
Chikhwawa	0.199	0.998	0.374
Nsanje	0.219	1.095	0.356
Balaka	0.199	0.998	0.368
Neno	0.203	1.014	0.373

Among the districts, the highest adolescent ASFR is in Ntchisi at 0.234 and the lowest ASFR is for Likoma at 0.0.136. All the four cities have ASFRs lower than the districts as expected, with the lowest being for Blantyre City at 0.137.

In terms of mean parities or current parities all females aged 15 years and above were asked to give information on the number of children ever born to them and whether the children were still alive. For adolescents, the highest parity is for Karonga district at 0.402 that is for every 1000 women aged 15 to 19 in Karonga there are 402 children ever born. The lowest current parity was observed for Ntchisi at 0.158. The four cities have lower parities than the districts. The proportion of women not stating their parity is always very high among adolescents, though comparisons with other censuses can still be performed.

4.2.1 Adolescent Fertility by residence, education and marital status

Fertility has been shown to vary according to place of residence, educational background, marital status and other characteristics of a woman. The variations in reported fertility levels in the ages 15-19 are examined by residence, education and marital status.

4.2.2 Adolescent Fertility and Residence

Table 4. 2: ASFR 15-19 by Residence, 2008

Residence	ASFR (15-19)	Mean Parities (15-19)
Urban	0.136	0.21
Rural	0.203	0.30

Urban adolescents have fertility rates of 0.136 thus, of every 1000 urban residing adolescents there were 136 births, compared to a fertility rate of 0.203 among their rural counterparts. Rural adolescents also have higher lifetime fertility with current parity of 0.30 whereas urban residing adolescents have current parity of 0.21.

4.2.3 Adolescent Fertility and Education

Educational attainment has consistently shown to be an important variable in fertility analysis. Generally, fertility declines as educational levels increase. Women aged 15-19 with no education have ASFR of 0.209, whilst women with primary education have fertility rates of 0.199. A difference is observed when adolescents reach secondary level, with fertility rates declining to 0.137. Adolescents with post-secondary education have fertility rates of 0.084.

The observed lower fertility rates for adolescents with higher education can be seen as a way to express the need to expanding access to formal education as a crucial intervention for preventing early childbearing among adolescents.

Table 4. 3: ASFR 15-19 by Educational Attainment, 2008

Educational Attainment	ASFR (15-19)	Mean Parities (15-19)
No Education	0.209	0.470
Primary	0.199	0.280
Secondary	0.137	0.200
Post-secondary	0.084	0.130

A similar trend is observed in terms of children ever born, with adolescents with no education ever having 57.4 percent more children in their lifetime than adolescents with a secondary level education. A difference of 40 percent in terms of lifetime fertility is observed between adolescents with no education (with current parity of 0.47) and adolescents with a primary education, with a current parity of 0.28.

A strong correlation between women’s education and reduced childbearing consistently emerges from studies throughout the developing world (Ainsworth, 1994; Martin and Juarez, 1995). Mboup and Saha (1998) found that in many countries of sub-Saharan Africa, women with no education have about two to three children more than women with secondary or higher education. It has been suggested that in areas that have not yet achieved mass education, changes in behaviour will be slow because of the slower pace of social interaction and diffusion, resulting in a lagging fertility decline (Lloyd, Kaufman, and Hewett, 2000). Many research exercises have suggested that increased educational qualification could be a means to reducing fertility amongst adolescents..

4.2.4 Adolescent Fertility and Marital Status

Table 4. 4: ASFR 15-19 by Marital Status, 2008

Marital Status	ASFR (15-19)	Mean Parities (15-19)
Never Married	0.056	0.100
Married	0.187	0.760
Separated/Divorced	0.134	1.010
Widowed	0.159	0.950

Marriage is a primary indicator of a woman’s exposure to the risk of becoming pregnant. The distribution of adolescent fertility cross tabulated by marital status shows that there is higher childbearing amongst teens that are currently or have ever been married, compared to those who have never been married. The highest adolescent fertility rate is observed for women that reported being separated or divorced, with a difference in fertility of 87.9 percent compared to adolescents that had never been married.. From the data it shows that early marriage increases the likelihood of pregnancy and childbearing among adolescents.

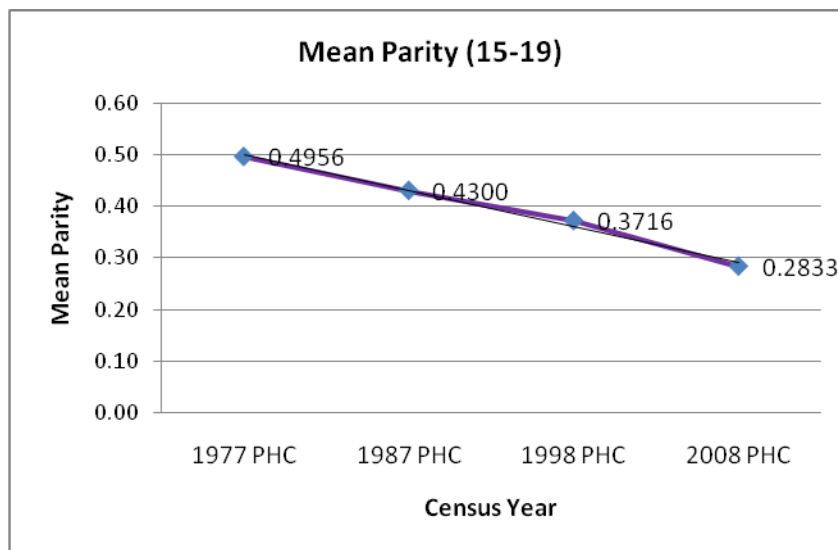
4.3 TRENDS IN ADOLESCENT FERTILITY

The trend in adolescent fertility can be assessed by comparing the mean parities from the 2008 census with data from previous censuses. The table and graphs below show the mean parities for residence and regions for ages 15-19 from the 1977, 1987 and 1998 censuses.

Table 4. 5: Trends in Malawi Adolescent Mean Parities; 1977 to 2008

Census Year	Mean Parity
2008	0.2833
1998	0.3716
1987	0.4300
1977	0.4956

Figure 4. 1: Trends in Malawi Adolescent Mean Parity; 1977 – 2008



The above graph and table show that there has been a decline in the adolescent mean parity, from 495 children ever born to women aged 15-19 in 1977 to 371 children ever born per 1000 women in 1998 to 283 children in 2008.

Table 4. 6: Trends in Adolescent Mean Parities by Area; 1977 – 2008

Area/Region	Mean Parities			
	1977	1987	1998	2008
Residence				
Urban	0.4	0.3	0.3	0.2
Rural	0.5	0.5	0.4	0.3
Region				
Northern	0.4	0.4	0.4	0.3
Central	0.5	0.4	0.3	0.3
Southern	0.6	0.5	0.4	0.3

In terms of mean parities by areas there was a decline of about 13 percent between both 1977 and 1987 and between 1987 and 1998. The number of children ever born to adolescent mothers has also declined by 24.7 percent between 1998 and 2008.

Table 4. 7: Trends in adolescent fertility by education and marital status, 1998 and 2008

Characteristics	ASFR		CEB	
	1998	2008	1998	2008
Education				
No Education	0.100	0.200	0.400	0.470
Primary	0.100	0.200	0.200	0.280
Secondary +	0.100	0.100	0.200	0.200
Marital Status				
Never Married	0.100	0.060	0.100	0.100
Married	0.200	0.190	0.800	0.760
Separated/Divorced	0.100	0.130	0.900	1.010
Widowed	0.100	0.160	0.900	0.950

4.4 ADOLESCENT FERTILITY AND OVERALL FERTILITY

The 2008 Census shows that of the 515,008 births among women aged 15-49 in the 12 months period prior to the census 14 percent (70,737) were from women aged 15-19. To calculate the contribution of adolescent fertility to TFR the formula below was used:

$$\frac{\text{ASFR}_{15-19} \times 100}{\sum \text{ASFR}_{15-49}}$$

Adolescents contributed 11.34 percent of all births in 2008. This is a decline from 1998 when adolescent mothers contributed 14 percent of the overall fertility. This group should therefore be targeted if fertility decline is to be achieved, especially as these adolescents are at the beginning of their reproductive years, with lower fecundity (Gupta and Leite, 1999).

CHAPTER 5 CHILDLESSNESS AND INFERTILITY

5.1 INTRODUCTION

The lack of uniform definitions has hounded research on infertility (Rutstein et al, 2004). While it is clear that infertility, childlessness or sterility all refer to the inability of couples to conceive or bear children when desired, there tends to be some variation in the specific definitions adopted by clinicians, demographers and other researchers (*ibid*, 2004). Variation occurs largely in (a) the reference period used to establish infertility; and (b) in the classification of women who have experienced pregnancy but not a live birth. The World Health Organisation (WHO) for example, uses the term infertility if the couple has never conceived despite cohabitation and exposure to pregnancy (without contraception) for a period of two years(WHO, 1975; WHO, 2001).

A distinction is made between primary and secondary infertility where the former includes those who have successfully conceived but have failed to deliver a live birth, and the latter refers to couples having difficulty bearing a second or higher order birth, despite usually five years of exposure, as in the definition above. The five-year reference period is typically used, but not necessarily, in demographic surveys.

While WHO defines infertility as failure to conceive despite two years of cohabitation and exposure to pregnancy, clinicians, and at least one community based study in Egypt (Egyptian Fertility Care Society, 1995) have referred to infertility if one year of unsuccessful efforts to conceive as the criterion for infertility has passed (Vaessen, 1984; Farley and Beisey, 1988).

In countries with populations such as in Malawi, with nearly universal marriage and low contraceptive use, the percentage of females who do not bear any child by a certain age indicates an extent of infertility. If infertility is high in a given population, it could be said that it is not realizing its full fertility potential but there can be a possibility of fertility going up as these undesirable conditions that lead to infertility are brought under control (Ugandan Bureau of Statistics, 2002) . The current chapter presents a profile of infertility in Malawi. In this analysis, infertility refers to women who do not have children by the age of 45 years.

5.2. LIMITATION

It has to be noted that there are practical measurement problems no matter which definition is used. It is difficult to measure continuous exposure to the risk of pregnancy over a period of years. A comprehensive measure of exposure requires data on marital status, abstinence, coital frequency and timing, contraceptive use, and the partner's presence or absence for the woman for the entire period under consideration. Another drawback in this assumption is raised by those women who lose children at a very young

age and report themselves childless. Shyrock and Siegel (1976) report that, the level of childlessness in a normal population ranges from two to four percent.

The use of contraception may also complicate the estimation of infertility and infecundity. Other biases arise because women who have borne a child during the period of measurement may have subsequently become infecund or because women who have not borne a child during that period may have had an unreported miscarriage or an induced abortion, been temporarily separated from their partner, been ill, failed to report contraceptive use, or stopped having intercourse (Vaessen, 1984).

5.3 CHILDLESSNESS IN MALAWI

Table 5.1 presents the percentage distribution of women by age reporting zero parity or childless in 2008 and for the previous censuses. Zero parity implies that the female has not had any child ever born to her. It is observed that close to a quarter of teenage women in Malawi had already started childbearing, and by age 24 years, almost 80 percent women aged 20-24 had already given birth to at least one child.

The proportion of women with zero parity decreases rapidly with age; from 75.7 percent in the age group 15-19 to 8.1 percent in the age group 25-29. Thereafter the percentage declines slowly with the age. However, the changes in percentage for the age groups beginning 30-34 years do not differ substantially. It is also worth noting that the percentage in the first three age groups of the reproductive period is influenced by the proportion married in these age groups. It is also expected that women who reach the age group 30-34 years and beyond have been exposed to child bearing for some time. Hence the percentage of females aged 30-34 years and beyond who reported to be zero parity provides a crude measure of primary infertility since marriage is universal in Malawi and all married women are probably likely to wish to have at least a child in their families.

Table 5. 1: Trends in percentage distribution of women with zero parity, 1977-2008.

Age group	1977	1987	1998	2008
15-19	63.2	71.4	73.4	75.7
20-24	14.8	20.7	21.5	21.3
25-29	6.0	8.1	8.5	8.1
30-34	4.1	5.2	5.3	4.9
35-39	3.5	4.2	4.0	4.1
40-44	3.7	4.2	3.9	3.8
45-49	3.8	4.1	3.8	3.6

In order to establish a trend in Malawi for women with zero parity, previous population and housing censuses are taken into account. Table 5.1 also indicates trends in proportion of women with zero parity. It can be seen that whereas the proportion of women aged 15-19 reporting to have at least a child was almost 30 percent in 1977, the proportion

declined to 25 percent in 2008. This implies that fewer women aged 15-19 are having children.

5.4 CHILDLESSNESS DIFFERENTIALS

Childlessness is known to differ by a number of characteristics. This section discusses childlessness by place of residence, region and district based on the 2008 census.

5.4.1 Childlessness by place of residence

There are several observations worth noting; Table 5.2; shows that from 1987 to 1998 childlessness levels for women aged 15 to 34 years has been increasing in the urban and the rural area. This is also true in 2008 when the urban area is considered. In general the proportion of women reporting zero parity in the urban is higher than in the rural years for years with the highest proportions found among women aged 15-19 years (81.7 percent) in 2008. This is not surprising because women in this age group are more likely to be attending school than their rural counterparts.

Further, save for women aged 35 to 39 years in 2008, the level of women with zero parity has generally been increasing, although marginally. It can also be seen that for women aged 40 to 44 years, the level of infertility for women in the urban increased although it takes a dip in 1998.

Table 5. 2: Percentage distribution of women with zero parity by rural and urban, 1977 - 1998

Age	1987		1998		2008	
	Urban	Rural	Urban	Rural	Urban	Rural
15-19	74.6	66.0	78.0	72.5	81.7	74.5
20-24	24.1	17.5	29.3	19.8	33.5	18.5
25-29	8.8	6.4	12.5	7.7	14.8	6.5
30-34	4.8	4.1	6.4	5.1	7.5	4.4
35-39	3.7	3.4	4.1	4.0	5.5	3.9
40-44	3.7	3.3	3.5	4.0	4.6	3.7
45-49	4.1	3.2	3.8	3.9	4.0	3.6

5.4.2 Childlessness by Regions and Districts

Data presented in Table 5.4 shows that the proportions of women with zero parity differs greatly among the three regions over time. When women in the age group 15-19 years are considered for the period 1977 to 2008, the proportion of women who had no child for Northern region increased from 70.1 percent to 74.7 percent; that of the South rose from 60.3 percent to 73.5 percent and the Central region it went up from 76.4 percent to 78.4 percent. Further it can be seen women in the Southern region aged 15-19 experienced the highest increase in level of women with zero parity for the same period.

The results for 2008 Census show that the Southern region (5.7 percent) had the highest proportion of women who had no child seconded by the Northern region and the Central Region (1.9 percent) had the least proportion. While assessing trends by using comparable census data show that infertility for women in age group 45-49 years has declined in Northern and Central regions, 3.3 percent to 2.3 percent and 3.0 percent to 1.9 percent respectively; while the Southern region registered an increase (from 4.6 percent to 5.7 percent). It is also worth mentioning that while there have been declining trends in levels of infertility for the Northern and Central regions, results from the 1987 and 1998 Population and Housing Censuses show irregular pattern. This is also true for the Southern region.

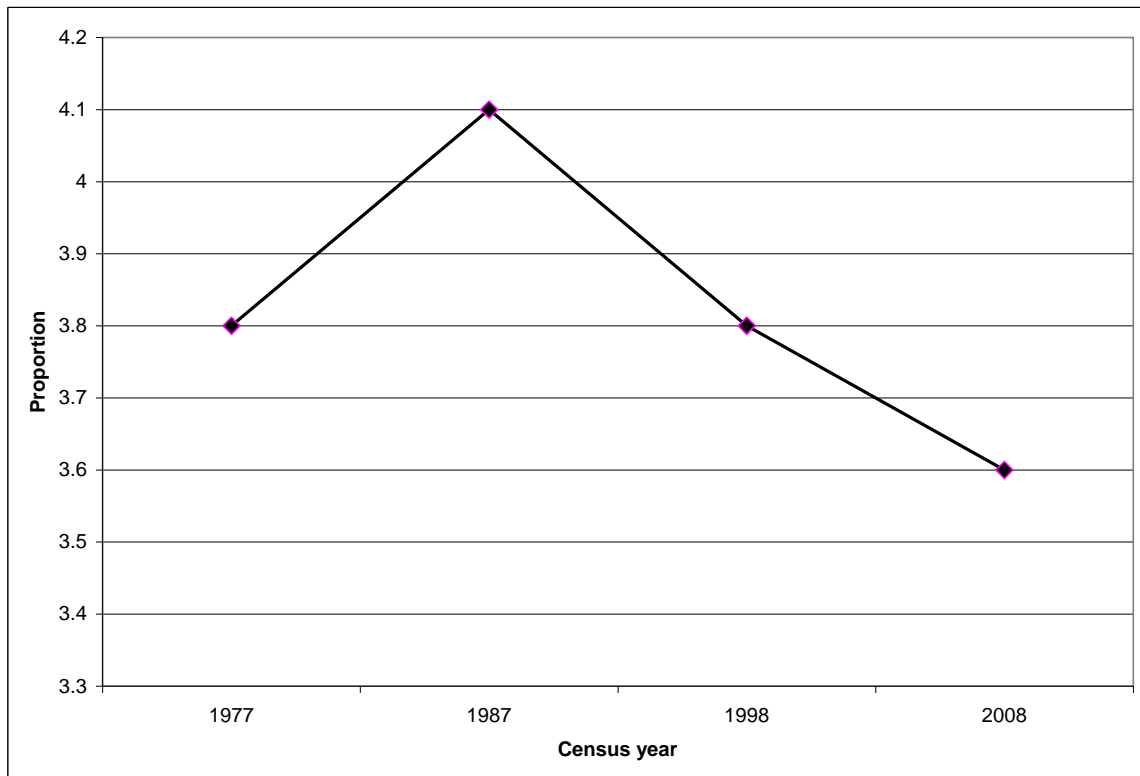
Table 5. 3: Trends in percentage distribution of women reporting zero parity by age

Region and Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Northern							
2008	74.7	20.8	7.3	3.6	2.8	2.4	2.3
1998	74.0	22.3	8.5	4.9	3.9	3.5	3.5
1987	71.2	19.4	6.7	4.0	3.3	3.3	3.1
1977	70.1	15.1	5.3	3.4	3.1	3.4	3.3
Central							
2008	78.4	21.2	6.5	2.9	2.2	2.1	1.9
1998	64.7	13.2	4.6	3.0	2.6	2.6	2.9
1987	68.7	17.6	5.5	3.2	2.5	2.5	2.6
1977	76.4	20.8	6.7	3.9	3.0	2.9	3.0
Southern							
2008	73.5	21.5	9.8	7.2	6.2	6.0	5.7
1998	70.7	21.9	10.0	6.5	4.8	4.8	4.6
1987	64.6	18.6	7.6	3.2	4.0	4.0	3.8
1977	60.3	15.9	7.1	5.1	4.4	4.6	4.6

5.5 TRENDS IN INFERTILITY

In this analysis, infertility refers to women who had no children by the age of 45. It has to be noted that fertility information was collected for women aged between 15 and 49 years. In 2008 the level of infertility was 3.6 percent. Further, with the exception of 1977, infertility among women in the age group 45-49 years has been declining in Malawi from 4.1 percent in 1987 to 3.6 percent in 2008 as shown in figure 5.1.

Figure 5. 1: Trends in proportion of women aged 45-49 years with zero parity



5.6 INFERTILITY DIFFERENTIALS

5.6.1 Infertility by place of residence

Table 5.4 gives trends for infertility by rural and urban areas from 1987 to 1998 which shows that the level of infertility among women in age group 45-49 years in the urban declined from 4.1 percent to 3.8 percent while that of the rural increased from 3.2 percent to 3.9 percent. However infertility increased slightly in 2008 where it is 4.0 percent and 3.6 percent in the urban and rural respectively. This is marginally higher than the pattern observed during 1987 - 1998 period.

Table 5. 4: Trends in percentage distribution of infertility, 1987 – 2008

Census Year	Urban	Rural
1987	4.1	3.2
1998	3.8	3.9
2008	4.0	3.6

5.6.2 Infertility by regions and districts

Table 5.6 presents the percentage distribution of women who reported zero parity by district according to 2008 Population and Housing Census. There are variations in terms of infertility by district; Thyolo and Phalombe districts registered the highest proportions of infertility with seven (7.0) percent, while the lowest proportions are found in Ntchisi and Mchinji districts, 1.4 percent a piece. The same table depicts a phenomenon whereby the districts with lower levels of infertility are located in Central region while those with higher infertility levels are in the Southern Region. For example, save for Ntcheu with 2.6 percent, most of the districts have levels of infertility of two (2.0) percent and below, while for those in the Southern region (Mangochi, Machinga, Zomba Chiradzulu, Thyolo Mulanje and Phalombe) the level is at six (6.0) percent and above.

Table 5. 5: Percentage distribution of level of infertility

Area	Proportion (%)
Malawi	3.6
Northern	2.3
Chitipa	2.4
Karonga	2.9
Nkhata Bay	3.4
Rumphi	2.0
Mzimba	1.7
Likoma	3.9
Mzuzu City	2.1
Central	1.9
Kasungu	1.8
Nkhota_kota	1.8
Ntchisi	1.4
Dowa	2.0
Salima	2.0
Mchinji	1.4
Dedza	1.7
Ntcheu	2.6
Lilongwe City	2.0
Lilongwe Rural	2.0
Southern	5.7
Mangochi	6.8
Machinga	6.5
Zomba	6.0
Zomba City	5.8
Chiradzulu	6.1
Blantyre Rural	6.4
Blantyre City	6.1
Mwanza	3.7
Thyolo	7.0
Mulanje	6.6
Phalombe	7.0
Chikwawa	2.5
Nsanje	2.1
Balaka	2.8
Neno	3.0

CHAPTER 6 NUPTIALITY LEVELS AND TRENDS

6.1 INTRODUCTION

Along with age and sex, marital status may be one of the most important population characteristics (Shyrock and Siegel, 1973). If one considers the major population processes to be birth, migration and death, then age, sex and marital status tend to be the first characteristics by which crude measurement of these processes is refined.

Regarding population-related processes, it seems natural to study nuptiality, because marriage or union formation is associated with the production of children. Marriage or exposure to the risk of pregnancy, conception and gestation, is considered an important “proximate determinant” of fertility (Davis and Blake, 1956). Nuptiality and marriage have a potential effect on other political, economic, social or psychological factors.

Nuptiality changes have been at the core of demographic transitions in some societies in Europe and Asia (Caldwell, 1993), with delayed marriages being seen as precursors of fertility change. Nuptiality changes underlie changes in family formation patterns and living arrangements, which are ultimately the basis of demographic transition (Sathar and Kiani, 1998). Nuptiality behavior has an impact on demographic outcomes such as fertility and population growth rates. A prominent outcome of nuptiality changes is a change or rise in proportions of single males and females, especially in the younger age groups of 15-24. This is particularly important in the case of females where the risk of pregnancy is decreased, especially where most childbearing takes place within marriages.

Marriage is a leading social and demographic indicator of exposure of women to the risk of child bearing. It is deemed to be the major gateway to family formation and child bearing. In low contraceptive countries the duration of one’s life spent in marriage has a direct reflection on the total period of exposure to child bearing. Marriage is a common practice across Malawi with 65 percent of persons aged 15 years or more currently in a marriage union.

The 2008 Census recorded the marital status of all persons aged 12 and older. This analysis covers the data collected from the 2008 census, and is based on nuptiality data for the age-specific distribution of men and women by their marital status. In relation to fertility, the chapter will only analyse age groups 15-49.

The chapter also analyses the patterns of marriage, estimation of mean age at first marriage, estimation of Singulate Mean Age at Marriage (SMAM) and the use of life table techniques in studying marriage and nuptiality.

Presented in Table 6.1 is the summary of marital status for males and females from the 2008 census data.

Table 6. 1: Distribution of Population age 15 years and older by Marital Status, 2008

Marital Status	Male	Female	Total
Never Married	31.62	17.72	24.39
Married	65.69	64.58	65.11
Divorced/Separated	2.23	7.80	5.13
Widowed	1.10	8.69	5.05

The above table shows that there were more males who had never married compared to the females. There is an almost equal ratio of currently married men and women. The opposite trend was observed for other categories of marital status with more divorced and separated females than males.

6.2 MARRIAGE RATES

6.2.1 Crude Marriage Rates

The Crude Marriage Rate measures the frequency of marriage in the total population. It is the ratio of the number of marriages in a year to the mean population. Table 6.2 below presents the crude marriage rates per 1,000 of the population presented for males and females.

**Table 6. 2: Crude Marriage Rates of Population Age 12 years and older
by sex, 2008**

Area	Total	Male	Female
Malawi	574.42	571.93	576.77
Northern Region	571.62	548.29	593.35
Chitipa	557.62	542.90	571.09
Karonga	573.15	556.70	588.12
Nkhata Bay	523.24	507.32	537.97
Rumphi	579.92	552.72	606.00
Mzuzu City	520.63	506.06	535.73
Mzimba	599.16	568.42	627.47
Likoma	434.15	431.41	436.64
Central Region	581.03	574.46	587.42
Kasungu	595.55	574.27	617.22
Nkhotakota	574.66	560.80	588.32
Ntchisi	583.84	573.35	594.01
Dowa	587.18	580.83	593.34
Salima	591.87	590.39	593.27
Lilongwe City	546.94	528.65	567.18
Lilongwe	602.14	598.76	605.37
Mchinji	582.10	568.50	595.88
Dedza	582.17	596.53	569.45
Ntcheu	544.40	553.51	536.35
Southern Region	569.00	576.27	562.30
Mangochi	589.31	595.01	584.25
Machinga	609.41	622.83	597.15
Zomba City	505.28	498.07	512.74
Zomba	568.11	584.66	553.34
Chiradzulu	536.57	556.75	519.32
Blantyre City	537.72	524.42	551.94
Blantyre	540.84	548.22	533.98
Mwanza	550.69	556.02	545.81
Thyolo	569.98	588.95	553.19
Mulanje	566.67	593.01	544.06
Phalombe	611.64	631.50	594.04
Chikwawa	592.06	580.54	603.55
Nsanje	567.72	558.87	576.16
Balaka	548.90	559.04	539.91
Neno	555.90	561.00	551.17

Table 6.2 shows that in respect of the total population aged 12 years and over, for every 1,000 persons, 574.42 are married. There are more married women at 576.77 per 1,000 women and 571.93 married men per 1,000 men. Among the districts, crude marriage rates are highest overall for Phalombe at 611.64 married persons per 1,000 of the population and lowest in Likoma at 434.15 married persons per 1,000 of the population. The crude marriage rates are generally lower in the four cities of Mzuzu, Lilongwe, Zomba and Blantyre as compared to the districts.

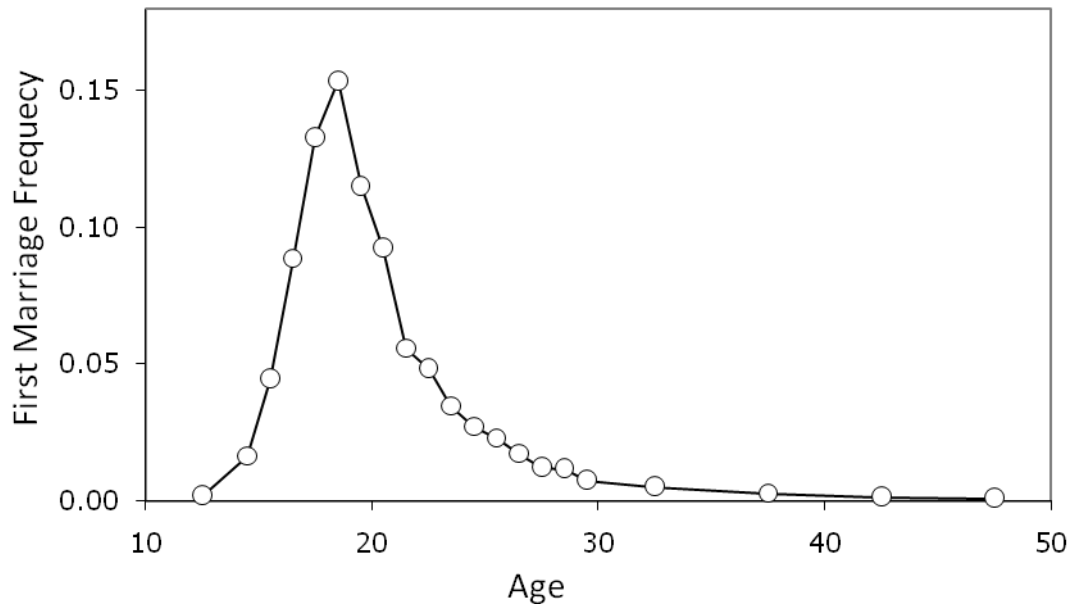
6.2.2 Age-Specific First Marriage Rates

The likelihood of marriage varies very much with age, and the age specific first marriage rates display the occurrences of first marriages in a single year, and in five year age groups. The 2008 census included for the first time a question '*at what age did (respondent) first marry*'. This information can be used to find the rates and frequencies of first marriages at different ages.

Table 6. 3: First Marriage Rates for Female Population aged 12 years and over by sex, 2008

Age Group x to x+n	Population Single	First Marriage 2008	First Marriage Rate per 1,000
12-14	487 083	2 607	5.35
15-19	459 876	41 267	89.74
20-24	119 547	21 850	182.77
25-29	38 603	3 924	101.65
30-34	12 105	801	66.17
35-39	5 797	271	46.75
40-44	3 311	127	38.36
45-49	2 143	60	28.00
50-54	1 750	48	27.43

Figure 6. 1: Frequencies of First Marriage, Females, 2008



From Table 6.3 and Figure 6.1, it can be observed that first marriage occurrences for females in Malawi in 2008 were concentrated in the late teens and early twenties, reaching their peak at age 18, where nearly 15 percent of all females enter into first marriages.

Table 6. 4: First Marriage Rates for Male Population aged 12 years and over by sex, 2008

Age Group x to x+n	Population Single	First Marriage 2008	First Marriage Rate per 1,000
12-14	482 826	2 607	5.40
15-19	595 570	41 267	69.29
20-24	299 781	21 850	72.89
25-29	112 274	3 924	34.95
30-34	32 065	801	24.98
35-39	13 429	271	20.18
40-44	5 876	127	21.61
45-49	3 590	60	16.71
50-54	2 423	48	19.81

Figure 6. 2: Frequencies of First Marriage, Males, 2008

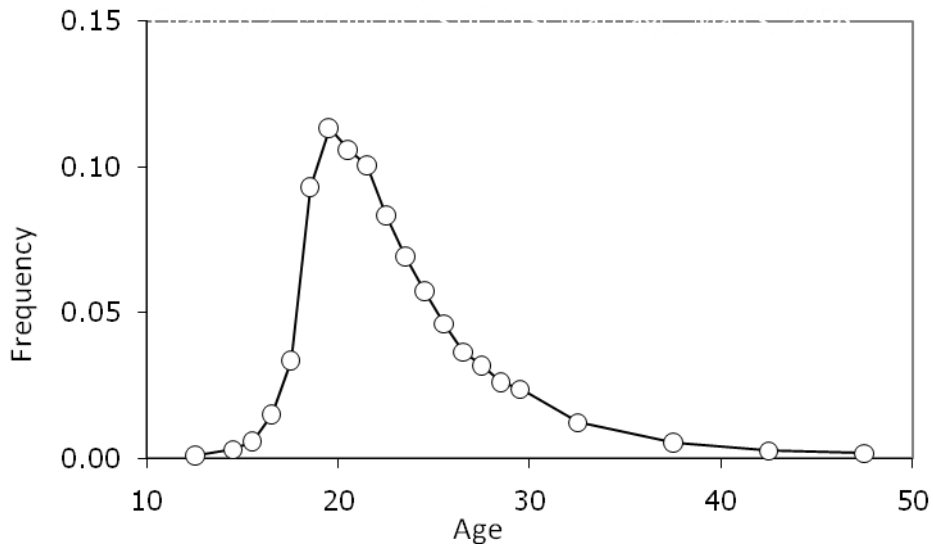


Table 6.3 and Figure 6.2 present the age distribution of first marriages for 2008 for males. There is an early peak at age 20, and there are more men getting married at older ages than women, since, as is expected, there is an age difference between men and women for ages at first marriage (Kpedekpo, 1982).

6.3 SINGULATE MEAN AGE AT MARRIAGE

The Singulate Mean Age at Marriage (SMAM) is an estimate of the average age at first marriage obtained from the population never married at successive ages (Schürer, 1989). Age at marriage is often used as a proxy for the onset of women's exposure to the risk of pregnancy. Overall, Malawian women marry at a mean age of 18.6 years, although this varies with the level of education and the area of residence. However many women are sexually active before marriage. For instance, from the 2004 MDHS, it was noted that about 17 percent of women aged 20-49 would have had sexual intercourse by age 15, and the median age at first sexual intercourse was 17.3, which is about one and half years lower than the median age at first marriage of 18.6 years.

In societies where reproduction is primarily confined within marriage, the changes in marriage ages and the resultant reduction in proportion of women remaining in married state are directly linked to fertility. Raising the female age at marriage has therefore been recognized as one of the important policy interventions that might be able to influence population growth rates apart from national family planning programme.

Table 6. 5: Singulate Mean Age at Marriage by Area, 2008

Area	Total	Male	Female
Malawi	21.8	23.9	19.8
Northern Region	20.2	23.1	18.4
Chitipa	20	22.9	18.2
Karonga	19.9	22.9	18.2
Nkhata Bay	20.3	23	18.5
Rumphi	20.5	23.3	18.5
Mzimba	20	22.9	18.2
Likoma	21.9	24.5	19.8
Mzuzu City	22	24.5	19.4
Central Region	20.8	22.8	18.8
Kasungu	20.6	22.8	18.5
Nkotakota	21	23	19
Ntchisi	20.7	22.7	18.8
Dowa	20.8	22.7	18.8
Salima	20.6	22.8	18.7
Lilongwe	20.6	22.5	18.6
Lilongwe City	22	23.9	19.6
Mchinji	20.7	22.7	18.6
Dedza	20.5	22.6	18.7
Ntcheu	20.6	22.8	18.7
Southern Region	20.3	22.7	18.6
Mangochi	20	22.4	18.4
Machinga	19.9	22.4	18.3
Zomba	20	22.3	18.5
Zomba City	21.9	23.9	19.7
Chiradzulu	20.4	22.5	18.8
Blantyre	20.7	23	18.8
Blantyre City	22.1	24.1	19.7
Mwanza	20.5	22.9	18.6
Thyolo	20.1	22.4	18.6
Mulanje	19.7	22.2	18.4
Phalombe	19.5	21.9	18.2
Chikwawa	20.6	22.8	18.6
Nsanje	20.4	22.9	18.5
Balaka	20.4	22.7	18.7
Neno	20.6	22.9	18.6

In general, marriage is nearly universal in Malawi, with 90.5 percent of men and women ever married (or in unions) by age 30. Such marriages also start early, particularly amongst females. The Singulate Mean Age at First Marriage from the Census was 19.8 years for females and 23.9 years for males, with an average of 21.8 years for both sexes. This means that on average, Malawian females stay single for less than 20 years while their male counterparts stay single for less than 24 years. The highest SMAMs are observed in urban areas, Mzuzu City, Lilongwe City, Blantyre City and Zomba City. The district with the lowest SMAM for males is Mulanje at 22.2 years, and the district with the lowest SMAMs for females are Chitipa, Karonga, Mzimba and Phalombe all with SMAMs of 18.2 years.

Table 6. 6: SMAM by Residence and Educational Attainment, 2008

Characteristics	SMAM	
	Male	Female
Residence		
Urban	25.9	21.9
Rural	23.4	19.8
Educational Attainment		
No Education	23.0	18.2
Primary	23.0	19.5
Secondary	25.2	22.1
Post-Secondary	28.5	26.2

From Table 6.6, SMAM was 18.2 years for women with no education and it increases with level of education. The SMAM was 22.1 years for women with secondary level education showing a difference of 4 years between the SMAM for women with no education and those with secondary education. Similar observations were made for males: those with no education enter marriage at an earlier age of 23.0 compared to those with secondary education with SMAM of 25.2.

There is evidence that suggests that residence and education have an impact on levels of SMAM. The data shows that females' early entry into marriage is closely associated with their level of educational attainment, either as a cause or a consequence. Increased female education delays age at marriage (or consensual union), delaying the onset of a risk to pregnancy and childbirth which, in turn, lowers completed fertility. One of the most potent effects of female education on fertility is indirect through its influence on age at marriage (or consensual union). Research to date suggests that age at marriage increases with female education (Momeni, 1972). Completed fertility, in turn, has been found to be lower among those women who delay age at marriage (or first consensual union) (Mandelbaum, 1974; Yaukey and Thorsen, 1972).

6.4 TRENDS IN SINGULATE MEAN AGE AT MARRIAGE

Table 6.7 shows a gradual increase in levels of SMAM for both males and females over four censuses. For males there has been a 4.4 percentage increase in SMAM from 1977 to 2008 and an 11.2 percentage increase in SMAM for females for the same time period. The proportions of females never married in the age group 15-19 have increased by a 44.4 percentage margin from 1977 to 2008.

Table 6. 7: Proportion Single and Mean Age at Marriage; 1977, 1987, 1998 and 2008

Age Group	Proportion Single							
	Male				Female			
	1977	1987	1998	2008	1977	1987	1998	2008
15-19	93.8	91.1	91.7	95.2	48.9	55.1	61.8	70.6
20-24	49.3	51.4	53.0	54.0	7.4	11.5	14.6	17.4
25-29	13.3	17.4	18.0	21.2	2.2	3.5	4.8	6.7
30-34	4.9	6.3	6.0	7.7	1.3	1.6	2.1	3.0
35-39	2.9	3.4	3.4	4.1	1.0	0.9	1.3	1.9
40-44	2.3	2.3	2.6	2.7	1.0	0.8	1.1	1.5
45-49	1.8	1.7	1.7	2.1	0.9	0.7	1.0	1.2
SMAM	22.9	23.2	23.4	23.9	17.8	18.4	19.0	19.8

Comparing 1998 and 2008, there has been a 2.1 percentage increase in SMAM for males and a 4.2 percentage increase in SMAM for females. The proportions of females never married in the age group 15-19 have increased by 14.2 percent from 61.8 in 1998 to 70.6 in 2008.

6.5 NUPTIALITY TABLES

The 2008 census included a question, addressed to ever married persons, from age 12, on age at first marriage. This information, together with information on marital status, may be used to produce retrospective estimates of nuptiality tables. Just as the life table describes the course of mortality, so does the nuptiality table describe the course of marriage in a population.

6.5.1 Construction of Nuptiality Tables on Age at First Marriage

The source data required for the construction of a nuptiality table is the Age at First Marriage for ever married population aged from age 12. The data should be tabulated by single years for ever married persons by sex, current age and age at first marriage. The population by sex and single years of age is also required for the calculation. The

nuptiality table provides two important basic nuptiality statistics; the mean age at first marriage and the proportion never married by age 50.

6.5.2. Nuptiality Table for Males and Females

Table 6.8 and 6.9 give the nuptiality table for females and males respectively for 2008. The results are presented in grouped data for ages 11 to 13, and then presented for single ages from age 14 to 29. From age 30 the data is presented grouped in five year age groups. The data is group at the extreme ages, as marriage is concentrated in the middle, young adult ages until age 35 for females. The concentration of marriages requires single year presentation to observe the rapidly occurring marriages.

Table 6. 8: Nuptiality Table for Females, based on Age at First Marriage, 2008

x	N	First Marriage	Single at age x	Marriage
		Probabilities		Frequency
		N_{qx}	L_x	N_{dx}
11	3	0.0059	1.0000	0.0059
14	1	0.0169	0.9941	0.0168
15	1	0.0472	0.9773	0.0462
16	1	0.0976	0.9311	0.0909
17	1	0.1606	0.8402	0.1349
18	1	0.2197	0.7053	0.1550
19	1	0.2101	0.5503	0.1156
20	1	0.2135	0.4347	0.0928
21	1	0.1645	0.3419	0.0562
22	1	0.1737	0.2857	0.0496
23	1	0.1502	0.2360	0.0355
24	1	0.1406	0.2006	0.0282
25	1	0.1364	0.1724	0.0235
26	1	0.1187	0.1489	0.0177
27	1	0.0980	0.1312	0.0129
28	1	0.1077	0.1183	0.0127
29	1	0.0880	0.1056	0.0093
30	5	0.2866	0.0963	0.0276
35	5	0.1948	0.0687	0.0134
40	5	0.1443	0.0553	0.0080
45	5	0.1103	0.0473	0.0052
50	-	-	0.0421	-

Table 6. 9: Nuptiality Table for Males, based on Age at First Marriage, 2008

		First Marriage Probabilities	Single at age x	Marriage Frequency
x	n	Nqx	Lx	Ndx
11-13	3	0.0029	1.0000	0.0029
14	1	0.0030	0.9971	0.0030
15	1	0.0059	0.9941	0.0058
16	1	0.0153	0.9883	0.0151
17	1	0.0346	0.9731	0.0336
18	1	0.0993	0.9395	0.0933
19	1	0.1343	0.8462	0.1136
20	1	0.1447	0.7326	0.1060
21	1	0.1607	0.6266	0.1007
22	1	0.1589	0.5259	0.0836
23	1	0.1571	0.4423	0.0695
24	1	0.1544	0.3728	0.0576
25	1	0.1469	0.3152	0.0463
26	1	0.1360	0.2689	0.0366
27	1	0.1379	0.2324	0.0320
28	1	0.1310	0.2003	0.0262
29	1	0.1365	0.1741	0.0238
30	5	0.4122	0.1503	0.0620
35	5	0.3093	0.0884	0.0273
40	5	0.2097	0.0610	0.0128
45	5	0.1838	0.0482	0.0089
50	-	-	0.0394	-

By applying the formula

$$\text{SumProduct } (x + 0.5) / \text{Sum } dx$$

Where;

x is the age

dx is the marriage frequency

The mean age at first marriage for females calculated from the unabridged nuptiality tables using age at first marriage is 20.7 years. The proportion of females never married by age 50 is 0.0421 or 4.2 percent.

From the male nuptiality tables, based on reported age at first marriage, the mean age at first marriage for males in Malawi is 23.6. The nuptiality table also shows that a proportion of 0.0384 or 3.94 percent of men are never married at age 50.

CHAPTER 7 POLICY IMPLICATIONS

The 2008 census has established that the Total Fertility Rate (TFR) for Malawi is 6.0. The TFR is still high despite that it is declining, and it ranks among the highest in the world. High TFR generally leads to a high population growth rate, which in turn has far-reaching implications for almost all aspects of social and economic development. Although the relationships between fertility rates and socio-economic changes are exceedingly complex and poorly understood, it is generally agreed among policy makers, development planners and other key policy actors that high rates of fertility exert pressure on natural resources such as land and forests; the environment, including waste management; and social services including education, health, housing and access to clean water. It is therefore imperative that policies and development frameworks address issues of high fertility rates to attain sustainable development.

Among the major contributing factors to the high total fertility rates in Malawi are the high Adolescent Fertility Rates. The 2008 Census has shown that Malawi's population is youthful, with a median age of 17 years, which implies that more young people are entering the reproductive age group. Adolescents (aged 15 – 19) constitute 9.7 percent of the total population of Malawi, and the census shows that for every 1000 women aged 15 – 19, there are 193 births. High adolescent fertility rates imply higher school drop-out rates among girls, higher cases of complications during pregnancy, higher maternal mortality rates and higher levels of infant and childhood illnesses and mortality. High rates of adolescent fertility therefore impede government efforts of reducing poverty and the attainment of development goals, including the Malawi Growth and Development Strategy and the Millennium Development Goals.

High fertility rates are also directly linked to the levels of educational attainment of women in a country. The 2008 Census data shows lower fertility for women with secondary education compared to those with primary and lower education for all age groups. It further shows early onset of fertility for adolescents with primary or lower education as opposed to their counterparts with secondary and higher education. Overall, by the time they complete their childbearing period, women with no education bear 6.5 children, while those with primary, secondary and tertiary education have 6.2, 4.3 and 3.0 children respectively. From the foregoing observation, it may be concluded that higher investment in girls' education would contribute to lower rates of fertility, particularly among adolescent girls in Malawi.

The Government of Malawi is committed to ensuring sustainable population growth rates and fertility rates. This commitment is reflected in various key policy documents. The Malawi Growth and Development Strategy (MGDS) expressly sets a medium term outcome of reducing total fertility rate from 6.0 to 4.9. A related outcome in the MGDS aims to increase the contraceptive prevalence rate from 33.0 percent to 40.6 percent by providing accessible, affordable and comprehensive reproductive health services.

The MGDS objectives need to be complemented with comprehensive efforts in sector-specific policies and plans, including issues of minimum legal age of marriage, sexual and reproductive health education for both in- and out-of-school youth, and provision of

rights based youth friendly reproductive health services. Empowerment of women and prevention of gender-based violence are also key strategies for reducing high fertility rates.

APPENDICES

APPENDIX 1: TEAM MEMBERS OF FERTILITY AND NUPTIALITY ANALYTICAL REPORT

NAME	INSTITUTION
Charles Machinjili	National Statistical Office
Mercy Kanyuka	National Statistical Office
Jameson Ndawala	National Statistical Office
Angela Msosa	National Statistical Office
Mylen Mahowe	National Statistical Office
Tiope Mleme	National Statistical Office
Emmanuel Mwanaleza	National Statistical Office
Jesman Chintsanya	University of Malawi, Chancellor College
Stella Nda	University of Malawi, Chancellor College
Jason Onsembe	UNFPA
Griffith Feeney	UNFPA
Dan Msonda	UNFPA

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12345678(90)

Person Number	P9. What is (NAME/S) religion?	P10. What is (NAME/S) tribe? Code tribe	P11. Where was (NAME) residing previously? Code region and district OR code the foreign country	P12. How long has (NAME) been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? (Record '100' if less than 1 year) (Record higher age if the residence has not changed since birth)	P13. Does (NAME) have difficulty or problems in the following? If yes, what are the causes?		P14. PARENTAL SURVIVORSHIP AND RESIDENCE			P15. Does (NAME) have a birth certificate?	P16. Can (NAME) read and write in the following languages?	P17. Has (NAME) ever attended school?
					Type of disability	Causes	Is (NAME/S) natural mother alive?	If alive does (NAME/S) natural mother live in this house-hold?	Is (NAME/S) natural father alive?			
1	Christian				1	None	Yes	Yes	Yes	Yes, seen	None	Has never attended
2	Muslim				2	Hearing	No	No	No	Yes, but not seen	English	Has ever attended
3	Other				3	Speaking	Don't know	Don't know	Don't know	No	Chichewa	Is currently attending
4	No religion				4	Walking/Climbing	Yes	Yes	Yes	Yes, seen	Other	Is currently attending
5					5	Other	Yes	Yes	Yes	Yes, seen		Is currently attending
6					6		No	No	No	No		Is currently attending
7					7		Yes	Yes	Yes	Yes, seen		Is currently attending
8					8		No	No	No	No		Is currently attending
9					9		Yes	Yes	Yes	Yes, seen		Is currently attending
10					10		No	No	No	No		Is currently attending
11					11		Yes	Yes	Yes	Yes, seen		Is currently attending
12					12		No	No	No	No		Is currently attending
13					13		Yes	Yes	Yes	Yes, seen		Is currently attending
14					14		No	No	No	No		Is currently attending
15					15		Yes	Yes	Yes	Yes, seen		Is currently attending
16					16		No	No	No	No		Is currently attending
17					17		Yes	Yes	Yes	Yes, seen		Is currently attending
18					18		No	No	No	No		Is currently attending
19					19		Yes	Yes	Yes	Yes, seen		Is currently attending
20					20		No	No	No	No		Is currently attending

SECTION D: DWELLING UNIT CHARACTERISTICS

D01. TYPE OF DWELLING UNIT	D01. MAIN MATERIAL OF THE STRUCTURE	D01. MAIN MATERIAL OF THE ROOF	D01. MAIN MATERIAL OF THE FLOOR
Premised <input type="checkbox"/> Semi-premised <input type="checkbox"/> Tenement <input type="checkbox"/> Other <input type="checkbox"/>	Brick <input type="checkbox"/> Concrete <input type="checkbox"/> Other <input type="checkbox"/>	Asphalt <input type="checkbox"/> Metal <input type="checkbox"/> Other <input type="checkbox"/>	Concrete <input type="checkbox"/> Brick <input type="checkbox"/> Other <input type="checkbox"/>

D04. MAIN MATERIAL OF THE WALL (What is the main material used for the walls?)

Brick Concrete Other

D05. MAIN MATERIAL OF THE FLOOR (What is the main material used for the floor?)

Concrete Brick Other

D06. NUMBER OF ROOMS (How many rooms do the dwelling unit have, excluding bathrooms, closets, stairways, and porches?)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169

APPENDIX 4 CEB TABLES BY DISTRICT

Table 1.1 Percentage distribution of women by number of Children Ever Born (CEB) alive, Malawi										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	635927	75.7	18.9	3.6	0.6	0.1	0.0	0.0	0.0	0.0
20-24	678071	21.3	29.8	30.0	12.7	4.2	1.1	0.4	0.1	0.0
25-29	566350	8.1	10.4	21.6	27.3	19.4	8.2	3.0	1.1	0.6
30-34	405602	4.9	4.8	9.1	15.1	21.9	20.2	12.8	6.0	4.8
35-39	298004	4.1	3.7	6.0	8.8	13.3	16.8	17.6	13.3	16.2
40-44	221274	3.8	3.4	5.0	6.5	9.1	11.6	14.3	14.2	31.8
45-49	174875	3.6	3.2	4.7	5.9	8.0	9.8	11.8	13.0	39.5

Table 1.2 Percentage distribution of women by number of Children Ever Born (CEB) alive, Malawi										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
Urban										
15-19	106840	81.7	14.8	2.4	0.3	0.1	0.0	0.0	0.0	0.0
20-24	126962	33.5	31.8	24.1	7.6	2.1	0.5	0.1	0.0	0.0
25-29	110779	14.8	18.3	27.0	22.8	11.6	3.7	1.2	0.3	0.2
30-34	68316	7.5	9.8	17.7	20.9	20.3	13.2	6.4	2.4	1.6
35-39	42725	5.5	6.5	12.1	15.1	18.2	16.0	12.6	7.3	6.5
40-44	29053	4.6	4.9	8.7	11.6	14.4	14.8	14.6	10.8	15.4
45-49	20833	4.0	3.5	6.9	9.6	12.4	13.5	13.8	12.6	23.4
Rural										
15-19	529087	74.5	19.7	3.9	0.6	0.1	0.0	0.0	0.0	0.0
20-24	551109	18.5	29.4	31.4	13.9	4.8	1.3	0.4	0.1	0.0
25-29	455571	6.5	8.4	20.4	28.4	21.3	9.4	3.4	1.2	0.7
30-34	337286	4.4	3.8	7.4	14.0	22.3	21.7	14.1	6.8	5.5
35-39	255279	3.9	3.2	5.0	7.7	12.5	17.0	18.4	14.3	17.9
40-44	192221	3.7	3.2	4.4	5.8	8.3	11.1	14.3	14.7	34.3
45-49	154042	3.6	3.1	4.4	5.5	7.4	9.3	11.6	13.1	41.6

Table 1.3 Percentage distribution of women by number of Children Ever Born (CEB) alive, Malawi

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
Northern										
15-19	86976	74.7	20.3	3.5	0.5	0.1	0.0	0.0	0.0	0.0
20-24	84938	20.8	30.7	30.9	12.4	3.6	0.9	0.3	0.1	0.0
25-29	68160	7.3	10.1	21.2	29.3	20.4	7.7	2.4	0.8	0.5
30-34	51179	3.6	4.4	8.6	15.4	23.7	22.1	13.2	5.6	3.3
35-39	38173	2.8	3.1	5.5	8.9	13.9	18.3	19.9	13.8	13.6
40-44	31448	2.4	2.5	4.0	6.5	9.5	13.1	17.0	16.9	27.8
45-49	24493	2.3	2.4	3.9	5.5	8.4	11.3	14.2	15.7	36.1
Central										
15-19	267213	78.4	17.0	3.0	0.4	0.1	0.0	0.0	0.0	0.0
20-24	284868	21.2	32.1	29.6	11.4	3.8	1.0	0.4	0.1	0.0
25-29	234021	6.5	10.0	22.3	28.3	19.8	8.2	2.9	1.0	0.7
30-34	172589	2.9	3.8	8.1	14.5	22.9	21.8	14.0	6.5	5.3
35-39	125375	2.2	2.7	4.7	7.6	12.5	17.3	19.1	15.1	18.6
40-44	93337	2.1	2.4	3.7	5.4	7.9	10.8	14.5	15.2	37.6
45-49	72374	1.9	2.2	3.4	4.8	6.9	8.8	11.6	13.6	46.5
Southern										
15-19	281738	73.5	20.3	4.3	0.7	0.1	0.0	0.0	0.0	0.0
20-24	308265	21.5	27.5	30.1	14.0	4.8	1.3	0.4	0.1	0.0
25-29	264169	9.8	10.8	21.2	25.9	18.7	8.4	3.1	1.2	0.7
30-34	181834	7.2	5.8	10.2	15.6	20.5	18.2	11.6	5.7	4.8
35-39	134456	6.2	4.8	7.4	9.8	13.9	16.0	15.5	11.4	14.8
40-44	96489	6.0	4.7	6.6	7.7	10.0	11.8	13.2	12.4	27.4
45-49	78008	5.7	4.4	6.1	7.1	9.0	10.2	11.4	11.7	34.0

Northern Region

Table 1.4 Percentage distribution of women by number of Children Ever Born (CEB) alive, Chitipa										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	9738	77.7	17.8	3.0	0.4	0.1	0.0	0.0	0.0	0.0
20-24	8519	22.8	29.3	29.9	12.4	3.9	1.0	0.4	0.1	0.0
25-29	6419	7.0	8.6	18.6	27.1	21.8	10.1	4.0	1.5	1.0
30-34	5243	4.3	4.0	6.7	10.8	20.1	22.4	16.8	8.2	6.4
35-39	4196	2.6	2.4	4.2	5.9	9.2	15.8	20.4	18.3	21.1
40-44	3221	2.1	2.5	3.2	5.1	6.9	10.3	14.3	17.1	38.4
45-49	2473	2.4	2.3	3.4	4.3	6.5	8.2	11.2	14.6	46.8

Table 1.5 Percentage distribution of women by number of Children Ever Born (CEB) alive, Likoma										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	584	81.0	15.2	2.9	0.0	0.0	0.0	0.0	0.0	0.0
20-24	537	26.6	29.1	33.1	8.4	1.9	0.2	0.0	0.0	0.0
25-29	466	8.6	13.3	24.7	32.0	15.2	6.0	0.0	0.0	0.2
30-34	336	5.4	6.5	10.1	21.4	29.2	17.9	7.1	2.1	0.3
35-39	259	3.9	5.0	5.8	12.0	20.1	18.1	17.8	8.1	8.9
40-44	204	4.4	3.4	6.9	5.4	9.3	10.8	18.6	14.7	26.5
45-49	152	3.9	3.3	9.9	9.2	8.6	5.9	10.5	17.1	30.9

Table 1.6 Percentage distribution of women by number of Children Ever Born (CEB) alive, Mzuzu

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	7185	83.3	14.1	1.9	0.1	0.1	0.0	0.0	0.0	0.0
20-24	8042	33.8	33.2	23.8	6.8	1.7	0.4	0.1	0.0	0.0
25-29	7189	13.3	19.3	27.1	24.6	11.3	3.1	0.8	0.2	0.2
30-34	4543	5.8	9.2	17.6	21.9	22.4	14.7	5.5	1.8	0.9
35-39	2896	3.7	5.8	12.2	16.3	19.8	17.5	12.7	6.7	5.2
40-44	2030	2.9	3.3	7.3	11.2	14.8	17.9	16.2	12.2	14.0
45-49	1471	2.1	3.4	6.0	8.4	13.4	15.8	16.9	15.1	18.8

Table 1.7 Percentage distribution of women by number of Children Ever Born (CEB) alive, Rumphi

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	8413	73.7	21.5	3.4	0.4	0.2	0.0	0.0	0.0	0.0
20-24	8387	19.7	32.6	31.4	12.1	3.1	0.5	0.1	0.1	0.0
25-29	6743	5.8	10.1	22.5	30.3	21.0	7.3	1.8	0.5	0.3
30-34	5210	3.1	4.2	8.5	15.7	25.5	22.4	13.0	4.9	2.6
35-39	3754	2.6	2.5	5.0	8.0	16.0	19.6	20.3	13.2	12.5
40-44	3042	2.4	2.3	4.0	5.3	8.7	12.0	18.2	19.4	27.6
45-49	2319	2.0	2.3	3.1	5.1	7.6	11.1	14.3	18.0	36.4

Table 1.8 Percentage distribution of women by number of Children Ever Born (CEB) alive, Karonga

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	13301	66.7	25.9	5.5	0.8	0.2	0.0	0.0	0.0	0.0
20-24	13295	17.8	26.4	32.4	16.0	5.2	1.4	0.4	0.1	0.0
25-29	10985	7.3	9.7	18.3	26.8	22.2	10.1	3.5	1.1	0.7
30-34	8093	3.5	4.9	8.6	14.4	20.6	21.7	15.4	6.9	3.9
35-39	6049	3.4	4.1	6.3	8.7	12.3	16.4	19.1	15.0	14.4
40-44	4823	2.7	3.2	5.1	6.9	9.5	12.6	16.0	15.6	28.1
45-49	3810	2.9	3.0	4.9	6.0	9.6	11.1	13.8	14.0	34.5

Table 1.9 Percentage distribution of women by number of Children Ever Born (CEB) alive, Mzimba										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	36269	75.0	20.2	3.2	0.5	0.1	0.0	0.0	0.0	0.0
20-24	35453	18.8	31.5	32.1	12.5	3.4	0.9	0.3	0.1	0.0
25-29	27805	6.1	8.5	21.0	31.4	21.5	7.7	2.4	0.8	0.4
30-34	21622	2.8	3.2	7.0	15.1	25.2	23.9	13.5	5.8	3.3
35-39	16275	2.3	2.3	4.2	8.2	13.7	19.2	21.4	14.4	14.1
40-44	14046	1.9	1.8	3.2	5.7	9.2	13.2	17.7	18.1	28.8
45-49	11113	1.7	1.9	3.1	4.9	7.7	11.1	14.7	16.5	38.1

Table 1.10 Percentage distribution of women by number of Children Ever Born (CEB) alive, Nkhata Bay										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	11486	75.3	19.3	3.9	0.6	0.1	0.0	0.0	0.0	0.0
20-24	10705	20.4	31.3	31.0	12.2	3.7	0.8	0.2	0.1	0.0
25-29	8553	7.2	9.4	21.6	30.0	20.8	7.4	2.2	0.7	0.4
30-34	6132	4.2	5.0	9.4	16.2	24.4	21.5	12.2	4.4	2.6
35-39	4744	3.6	3.8	6.5	10.4	14.6	19.6	19.3	11.5	10.5
40-44	4082	3.6	3.9	4.3	8.2	10.3	14.2	17.1	14.9	23.0
45-49	3155	3.4	3.5	4.9	6.9	9.2	12.9	13.8	14.4	30.6

Central Region

Table 1.11 Percentage distribution of women by number of Children Ever Born (CEB) alive, Dedza										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	30424	77.3	17.7	3.1	0.5	0.1	0.0	0.0	0.0	0.0
20-24	31529	18.7	31.8	30.7	12.4	4.3	1.1	0.4	0.1	0.0
25-29	25210	4.9	8.3	21.7	29.9	20.8	8.6	3.4	1.2	0.7
30-34	19667	2.3	3.2	6.7	15.1	24.9	22.2	13.7	6.4	5.2
35-39	14915	1.9	2.3	4.3	8.0	13.7	18.8	19.6	14.3	17.0
40-44	11367	1.9	2.5	3.6	5.2	8.4	11.1	15.6	15.8	35.5
45-49	8992	1.7	2.5	3.2	4.6	7.4	9.1	12.8	14.4	43.7

Table 1.12 Percentage distribution of women by number of Children Ever Born (CEB) alive, Kasungu										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	29574	79.1	16.6	2.8	0.5	0.1	0.0	0.0	0.0	0.0
20-24	31001	20.1	30.9	30.9	12.6	3.9	1.0	0.3	0.1	0.0
25-29	25543	5.7	8.0	20.0	29.6	22.7	9.1	3.0	1.0	0.6
30-34	19015	2.7	2.7	6.2	12.7	21.7	24.3	16.0	7.5	5.8
35-39	13927	2.2	2.0	3.6	6.1	10.5	15.8	20.6	17.5	21.6
40-44	10760	2.0	1.7	2.5	4.5	6.5	9.4	14.5	15.6	43.0
45-49	8274	1.8	1.9	2.9	4.2	6.0	7.7	10.6	13.2	51.2

Table 1.13 Percentage distribution of women by number of Children Ever Born (CEB) alive, Lilongwe City										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	34467	81.1	15.3	2.6	0.3	0.0	0.0	0.0	0.0	0.0
20-24	43630	31.3	33.1	24.6	7.7	2.2	0.6	0.1	0.0	0.0
25-29	38618	12.8	18.3	27.3	23.3	12.4	3.9	1.3	0.4	0.3
30-34	23655	5.4	9.5	17.6	20.7	20.9	14.1	7.1	2.9	1.8
35-39	14341	3.6	6.5	11.6	15.2	18.0	15.9	13.0	8.1	7.7
40-44	9506	2.9	4.7	8.1	11.9	13.8	15.0	15.1	10.9	17.4
45-49	6582	2.0	3.0	6.2	10.0	12.4	13.7	14.0	13.1	25.3

Table 1.14 Percentage distribution of women by number of Children Ever Born (CEB) alive, Lilongwe Rural										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	57795	80.8	14.9	2.7	0.4	0.1	0.0	0.0	0.0	0.0
20-24	61044	20.0	33.1	29.6	11.1	4.0	1.2	0.4	0.1	0.0
25-29	49448	4.9	7.9	22.2	29.8	20.9	8.8	3.2	1.2	0.8
30-34	38621	2.5	2.5	5.9	13.5	24.1	23.8	14.8	7.0	5.9
35-39	29161	2.0	1.8	3.4	6.2	11.8	18.3	20.4	16.3	19.6
40-44	21516	2.0	1.8	2.8	4.2	6.8	10.4	15.0	16.5	40.2
45-49	16839	2.0	1.8	2.8	3.9	5.8	8.0	11.6	14.2	49.4

Table 1.15 Percentage distribution of women by number of Children Ever Born (CEB) alive, Nkhotakota										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	14111	74.1	19.5	4.6	0.5	0.1	0.0	0.0	0	0.0
20-24	14775	21.2	28.6	29.3	13.7	4.9	1.3	0.4	0.1	0.0
25-29	12740	6.4	9.2	19.6	26.3	21.8	10.2	3.9	1.4	1.0
30-34	9049	2.8	3.6	7.6	13.0	20.5	21.2	15.8	8.1	7.1
35-39	6765	2.4	2.4	4.7	7.2	11.6	15.5	18.1	16.2	21.7
40-44	4919	2.0	3.2	3.6	5.2	8.3	10.2	13.6	15.0	38.4
45-49	8274	1.8	1.9	2.9	4.2	6.0	7.7	10.6	13.2	51.2

Table 1.16 Percentage distribution of women by number of Children Ever Born (CEB) alive, Ntchisi										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	10956	86.0	10.8	1.8	0.3	0.1	0.0	0.0	0.0	0.0
20-24	11156	23.3	30.6	28.7	11.9	3.7	1.0	0.4	0.0	0.0
25-29	8637	5.5	8.5	20.9	29.6	20.6	9.1	3.4	1.3	0.9
30-34	6589	2.1	2.4	5.1	11.8	22.5	23.3	16.4	8.1	8.0
35-39	4946	1.5	1.7	2.5	5.4	9.6	16.0	19.5	17.5	26.2
40-44	3845	2.0	1.4	2.4	3.3	5.6	8.9	12.6	15.4	48.2
45-49	2987	1.4	1.4	1.3	3.3	4.5	7.1	9.8	13.4	57.5

Table 1.17 Percentage distribution of women by number of Children Ever Born (CEB) alive, Dowa										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	28394	81.6	14.6	2.2	0.3	0.1	0.0	0.0	0.0	0.0
20-24	28579	21.5	35.8	28.6	9.2	3.1	0.9	0.5	0.1	0.0
25-29	22154	5.4	9.1	24.6	30.1	18.6	7.6	2.6	1.0	0.7
30-34	17838	2.4	2.9	7.3	14.8	24.7	22.6	13.7	6.0	5.3
35-39	13004	1.8	2.1	3.3	6.5	12.0	18.4	21.3	15.6	18.8
40-44	9824	1.5	1.9	2.8	4.1	6.8	10.9	14.6	16.3	40.5
45-49	7859	2.0	2.1	3.3	4.1	6.1	8.1	12.1	13.2	48.5

Table 1.18 Percentage distribution of women by number of Children Ever Born (CEB) alive, Mchinji										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	22296	74.6	21.1	2.8	0.5	0.1	0.0	0.0	0.0	0.0
20-24	22628	16.3	31.5	32.7	13.3	4.2	1.2	0.3	0.1	0.0
25-29	17793	4.0	7.2	19.6	29.7	23.6	10.5	3.3	1.1	0.7
30-34	13481	2.0	2.1	5.5	11.9	21.8	24.1	17.6	8.1	6.8
35-39	10219	1.6	1.8	2.9	5.3	10.2	15.7	20.3	17.9	23.9
40-44	7628	1.5	1.6	2.8	4.2	5.8	8.6	13.0	14.7	47.2
45-49	5646	1.4	1.4	1.9	3.4	5.1	7.0	8.9	12.9	57.7

Table 1.19 Percentage distribution of women by number of Children Ever Born (CEB) alive, Ntcheu										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	23158	72.3	22.3	3.8	0.5	0.1	0.0	0.0	0.0	0.0
20-24	23166	16.7	30.7	33.9	13.4	4.0	0.8	0.3	0.0	0.0
25-29	19519	5.6	8.9	21.4	29.6	22.1	8.5	2.5	0.8	0.5
30-34	14448	3.2	3.9	7.9	14.4	24.1	22.1	14.2	5.9	4.1
35-39	10334	2.9	3.4	5.4	8.0	12.8	18.4	18.7	14.1	16.0
40-44	8605	2.8	3.5	4.2	5.6	9.5	11.9	14.6	15.0	32.4
45-49	7217	2.6	3.3	4.9	5.5	7.7	9.6	11.7	13.6	40.8

Table 1.20 Percentage distribution of women by number of Children Ever Born (CEB) alive, Salima										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8+
15-19	16038	72.2	20.7	5.0	0.8	0.1	0.0	0.0	0.0	0.0
20-24	17360	17.6	29.3	30.4	14.3	5.5	1.6	0.7	0.1	0.0
25-29	14359	5.8	9.2	18.9	26.5	21.4	10.5	4.7	1.6	1.1
30-34	10226	2.8	3.7	7.8	12.9	20.5	20.9	15.4	8.2	7.7
35-39	7763	2.2	2.9	4.7	7.4	12.0	16.6	17.2	15.4	21.4
40-44	5367	2.3	2.1	4.5	5.6	8.0	10.8	13.5	14.0	38.7
45-49	4131	2.0	2.4	3.7	5.1	7.2	9.1	10.6	12.4	47.0

Table 1.21 Percentage distribution of women by number of Children Ever Born (CEB) alive, Balaka										
Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	15458	69.1	24.1	5.1	0.7	0.1	0.0	0.0	0.0	0.0
20-24	15310	15.7	27.2	33.3	16.4	5.5	1.2	0.4	0.1	0.0
25-29	13248	5.6	9.4	19.3	26.6	22.2	10.7	4.0	1.2	0.8
30-34	9283	3.1	4.6	8.4	14.3	20.8	20.9	14.7	7.0	6.1
35-39	7053	3.1	4.5	6.4	8.1	13.1	15.6	17.2	12.5	19.2
40-44	5310	3.3	4.2	5.6	6.0	9.0	10.1	13.3	13.0	35.2
45-49	4483	2.8	4.1	5.0	5.8	7.9	9.3	11.2	12.7	41.1

Table 1.22 Percentage distribution of women by number of Children Ever Born (CEB) alive, Blantyre City										
Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	35157	82.4	14.4	2.2	0.3	0.1	0.0	0.0	0.0	0.0
20-24	42622	36.6	30.4	23.5	7.1	1.7	0.3	0.1	0.0	0.0
25-29	37144	18.1	18.7	27.2	21.6	10.0	3.0	0.8	0.2	0.1
30-34	22371	10.5	11.4	19.2	20.9	18.5	11.3	5.0	1.9	1.1
35-39	13618	8.2	7.6	14.0	15.5	18.2	14.9	11.0	5.7	4.6
40-44	9260	6.7	6.2	10.4	12.4	15.1	14.2	13.0	9.5	12.2
45-49	6905	6.1	4.4	8.8	10.7	13.3	13.5	12.7	10.7	19.5

Table 1.23 Percentage distribution of women by number of Children Ever Born (CEB) alive, Blantyre Rural										
Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	17959	76.9	18.7	3.0	0.4	0.1	0.0	0.0	0.0	0.0
20-24	18835	23.9	29.0	30.4	11.8	3.5	0.8	0.2	0.0	0.0
25-29	15708	10.6	10.6	23.1	27.3	18.1	6.7	2.1	0.7	0.5
30-34	11433	7.3	5.9	10.5	17.0	23.0	18.1	10.6	4.1	3.5
35-39	8071	6.9	5.0	7.1	10.2	15.2	16.6	15.8	10.8	12.1
40-44	6062	7.1	4.6	6.8	7.4	10.7	13.2	13.5	11.9	24.6
45-49	4782	6.4	4.7	6.2	7.0	8.5	10.5	11.7	11.0	33.7

Table 1.24 Percentage distribution of women by number of Children Ever Born (CEB) alive, Chikhwawa

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	20748	68.0	24.9	4.9	0.8	0.1	0.0	0.0	0.0	0.0
20-24	21176	15.9	30.5	32.1	14.5	4.8	1.4	0.4	0.1	0.0
25-29	18603	5.7	9.3	21.3	28.5	20.1	9.3	3.3	1.3	0.9
30-34	12959	3.7	4.0	7.8	15.3	22.1	20.7	13.3	7.0	5.8
35-39	10047	3.0	3.2	5.2	7.2	13.2	17.5	18.3	14.0	18.2
40-44	7049	3.3	2.7	3.6	5.5	7.8	12.0	15.2	15.6	34.1
45-49	5585	2.5	2.8	3.3	4.9	6.9	9.4	12.5	13.7	43.6

Table 1.25 Percentage distribution of women by number of Children Ever Born (CEB) alive, Machinga

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	22812	70.7	21.4	5.1	1.1	0.2	0.0	0.0	0.0	0.0
20-24	24685	18.1	26.0	31.2	16.0	6.0	1.6	0.6	0.1	0.0
25-29	21139	8.3	9.0	19.3	25.5	20.6	10.2	4.1	1.7	0.9
30-34	14484	7.3	4.7	8.5	14.0	20.2	19.7	12.6	6.6	6.1
35-39	11458	6.1	3.9	6.4	8.9	13.4	16.2	15.9	11.6	17.3
40-44	7573	6.2	4.0	6.0	7.4	9.9	11.6	12.8	12.1	29.4
45-49	6188	6.5	4.1	6.0	6.4	8.8	10.7	11.2	11.7	34.3

Table 1.26 Percentage distribution of women by number of Children Ever Born (CEB) alive, Mangochi

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	37006	73.7	19.4	4.6	0.9	0.2	0.0	0.0	0.0	0.0
20-24	39792	21.5	27.4	29.0	14.2	5.4	1.4	0.5	0.1	0.0
25-29	34934	9.8	10.4	20.0	24.7	19.1	9.6	3.8	1.5	0.8
30-34	23429	8.3	4.9	9.2	14.4	19.6	18.3	12.6	6.6	5.7
35-39	19145	6.6	3.9	6.7	9.4	13.2	16.1	15.6	11.9	16.2
40-44	12924	6.8	3.9	6.0	7.2	9.6	12.1	13.2	12.4	28.5
45-49	10340	6.8	3.6	5.6	7.3	9.0	10.7	11.2	11.8	33.6

Table 1.27 Percentage distribution of women by number of Children Ever Born (CEB) alive, Mulanje										
Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	24135	70.8	21.9	5.3	0.8	0.2	0.0	0.0	0.0	0.0
20-24	28262	17.6	24.6	32.2	17.1	6.0	1.5	0.5	0.1	0.0
25-29	23347	8.9	8.9	19.3	26.9	20.6	9.5	3.5	1.4	0.7
30-34	16754	7.7	5.7	9.5	15.3	20.6	18.6	11.8	6.0	4.7
35-39	11970	7.6	6.1	7.9	9.9	13.5	15.4	14.1	10.8	14.4
40-44	9157	6.8	6.6	7.5	8.2	9.9	11.4	12.0	11.7	25.6
45-49	7681	6.6	6.0	7.9	8.3	9.5	10.0	10.1	11.2	30.2

Table 1.28 Percentage distribution of women by number of Children Ever Born (CEB) alive, Mwanza										
Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	4752	78.0	17.0	3.5	0.6	0.0	0.0	0.0	0.0	0.0
20-24	4715	22.0	27.7	30.6	13.6	4.4	1.1	0.3	0.1	0.0
25-29	4070	8.2	9.4	21.1	28.4	20.0	8.7	2.6	0.9	0.6
30-34	2863	6.7	4.1	7.9	13.9	20.3	21.0	14.1	6.6	5.3
35-39	2072	5.1	2.7	5.5	7.3	11.7	16.2	19.2	14.9	17.5
40-44	1554	4.6	3.1	3.7	6.0	9.0	10.2	13.9	14.9	34.6
45-49	1200	3.7	2.0	4.2	5.8	7.9	8.5	11.0	13.1	43.6

Table 1.29 Percentage distribution of women by number of Children Ever Born (CEB) alive, Neno										
Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	5339	68.3	25.1	5.1	0.6	0.0	0.0	0.0	0.0	0.0
20-24	5437	15.6	27.0	34.4	16.3	5.1	1.2	0.2	0.1	0.0
25-29	4439	5.7	8.6	18.6	27.2	24.1	9.7	3.8	1.4	0.5
30-34	3196	2.6	3.9	7.5	12.6	22.9	21.6	14.6	7.9	6.3
35-39	2388	3.1	3.1	4.7	7.6	12.1	15.5	18.7	14.6	20.5
40-44	1789	3.0	2.9	4.6	5.8	7.9	11.5	14.0	13.9	36.5
45-49	1489	3.0	2.8	3.3	5.3	7.7	10.1	11.8	13.2	42.5

Table 1.30 Percentage distribution of women by number of Children Ever Born (CEB) alive, Nsanje

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	11687	70.5	22.0	5.1	0.9	0.1	0.0	0.0	0.0	0.0
20-24	10790	17.3	30.7	30.0	14.1	5.2	1.8	0.5	0.1	0.0
25-29	9930	5.6	9.2	19.7	26.3	20.7	10.1	4.7	2.2	1.3
30-34	6745	2.8	3.9	7.1	13.0	20.6	20.6	15.0	8.1	8.7
35-39	5522	2.8	2.5	4.5	7.0	11.9	16.1	18.5	15.0	21.6
40-44	3889	2.0	2.6	3.4	5.3	6.4	10.2	13.1	16.0	40.8
45-49	3241	2.1	1.9	3.5	4.2	6.2	9.3	11.2	13.6	47.5

Table 1.31 Percentage distribution of women by number of Children Ever Born (CEB) alive, Phalombe

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	13574	68.8	21.8	6.6	1.2	0.2	0.0	0.0	0.0	0.0
20-24	16979	15.8	21.2	31.9	19.2	8.1	2.4	0.7	0.1	0.0
25-29	13718	8.7	6.9	15.8	25.2	22.2	12.4	5.3	2.0	1.3
30-34	9592	8.2	4.7	7.4	12.3	18.5	19.0	14.5	7.5	7.5
35-39	7031	7.4	4.7	6.6	8.0	12.0	14.6	15.6	12.3	18.4
40-44	5137	7.3	5.5	6.5	7.2	9.3	10.6	11.9	11.9	29.6
45-49	4117	7.0	4.4	6.4	6.9	8.6	9.1	11.1	10.7	35.3

Table 1.32 Percentage distribution of women by number of Children Ever Born (CEB) alive, Chiradzulu

Age group	Number of Children Ever Born (CEB) alive									
	0	1	2	3	4	5	6	7	8+	
15-19	13910	74.7	20.6	3.3	0.4	0.1	0.0	0.0	0.0	0.0
20-24	14557	20.6	28.9	31.4	13.1	4.2	1.2	0.3	0.0	0.0
25-29	12594	9.0	10.3	22.2	27.8	18.9	7.7	2.5	0.9	0.5
30-34	8884	7.6	5.6	10.1	16.2	21.7	19.0	11.1	5.0	3.6
35-39	6688	6.6	5.0	6.9	10.3	14.6	16.7	15.7	11.1	12.9
40-44	5395	6.7	5.3	7.1	7.4	9.7	11.8	13.8	12.5	25.3
45-49	4463	6.1	5.4	7.3	6.8	9.1	9.7	11.1	13.0	30.9

Table 1.33 Percentage distribution of women by number of Children Ever Born (CEB) alive, Zomba City										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8 +
15-19	4821	85.2	11.6	2.2	0.2	0.1	0.0	0.0	0.0	0.0
20-24	5230	37.5	29.7	22.8	6.9	2.3	0.6	0.1	0.0	0.0
25-29	4528	16.3	20.9	25.8	22.0	10.2	3.1	0.9	0.4	0.1
30-34	2894	8.1	10.6	19.4	20.6	20.2	10.8	6.8	2.1	1.2
35-39	1910	6.7	6.2	12.5	17.6	19.1	15.7	11.2	5.1	5.9
40-44	1325	5.7	5.1	11.3	12.2	14.3	13.5	14.9	9.1	13.3
45-49	945	5.8	4.8	7.1	11.3	12.4	11.5	13.9	10.8	22.2

Table 1.34 Percentage distribution of women by number of Children Ever Born (CEB) alive, Zomba Rural										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8 +
15-19	26323	71.5	21.8	4.8	0.8	0.1	0.0	0.0	0.0	0.0
20-24	29316	17.6	27.1	32.1	15.6	5.4	1.3	0.5	0.1	0.0
25-29	25073	7.6	8.9	19.6	27.7	21.0	9.6	3.5	1.3	0.7
30-34	17781	6.6	5.2	9.0	14.9	20.2	19.5	12.8	6.7	5.0
35-39	13149	6.0	5.0	6.9	9.0	13.2	16.0	16.0	12.3	15.4
40-44	9611	6.0	5.2	7.0	7.7	9.9	10.7	13.0	11.8	28.4
45-49	8248	6.0	4.9	6.3	7.2	8.9	9.4	11.2	10.8	35.0

Table 1.35 Percentage distribution of women by number of Children Ever Born (CEB) alive, Thyolo										
Age group		Number of Children Ever Born (CEB) alive								
		0	1	2	3	4	5	6	7	8 +
15-19	28057	73.8	20.2	4.1	0.5	0.1	0.0	0.0	0.0	0.0
20-24	30559	19.3	26.0	32.1	15.2	5.3	1.2	0.4	0.0	0.0
25-29	25694	9.2	8.1	20.9	28.0	20.0	8.7	3.2	1.0	0.5
30-34	19166	8.1	4.9	8.7	15.3	22.1	19.0	11.7	5.6	4.2
35-39	14334	7.7	5.1	6.7	9.6	14.0	16.5	15.5	11.4	13.3
40-44	10454	7.3	5.1	6.6	7.4	9.6	11.6	13.4	12.7	25.9
45-49	8341	7.0	5.4	6.4	7.1	9.0	9.9	11.2	11.0	32.6