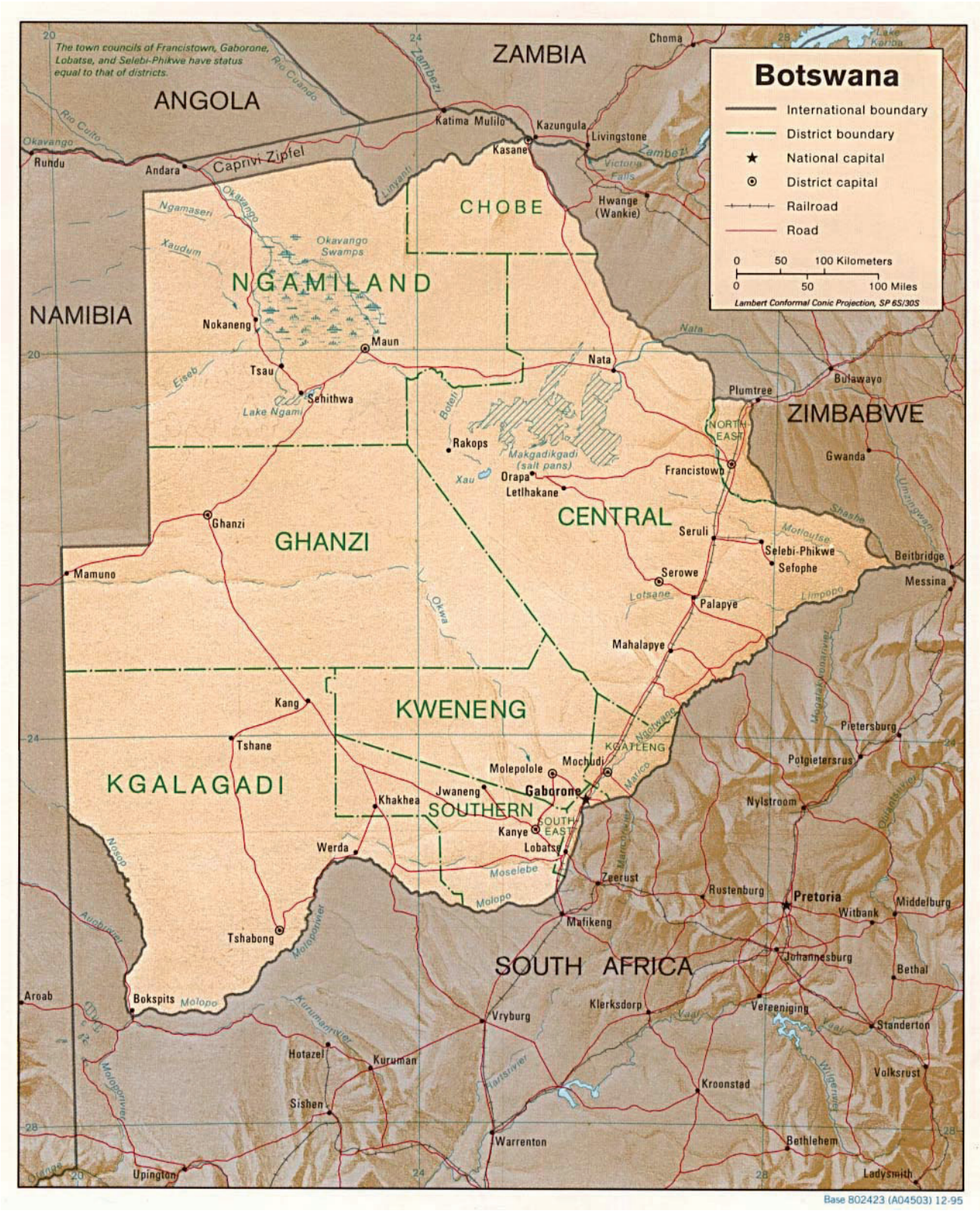
Republic of Botswana

BOTSWANA DEMOGRAPHIC SURVEY 2006

CSO
CENTRAL STATISTICS OFFICE


Botswana
International boundary
District boundary
National capital
District capital
Railroad
Road
0 50 100 Kilometers
0 50 100 Miles
Lambert Conformal Conic Projection, SP 65/30S
The town councils of Francistown, Gaborone, Lobatse, and Selebi-Phikwe have status equal to that of districts.
ZAMBIA
ANGOLA
NAMIBIA
ZIMBABWE
CHOBE
NGAMILAND
GHANZI
CENTRAL
KWENENG
KGALAGADI
SOUTHERN
KGATLENG
SOUTH EAST
NORTH-EAST
SOUTH AFRICA
Choma
Katima Mulilo
Kazungula
Livingstone
Kasane
Caprivi Zipfel
Rundu
Andara
Hwange (Wankie)
Victoria Falls
Okavango Swamps
Nokaneng
Maun
Tsau
Sehithwa
Lake Ngami
Nata
Rakops
Makgadikgadi (salt pans)
Orapa
Letlhakane
Francistown
Plumtree
Bulawayo
Gwanda
Ghanzi
Mamuno
Seruli
Selebi-Phikwe
Sefophe
Serowe
Palapye
Mahalapye
Beitbridge
Messina
Kang
Tshane
Molepolole
Mochudi
Gaborone
Khakhea
Jwaneng
Kanye
Lobatse
Werda
Tshabong
Zeerust
Rustenburg
Pretoria
Witbank
Middelburg
Pietersburg
Potgietersrus
Nylstroom
Mafikeng
Johannesburg
Bethal
Aroab
Bokspits
Vryburg
Klerksdorp
Vereeniging
Standerton
Hotazel
Kuruman
Sishen
Kroonstad
Volksrust
Warrenton
Bethlehem
Ladysmith
Upington
Rio Cuito
Okavango
Zambezi
Linyanti
Ngamaseri
Xaudum
Eiseb
Boteti
Xau
Okwa
Nossob
Molopo
Kuruman river
Harts river
Vaal
Limpopo
Shashe
Motloutse
Marico
Crocodile
Base 802423 (A04503) 12-95

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PREFACE

This report provides findings of the Botswana Demographic Survey (BDS-2006) conducted by the Central Statistics Office (CSO) in 2006. The BDS-2006, as part of the CSO programme of inter-censal surveys is the third to have been conducted in Botswana. The first and second BDS were conducted in 1987 and 1998 respectively.

The main objective of this survey was to estimate and update information collected during the 2001 Population and Housing Census. This includes estimation of information on population demographics, migration, housing characteristics, access to water, energy use and sanitation information for use during the inter-censal period.

Specifically the Demographic survey was designed to collect data to inform key demographic indicators such as population size, growth, age structure, life expectancy, migration, mortality (infant, child and adult), fertility, dependency and sex ratios, birth and death rates and population distribution. Knowledge of mortality, fertility rates and trends is useful in evaluating health policies, population policies and directing programmes towards areas of greater needs. Migration data on the other hand are useful in assessing the present and future sizes of different localities, districts, urbanization and many more.

The report has an executive summary followed by 8 chapters viz. (i) Background, (ii) Survey Methodology, (iii) Household Characteristics (iv) Population Characteristics (v) Economic Activities and the Labour Force, (vi) Fertility, (vii) Migration, and (viii) Mortality with summary and various appendices to the report.

Additional information can be obtained from CSO, Ministry of Finance and Development Planning at email csobots@gov.bw or fax +267 395 2201 or Demography Unit telephone: 3671300 Ext. 1392/1394. Requests to use the survey data for further analysis or research studies may be made in writing to the Government Statistician.

A. N. Majelantle
Government Statistician

Acknowledgement

I would like to acknowledge and appreciate contributions of all those who participated in this national exercise. To mention but a few, I am grateful to Chiefs and District Officers who facilitated the success of the survey in their districts and localities; the general public who provided the necessary information; Survey Field Officers which include Surveys Supervisors, Drivers and Enumerators who sometimes had to work under harsh climatic conditions; Demography and Surveys Units Staff and Other CSO Staff who performed quality control activities and their Managers; Data Processing System Programmers; Data Entry Personnel; the Chief Statistician as the project manager and all those whom I have not mentioned but whose input led to the successful completion of the survey.

The invaluable contribution of the team of consultants from the Department of Population Studies at the University of Botswana is highly appreciated. The team brought needed expertise in different areas during analysis for professional interpretation of data and improvement on the quality of the report. The team under the leadership of Professor G. Letamo includes: Professor H Siphambe; Mr R G Majelantle; Dr. K. Thaga; Mr K. Bainame; Professor P.S. Nair; and Professor E. K. Campbell. I equally acknowledge the contribution by the CSO editorial committee.

A. N. Majelantle
Government Statistician

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The 2006 Botswana Demographic Survey (BDS) provides data on the current situation in Botswana regarding population and development issues. It is the third to have been conducted in Botswana. The first and second BDS were conducted in 1987 and 1998 respectively. The most significant findings are presented here.

Population Characteristics

In 2006 the total population of Botswana was estimated to be 1,703,014. Age distribution shows that around 35.6 percent of the sample population is below the age of 15 years, while 59.2 percent is aged between 15-64 years and 5.2 percent above 65 years. This age structure compares almost favourably with that of 2001 census. The median age of the population is 21.9 years; 22.7 for females and 20.7 for males. The median age of the population living in cities and towns stands at 24.4 years. As expected, non-Batswana population is considerably older. The median age of non-Batswana population is 30.5 years. The majority of non- Batswana population (81 percent) belong to the economically active age groups.

Among Batswana population, females appear slightly older than males. While 59 percent of females belong to the age group 15-64, the corresponding proportion for males is 56.7 percent only. However, younger dependents (0-14 years) are relatively more among males, i.e. 38.6 percent as against 34.7 percent among females. The aged population is also proportionately higher among females, i.e. 6.4 percent as against 4.7 among males.

Females outnumber males in Botswana with a sex ratio of 92 males for every 100 females. However, it is reversed in the context of non-Batswana population. More than half (58 percent) of non-Batswana population are males.

Majority (57.4 percent) of Botswana population are living in cities/towns and urban villages. The share of rural population is 42.6 percent

Majority of the population (64.2 percent) are 'never married'. Around 18 percent of the sample population is married while 11 percent are cohabiting couples. Whereas 5 percent of the population is widowed, only a small proportion, i.e. 1.3 percent is divorced or separated.

The vast majority (81.1 percent) of the population are living in urban villages and rural areas. About one fifth of the population resides in cities/towns. We see the opposite pattern among the non- Batswana population. The majority (52 percent) of the non-Batswana live in cities and towns. Only around 20 percent of them reside in rural areas.

While three fourth of the population possess an educational attainment of primary or secondary level, 22 percent of the population has never attended school.

Majority of Batswana population are concentrated in Kweneng East, Central Serowe-Palpye, Gaborone , Central Tutume, Ngwaketse South and Central Mahalapye in that order whereas non-Batswana population are concentrated in Gaborone, Kweneng East, Francistown, South East and Central Serowe- Palapye.

The majority of non Batswana come from SADC countries, only a small fraction (0.6 percent) hails from other African countries and other continents.

Majority of Botswana's population (60.2 percent) profess Christianity. About 27 percent of the people mentioned 'God' as their religion. Interestingly, 9 percent of the population do not follow any religion at all. 'Badimo' is the only other religion which has some importance in Botswana with 3 percent followers. All other religious faiths combined have less than one percent following. As regards information on physical disability, vision impairment (both eyes) is found the most common among the reported disabilities. Next in order are hearing impairment, mental challenges and inability to use legs. This pattern is more or less the same across all the districts.

Economic Characteristics

The overall unemployment rate is estimated at 27 percent. This is quite high compared to the 2005/06 Labour Force Survey estimates of 17.6 percent in almost the same period. It is however worth noting that the Botswana Demographic Survey was conducted between August and November 2006, which are normally off season periods for agriculture. Given that agriculture, especially subsistence agriculture is currently the main single employer of labour in Botswana, it is quite probable that the estimated unemployment rate will be significantly higher due to the seasonal aspect of agriculture

Most unemployed have secondary education and no training. Most unemployed have never been married. Unemployment is highest for urban villages at 31percent, followed by rural areas at 28.3percent and lowest to cities/towns at 20.5percent.

The labour force participation rate is estimated at 53percent and is more for males at 61percent compared to females at 45percent. Most of the economically not active were students and home makers. Of the employed people, 56percent were males.

The biggest employers are Agriculture and Fishing and Wholesale and Retail contributing 14 percent each to total employment. Mining employs 3.3percent of the labour force even though it is the driving force of the economy in terms of output growth and exports. There is some occupational segregation which is evident in women being less represented in some industries and occupations. A majority of those employed are aged 25-29

Most employees are paid cash (68percent), followed by those in self employment with no employees and those working in lands / cattle posts. A majority of employees are resident in the rural areas and mainly employed in agriculture. Most of the unemployed are youth and women. Citizens face higher unemployment rates at 28percent compared to 10.4percent of non-citizens

Household Characteristics

The average household size is 6.48 persons per household with the most frequent sizes being 4, 5 and 6 persons per household. Single-person households account for about 5.5percent and about 18.5percent of the households have more than nine persons per household. Jwaneng, Sowa and Gaborone districts have the smallest average household sizes at 3.5, 4.4 and 4.8 persons per household respectively, while Kgalagadi South and Ngamiland West districts have the largest average household sizes at 8.66 and 7.9 persons per household respectively. In general, urban districts have small household sizes than rural districts.

53.4percent of the households were male-headed while the remaining 46.6percent are female-headed. Jwaneng and Ngamiland-Chobe districts have the highest percentage of male-headed households at 71.9percent and 70percent while the Ngamiland West and North-East districts have the highest percentage of the female-headed households at 59.3percent and 57.3percent respectively. About 29.8percent of the housing units in the country are one-roomed houses while 25.4percent are two roomed houses.

Most of the households in the country have traditional houses (87.6percent), a mixture of traditional and modern houses (85percent), detached houses (50.9percent), town houses (48.3percent), shacks (59.4percent) and modified traditional houses (76.9percent) have these housing units built by the owners who are also occupying them. About 66.9percent of the households with semi detached houses are rented from the government while 41.1percent of the household have flats that are rented from some renting companies and 21.5percent of the flats are rented from the BHC.

About 78.5percent of the households in Botswana have houses that were built using conventional bricks or blocks while 13.6percent were built with mud bricks or blocks with about 62.8percent of the traditional houses being built with mud bricks.

Fertility

Overall, fertility in Botswana has been stable in recent years, following a sustained decline since the 1980s. From a total fertility rate (TFR) of 6.6 children in 1981, the rate fell to 3.5 births in 2006. However, the rate has been almost unchanged since 2001. It should be noted that the target that the National Population Policy, which is currently under review, has set a TFR of 3.4 births to be attained in 2011 has already been achieved.

Although the overall TFR is 3.5 births, there are differentials between cities and towns, urban villages and rural areas of 2.4 births, 3.1 births and 4.6 births, respectively. Women with secondary education have 3.1 births compared to 5.3 births among women with no education. Never married women have an overall TFR of 3.2 compared to 5.8 births among women who are currently married.

The age pattern of fertility shows that a woman will have given birth to 1.9 (more than half of her lifetime births) by age 30 and 2.5 births (approximately three-quarters of her lifetime births) by age 35.

Regarding lifetime fertility, the highest proportion of all women who had no children (86.7percent) was in the 15-19 age-group and this percentage fell increasingly with age. One in ten women aged 15-19 had one live birth. However, the situation is different among the currently married women, where 41percent of currently married women aged 15-19 years had no children. Overall, a third of all women compared to 8percent of currently married women had no children.

As regards teenage fertility, out of all the live births that took place in the past year, approximately 9.7percent of them were to teenagers (5,927 out of 61,053). It is clear that the prevalence of teenage fertility has been declining over the years since the late 1980s. The share of teenage births among all births declined from 23.7percent in 1988 to 9.7percent in 2006.

Migration

Out of a total population of 1,703,014 42percent migrated within Botswana (internal migrants) at least once. Hence 58percent of the population had never migrated since they were born. Only 7percent of all movements in Botswana were made by non-citizens. Non-citizens formed only 3percent of the total population. Seventy-nine (79 percent) percent of them originated from SADC countries.

53percent of the migrants were females. The peak ages of internal migrants were 15-34 years. There was a positive association between education and migration. The higher the level of education the greater was the proportion of people who migrated. Employment rate was higher for migrants than non-migrants who were 15 years of age and over (51percent and 22percent, respectively). Relatively more male migrants were employed than females (62percent and 40percent, respectively). However, the non-migrants had much lower employment rates (26 percent for males and 18percent for females).

Among non-citizens of Botswana, the employment rates of migrants and non-migrants were considerably higher (67percent and 39percent, respectively) than was the case with citizens.

Mortality

Mortality estimates at the national level show that a crude death rate of 11.2 deaths per 1000 population. The CDR for urban areas is 9.6 deaths per 1000 population and for rural areas is 13.9 deaths per 1000 population.

The infant mortality rates directly estimated from the survey data on infant deaths in the last twelve months show a suspiciously high infant mortality rate. However, indirect methods show that infant mortality rate for the national population is 48 infant deaths per 1000 births. It has to be noted here that the 2005-6 diarrhoeal outbreak among children below age 5 affected all mortality estimates. The estimates show that during this particular period mortality indicators were unusually high. The figures for 2006 are even higher than the 2001 population and housing census.

The estimates for the life expectancy at birth stand at 54.4 years for the national population and at 55.2 and 52.4 for urban and rural populations, respectively.

Survey Response Rate

Of 11,760 households selected in the survey 10,970 were surveyed, producing a response rate of 93.3 percent.

Table 1.1: Number of households and response rates, BDS, 2006

	Place of Residence			
	Cities & Towns	Urban Village	Rural	Total
Sample d households	3,320	3,540	4,900	11,760
Complete d households	3,028	3,337	4,605	10,970
Household response rate (percent)	91.20	94.27	93.98	93.28

Table 1.2: Summary of Demographic Indicators

Comparison of the 1998 Botswana Demographic Survey, 2001 Population & Housing Census and 2006 Botswana Demographic Survey

Population Characteristics	1998 BDS	Census 2001	2006 BDS
Enumerated Population	**1,588,745**	**1,680,863**	**1,703,014**
Male	749,000	813,583	817,843
Female	840,000	867,280	885,171
Non-Batswana	42,000	60,716	55,266
Botswana Nationals Abroad		**28,210**	**-**
Males (000's)		16.8	-
Females (000's)		11.4	-
Population Distribution (percent)			
0-4	12.6	11.6	12.1
5-14	27.3	25.0	23.5
15-64	54.6	58.2	59.2
15-49	47.9	52.0	52.2
65+	5.5	5.0	5.2
Percentage of females aged 15-49	49.4	52.4	52.5
Dependency Ratio (per 100)	83.2	71.5	68.4
Child-woman Ratio (per 100)		430.1	442.6
Sex Ratio (Males per 100 Females)	89	93.8	92.4
Percentage Urban	45	54.2	57.4
Population Density (per km^2)	2.7	2.9	2.93
Crude Birth Rate (per 1000)		28.9	29.8
Crude Death Rate (per 1000)	10.1	12.4	11.2
Natural Rate of Increase (percent per annum)		1.7	1.9
General Fertility Rate		106.9	108.2
Mean Age at Childbearing		30.3	
Total Fertility Rate (births per woman)	3.4	3.27	3.47
Infant Mortality Rate	51	56	51
Child Mortality Rate	17	19	26
Under 5 Mortality	67	74	76
Life Expectancy at Birth (Years)	**62.0**	**55.6**	**54.4**
Males	59.6	52.0	48.8
Females	64.5	57.4	60.0
Mean Age (Years)		**24.8**	-
Males		24.2	-
Females		25.3	-
Median Ages (Years)		**20.1**	**21.9**
Males		19.4	20.0
Females		20.8	22.7

CHAPTER I

CHAPTER 1: BACKGROUND

1.1 Geography, climate and economy

The Republic of Botswana is a country of about 582,000 square kilometres in size, situated at the centre of the Southern African Plateau at a mean altitude of 1,000 metres above sea level. Formerly Bechuanaland Protectorate, it borders on the Republic of South Africa, Namibia, Zambia and Zimbabwe. Gazetted forest reserves cover 4,555 square kilometres which is only 0.8percent of the total land area. Botswana is relatively flat, with gentle undulations and occasional rocky outcrops.

The climate of Botswana is semi-arid. Temperatures are very high in summer and low during winter nights, often reaching below zero levels. Winter days are mild. The mean monthly maximum temperatures range between 23oC to 25oC in the Northern parts of the country and 21oC to 23oC in the Southern parts. The lowest mean monthly temperatures vary between 1oC to 5oC over the Eastern areas and 5oC to 7oC in the Northern parts of the country.

Rainfall is seasonal with uneven distribution. Most rivers flow seasonally, except in the Northwest District where the major rivers are perennial. Ground water exists at varying depths in most parts of Botswana. A sand-covered thirst-land, named the Kgalagadi (Kalahari) Desert, comprises 84 percent of the land area of Botswana. The soil of the Kgalagadi is sandy and of poor quality; yet this thirst-land frequently sustains abundant vegetation which contrasts with the general absence of surface water.

The availability of water is a dominant factor influencing the pattern of settlement. Water is needed to support and sustain the growth of crops and grass, to supply mining and other industrial needs, and to meet the demands of human settlements. About 87percent of the population lives in the eastern part of Botswana where rainfall is more regular, ground water is available, and the soil is relatively fertile. Drought adversely affects the already fragile food and agricultural situation in the country and seriously impairs the rural economy and socio-cultural structures.

Botswana gained its independence in 1966. At the time, Botswana was one of the poorest countries in the world with a per capita income estimated at less than USD100 per annum. It was largely rural and dependent on agriculture for livelihood. The country's real GDP, valued at 1993/94 prices amounted to P908.6 million. Of this total, agriculture accounted for P387.6 million or about 43 percent, while Bank, Insurance and other business services, the second largest sector contributed P183 million or about 20 percent. None of the other major sectors of the economy accounted for as much as 10 percent of real GDP in 1966. In terms of employment most people were engaged in subsistence agricultural farming and a significant part of the labour force was working as migrant labourers in the South African mines. There was therefore very little in terms of industry except the abattoir in Lobatse and a few economic activities that had emerged in Francistown.

With the discovery of minerals, especially diamonds, soon after independence, Botswana quickly became the fastest growing economy in the world. Its growth rates averaged 13percent through the 1970s and 1980s. Within a short period of time diamond began to dominate in terms of contribution to GDP, government revenue and to export revenue. From being almost non existent in 1966, mining contributed as much as 47 percent to GDP in 1986 before declining slightly to 35 percent share in 2003. Agriculture on the other hand declined to less than 5 percent by 1986 from more than 40 percent in 1966. After 10 years of successful diamond mining, the economy began to face a different challenge, that of trying to diversify the economy away from dominance by the diamond sector. This has been the focus of government policy in the last 20 years or more as is reflected in both the National Development Plans and the various budget speeches. That is important because diamonds are an exhaustible resource and secondly their performance depends on demand from outside the country, which may put the country into an uncertain path of development. Another important issue is that, while diamond mining contributes a relatively large proportion to growth, GDP, export shares, and government revenues, its direct impact in terms of employment is quite small because it is capital intensive by nature. For most of the years its contribution to employment has been between 3 and 4 percent.

The good performance in terms of growth driven by diamond mining has enabled the country to make significant human and infrastructural investments. As a result, most communities now have access to schools and health and water within reasonable distance. The investment in infrastructure, health, education has seen some major results in terms of human development. Social indicators show that life expectancy had gone up before a big reversal from HIV/AIDS, literacy rates are quite high, and more schools, roads and hospitals have been provided.

While growth has been quite impressive, income inequality remains high. Between 1985/86 and 1993/94 disposable income inequality declined marginally from a gini-coefficient of 0.556 to 0.537. For the urban areas disposable income inequality was however increasing between the two periods. Between 1993/94 and 2002/03 disposable income inequality actually increased marginally as the gini-coefficient rose from 0.537 to 0.573. Poverty has also remained high over time even though it was declining. It declined from about 59percent in 1985/86 to about 47percent in 1993/94. The worst forms of poverty are concentrated in the country's most remote areas, where a high degree of dependence on government welfare exists. Preliminary results released from the 2002/2003 HIES indicate poverty to have declined further to about 30 percent of the individuals living below the poverty datum line. Using the one Dollar per day however shows poverty to have increased from 19.9 percent people living below the one Dollar per day in 1993/94 to 23.4 percent in 2002/03. The results also show that more people lived below the one Dollar per day in the rural areas for both periods.

In terms of region, poverty declined for the cities/ towns between the periods, while it rose for urban villages and rural areas with the biggest increase being for rural areas . Poverty is therefore still a more serious issue in the rural areas even though it is prevalent in the urban areas. Unemployment has also been high, even though declining. It declined from an estimate of about 24 percent to about 17.6 percent between 2002/03 and 1995/96. The estimates from this data are however still quite high at about 27 percent, which we think is attributable to the seasonal effect. The BDS data were collected between August and November 2006, which is usually off farm season in Botswana.

The current challenges facing Botswana's economy are; diversifying the economy from the dominance of the mining sector especially diamond, dealing with the HIV/AIDS pandemic, which is taking a greater proportion of government budget. HIV/AIDS also affects growth negatively through its effect on labour productivity through loss of efficiency units and skilled manpower. Gains in both mortality and life expectancy from the past investment in health are being eroded by the disease. The second challenge is that of dealing with significantly high unemployment rates that also contribute to slow progress in poverty reduction in the country. Unemployment is due to both fewer job opportunities and increasing labour force especially the youth with less skills and experience required by the labour market. Lastly, the economy's greatest problem especially as it moves to National Development Plan 10 (NDP 10) is generally how to sustain the past growth performance from other sectors of the economy in order to achieve both the Vision 2016 goals and the Millennium Development Goals (MDGs). Given that diamonds have reached their peak, it will be difficult to achieve the growth rates required to reach these goals unless other sectors effectively take over from diamond in terms of growth momentum.

1.2 Population

Botswana's population is generally homogeneous compared to countries of East and West Africa. However, when compared to countries such as Lesotho and Swaziland, the population is more heterogeneous.

The people of Botswana are known as "Batswana". They are made up of various ethnic groups including the Bakgatla, Bakwena, Balete, Bangwato, Barolong, Batawana, Batlokwa, Bangwaketse, Basarwa, Baherero, Babirwa, Bakalaka, Bakgalagadi, Basubiya, Batswapong, Bayeyi, Bambukushu, Babenderu and Baherero, Basarwa, in addition to a small number of people of Asian and European descent and people of mixed ancestry. While Setswana is the national language, English is the official business language. Over seventy per cent of the population speak Setswana.

At independence the population was largely rural and the majority of the people resided on the Eastern part of the country. Most of the people were mobile commuting between villages, cattle posts and the lands. With the rapid expansion of economic activities in the mid 1970s and 1980s, the pattern of settlement has changed rapidly. There is a growing concentration of the population around major towns such as Gaborone, Francistown, Lobatse, Molepolole, Serowe, Palapye, Selebi-Phikwe and Maun.

1.3 Population policies and programmes

It is generally recognized that the adoption and promotion of positive population policies by a country can have a significant social and economic impact on its people and can improve their quality of life. The government of Botswana has aimed at raising the standard of living of the people of Botswana since its first National Development Plan (1968-1973). The government of Botswana's commitment in addressing population issues together with their social and economic implications are reflected in the National Population Policy developed and adopted in 1997. Currently, this population policy is under review.

The main goal of the population policy is to improve the quality of life and standard of living of all people in Botswana. The government has decided to take account of and influence population growth trends in the desired direction. In order to do so, the government has tried to explicitly consider and integrate into national development planning framework issues such as health, education, employment, water, housing, food, energy, environment, women's status and poverty alleviation.

1.4 Objectives of the 2006 Botswana Demographic Survey

The Botswana Demographic Survey (BDS) 2006 is the third to have been conducted in Botswana. The first and second BDS were conducted in 1987 and 1998 respectively. The main objective of the 2006 BDS was to update statistics collected during the 2001 Population and Housing Census and to provide data that can be used during the inter-censal period. The specific objectives of the BDS 2006 are: (1) to estimate demographic indicators such as migration, fertility and mortality; (2) to update information collected during the 2001 Population and Housing Census and provide data that can be used during the inter-censal period; (3) to estimate population size and distribution by gender and age groups; (4) to estimate growth in the population by gender and age groups; (5) to estimate life expectancy by gender; (6) to estimate internal and external migration rates; (7) to estimate dependency and sex ratios; and (8) to estimate birth and death rates. The findings are used to monitor and evaluate the effectiveness of the various interventions, which are aimed at achieving the overall goal of improving the standard of living of the people of Botswana.

CHAPTER 2

CHAPTER 2: SURVEY METHODOLOGY

2.1 Sample Design

The sample for the 2006 Botswana Demographic Survey (2006 BDS) was designed to provide estimates of demographic indicators at the national, urban and rural areas, and at districts levels.

The sampling frame for the 2006 Botswana Demographic Survey consisted of 4,143 EAs being the total number of Enumeration Areas (EAs) delineated during the 2001 Population and Housing Census.

Stratification was employed such that all districts and major urban centres become their own strata.

A stratified two-stage probability sample design was used for the selection of the sample. The first stage was the selection of EAs as Primary Sampling Units (PSUs) selected with probability proportional to measures of size (PPS), where measures of size (MOS) were the number of households in the EA as defined by the 2001 Population and Housing Census. In all 588 EAs were selected with probability proportional to size. During the second stage of sampling, households were systematically selected from a fresh list of occupied households prepared at the beginning of the survey's fieldwork (i.e. listing of households for the selected EAs). A total of 11,760 households were drawn systematically.

2.2 Questionnaires and coverage

The 2006 BDS consisted of only one questionnaire, the Household Questionnaire. In the development of the questionnaire, along with the professionals, the other members like users were also invited. The final version of the questionnaire was produced on the basis of the experiences gained from the pre test of the survey conducted using the draft questionnaire.

The Household questionnaire was divided into various sets of questions with the major ones as;

i. Socio-Demographic Characteristics
ii. Parental Survivorship and Fostering
iii. Fertility and child survival
iv. Mortality
v. Education and Training
vi. Migration

2.3 Field work and Data Processing

The field staffs were trained for three weeks during the month of July, 2006. A total of 66 field staff, consisting of 22 supervisors and 44 enumerators, was engaged for data collection. Twenty two teams were formed which comprised of two enumerators, a supervisor and one or more vehicle with a driver. The teams were given a workload of at least 26 EAs. Data collection was conducted from 1st August to 30th November 2006.
Before data entry was carried out, the questionnaires were edited to check if all the relevant questions had been responded to and coded according to the codes designed for the study. Editing and coding started from September to December 2006 by 13 coders.

CHAPTER 3

CHAPTER 3: HOUSEHOLD CHARACTERISTICS

Information on the characteristics of the household is provided to assist in the interpretation of survey findings and to serve as a basic check on the sample implementation. Information on the household characteristics was collected using the household questionnaire. The household questionnaire collected data on a range of household characteristics such as, total number of people living in the household, how they related to the head of the household, their age and gender, household amenities and durable goods owned. Knowledge of different aspects of housing types, construction, essential facilities and other characteristics would be useful to inform housing policies for Urban/Rural regions and different districts.

3.1. Household size and Headship

Table 3.1.1 shows that the average household size is 6.48 persons per household with the most frequently reported sizes being six and seven persons per household. The table shows that more than half of all the households in the country have an average household size of at most seven persons. Single-person households account for about 5.5percent and about 18.5percent of the households have more than nine persons per household. Jwaneng, Sowa and Gaborone districts have the smallest average household sizes at 3.49, 4.52 and 4.77 persons per household respectively, while Kgalagadi South and Ngamiland West districts have the largest average household sizes at 8.66 and 7.89 persons per household respectively. In general, urban districts have smaller household sizes than rural districts. This might be due to the fact that most of the rural households are composed of traditional extended families while urban households are mostly composed of nuclear families. Another contributing factor could be the effect of HIV/AIDS which has left some children as orphans. Most of these orphans are staying with their grandparents in rural areas. The Botswana Multiple Indicator Survey (2000) found that about 23.6percent

Of these children aged 0-14 were living in rural areas. Table 3.1.1 further shows that among the districts with households made up of one person, Gaborone has the highest percentage (14.5percent) and among districts with household of ten or more people, Kweneng East has the highest percentage (12.9percent)

Table 3.1.2 shows that about 53.3percent of the households were male-headed while the remaining 46.7percent are female-headed. The gap in headship is large in Cities and Towns with towns showing about 64.1percent of male headed households. The Jwaneng and Ngamiland-Chobe districts have the high percentage of male-headed households at 71.9percent and 70.0percent respectively, while the Ngamiland West and North East districts have the high percentage of the female-headed households at 59.3percent and 57.3percent respectively. Table 3.1.2 also shows that among the households that have one room houses, 15percent are in Gaborone, 11.8percent in Kweneng East, and 7.3 in Central Serowe-Palapye. Kweneng East has the highest percentage (17.8percent) of households with large houses of eight or more rooms. It is worth noting that the mining towns namely; Orapa, Jwaneng and Sowa have no or few households with one room houses.

Table 3.1.3 shows that most of the small households that is; households with one and two people respectively, were male-headed with 68.3percent and 58.6percent. Households with between two and nine people per household were female-headed while large households that is; households with ten or more people are male headed (51.4percent).

3.2 Housing Characteristics

With regard to the housing unit, Table 3.2.1 shows that about 29.8percent of the housing units in the country are one-roomed houses while 25.4percent are two roomed houses. This means that more that half of all the households in the country have either one or two rooms.

Table 3.2.2 shows that 41.9percent of the households in the country have houses that are detached from each other, 15.5percent of the households have traditional houses, and 17.8 percent, a mixture of both traditional and modern houses. The survey shows that only 0.8percent of the households in the country have town houses and flats as housing units.

Table 3.2.2 also shows that most of the households in the country have traditional houses (87.6percent), a mixture of traditional and modern houses (85.0percent), detached houses (50.8percent), town houses (48.3percent), shacks (59.4percent) and modified traditional houses (76.9percent) built by their owners who are also occupying them. About 66.9percent of the households with semi detached houses are rented from the government while 44.1percent of the household have flats that are rented from some renting companies and 21.5percent of the flats are rented from the BHC. The Table further shows that 61.1percent and 60.4percent of people who stay in households with movable houses and houses built in commercial compound respectively are not paying any rent for these housing units.

With regard to the housing structures, Table 3.2.3 shows that about 78.5percent of the households in Botswana have houses that were built using conventional bricks or blocks while 13.6percent were built with mud bricks or blocks. Of these, 62.8percent are traditional houses. Of those built with conventional cement bricks, 84.4percent are a mixture of traditional houses, 98.8percent are detached houses, 98.7percent semi detached houses, 97.4percent town houses, 98.3percent flats and 87.4percent houses built as part of commercial buildings. The data further show that 69.3percent of the households with shacks have those shacks built with corrugated iron.

With regard to the floor structure, Table 3.2.4 shows that about 77percent of the households in the country have houses whose floors are made of cement while 16.9percent of the households have floors made up of mud and cow dung which is a traditional way of floor making in the country. About 84.5percent of the households with traditional houses have these houses with floor made up of mud

and cow dung. Table 3.2.5 shows that 72.1percent of the households in the country have houses that are roofed with corrugated iron, 17.0percent are thatched with grass, and 9.1percent are roofed with roof tiles. Of those houses thatched with grass, 88.1percent are traditional houses. The majoring of other types of housing units is roofed with corrugated iron. However, most of the households living in town houses have those housing units roofed with roof tiles (62.1percent).

Table 3.2.6 shows that about 98.4percent, 93.7percent and 58.0percent of the households in cities and towns, urban villages and rural area respectively have houses that are built using concrete bricks. It further shows that about 26.6percent of the households in rural areas have houses that are built using mud bricks. With regard to flooring, the survey shows that 91percent, 89.4percent and 61.4percent of the households in cities and towns, urban villages and rural areas respectively have houses with cement floors. It further shows that about 34.1percent of the households in rural area have houses with mud and cow dung floors. About 80.2percent, 82percent and 61.1percent of the households in cities and towns, urban villages and rural areas respectively have houses roofed with corrugated iron while about 33.5percent of the households in rural areas have houses roofed with thatch grass.

3.3 Water Supply

Table 3.3.1 shows that more than half, about 59.7percent of the households in Botswana draw water from within their homes (indoor and outdoor) and about 25.9percent of the households draw water from community stand pipes. It shows that 85.1percent of the households in the cities and towns draw their water from within their homes, 81.2percent of those in urban villages also draw water from within their homes while only 32.2percent of the rural households draw water from within their homes. About 41.6percent of the rural households in Botswana draw water from community stand pipes.

3.4. Toilet Facilities

Table 3.4.1 shows that about 23percent of the households use flush toilets, 29percent use ventilated improved pit latrines and 19.5percent use health hazardous pit latrines while 21.3percent use other places as toilet facilities. About 50.1percent of the households in the cities and towns use flush toilet, 39.2percent of the urban villages' households use ventilated improved pit latrines while about 42.6percent percent of the rural households use other means as toilet. This is more likely to be the bush because other conventional facilities that can be used as toilets are not available in the rural areas.

3.5. Sources of Energy

With regard to lighting, Table 3.5.1 shows that about 39.5percent of the households in Botswana use paraffin for lighting while 36.5percent use electricity. The data further show that about 60.2percent of the cities and towns households use electricity for lighting, 49.1percent of the urban villages' households also use electricity for lighting while 48.1percent of the rural households use paraffin for lighting. For cooking, the data show that about 46.9percent of the households use wood and 42percent use gas for cooking. The table shows that about 69.4percent and 55.5percent of the households in the cities and urban villages respectively use gas for cooking while the majority (76.7percent) of the rural households use wood for cooking in Botswana.

For heating, the data shows that about 51.7percent of the households use wood and 15.1percent use electricity for heating in Botswana. About 30.1percent of the households in cities and towns use electricity while 44.6percent and 75.2percent of the households in urban villages and rural villages respectively use wood for heating.

With regard to refuse disposal, Table 3.5.2 shows that 94.4percent of the households in cities and towns reported that their refuse is being collected by government agencies for disposal, 34.5percent and 34.3percent of the urban villages and rural areas household said they dispose their refuse by burning it. About 45.5percent and 35.9percent of the rural and urban villages' households dispose their refuse by throwing it in the rubbish pit. About 83.4percent, 58.9percent and 58.6percent of the households in cities and town, rural area and urban villages reported that their refuse is being collected regularly as shown in Table 3.5.3

3.6 Ownership of Durable Goods

The report shows in Table 3.6.1 that among the durable goods possessed by households, the most commonly reported are radio and mobile phones with 67percent and 57.4percent respectively. The report further shows that there is no significant difference in ownership of these goods between cities and town, urban villages and rural areas. There is a marked difference in ownership of tractors, donkey cart, Bicycle, wheelbarrows, boats and ploughs with households in rural areas owning most of these items compared with households in cities/town and urban villages. Among the 6.7percent national households that own computers, 58.2percent are in cities and towns with only 10percent of the rural households owning computers. About 37.2percent of the households in Botswana have Televisions (TVs) of which 37.7percent and 39.2& are in cities and town and urban villages respectively.

Table 3.6.2 shows that about 2.7percent of the households in the country have at least one critically ill person. Ngamiland West and Central Tutume districts have the highest percentage of households with at least one critically ill person; 12.9percent and 11.2percent respectively. Other districts contribute less than 10percent to this 2.7percent. The table also shows that most of these critically ill people (57.3percent) live in rural areas. About 29.6percent of the critically ill people live in urban villages while only 13.1percent are in cities and towns. This may reflect the issue that most people go back to their villages for support when they are very sick .All the households that reported the presence of a critically ill person reported that nurses and/or social workers visit those critically ill persons in their homes.

Table 3.1.1: Percentage Distribution of District Household by Number of People

	Average No of Persons	Number of People Per Household									
		1	2	3	4	5	6	7	8	9	10+
Gaborone	**4.77**	14.5	19.8	16.8	15.6	12.0	10.4	10.9	5.3	3.8	3.5
Francisto wn	**5.58**	6.6	7.6	5.7	5.6	4.9	3.6	4.1	3.0	3.4	3.3
Lobatse	**5.65**	2.0	2.1	2.7	1.9	1.5	2.0	1.2	0.9	1.6	1.4
Selibe P hikwe	**5.06**	4.5	3.8	4.0	3.4	2.3	3.6	1.6	2.5	2.9	0.8
Orapa	**5.85**	0.2	0.5	0.8	1.2	0.9	1.7	0.8	0.5	0.0	0.8
Jwaneng	**3.49**	2.1	1.5	0.8	1.0	0.8	0.3	0.6	0.0	0.0	0.0
Sowa	**4.52**	0.3	0.2	0.2	0.1	0.3	0.2	0.0	0.1	0.0	0.0
Southern Ngwak etse	**6.96**	4.7	4.9	4.9	4.9	6.7	8.6	6.5	9.4	10.9	7.6
Southern Borolong	**6.88**	2.3	1.6	1.6	3.2	3.7	3.4	3.5	3.1	4.4	3.9
Ngwakets e West	**6.37**	0.7	0.7	0.3	0.7	0.4	1.4	0.1	0.2	0.5	0.7
South Ea st	**6.41**	4.5	3.5	3.4	2.5	2.6	2.6	3.7	2.2	3.1	3.5
Kwen eng Ea st	**6.61**	10.3	11.0	9.9	11.6	11.2	11.5	11.8	14.2	11.3	12.9
Kwen eng West	**6.18**	2.1	1.8	2.3	2.3	1.4	2.1	2.2	3.0	3.4	1.5
Kgatleng	**6.82**	4.5	3.6	5.6	4.1	5.1	4.7	3.9	5.2	4.5	4.9
Serowe -Palapye	**6.90**	9.1	7.7	8.2	7.9	9.6	8.2	8.5	7.9	8.5	10.7
Centra l Maha lapye	**6.48**	5.6	4.5	6.1	5.0	4.8	6.0	7.5	6.8	8.2	5.1
Centra l Bobirwa	**7.02**	3.6	2.6	2.8	3.9	4.7	3.4	5.0	4.3	3.9	4.7
Cent ral Letlhak ane	**7.35**	1.8	2.3	2.2	2.0	1.9	2.5	3.9	2.0	4.1	3.7
Centra l Tutume	**6.85**	5.1	5.2	5.1	6.4	7.7	8.9	7.7	8.1	7.7	7.7
North East	**6.52**	2.6	3.0	3.1	2.4	2.8	3.9	4.0	3.1	3.3	3.2
Ngam iland East	**7.81**	3.6	2.9	3.1	3.8	3.5	3.7	3.9	4.7	5.3	5.8
Ngam iland We st	**7.89**	1.6	2.6	2.2	4.1	2.7	2.6	4.0	6.1	3.7	6.3
Ngam iland -Chobe	**5.65**	1.6	1.6	1.8	1.4	0.8	1.8	0.5	1.8	0.2	0.9
Ghanzi	**6.15**	3.0	2.7	3.1	3.3	5.6	1.7	2.3	3.2	1.7	2.8
Kga lagad i South	**8.66**	2.1	1.4	1.1	0.8	1.2	0.6	0.8	1.5	1.9	2.9
Kga lagad i North	**6.73**	0.9	0.8	0.9	0.9	1.1	0.8	0.9	0.9	1.6	1.3
Tot al Per centage	**6.48**	**5.5**	**7.7**	**9.3**	**11.8**	**12.3**	**11.0**	**9.6**	**7.6**	**6.7**	**18.5**
Tot al Number	**1703014**	**94476**	**131241**	**159061**	**200693**	**209227**	**187841**	**163183**	**129786**	**113662**	**314645**

Table 3.1.2: Percentage Distribution of District Household Headship by Gender and Number of rooms

District	Gender		Number of Rooms Per Household							
	Male	Female	1	2	3	4	5	6	7	8+
Gaborone	57.6	42.4	15.0	8.3	10.1	16.3	12.3	15.3	9.5	7.7
Francisto wn	54.6	45.4	6.2	3.7	3.9	6.3	3.5	2.4	1.4	2.7
Lobatse	52.5	47.5	1.4	1.5	1.7	2.3	1.6	2.3	2.4	1.1
Selibe P hikwe	67.6	32.4	5.2	2.3	2.2	2.1	1.1	1.0	0.7	0.0
Orapa	66.8	33.2	0.0	0.0	0.7	3.2	0.9	0.2	0.0	0.0
Jwaneng	71.9	28.1	1.0	1.1	0.7	1.4	0.5	0.5	1.1	1.2
Sowa	62.1	37.9	0.1	0.0	0.2	0.7	0.0	0.0	0.0	0.0
Southern Ngwak etse	50.1	49.9	3.9	6.4	6.8	7.5	10.0	8.4	7.7	5.2
Southern Borolon g	52.9	47.1	2.4	3.7	3.9	2.1	4.1	3.6	4.3	3.6
Southern Ngwak etse West	46.5	53.5	0.5	0.9	0.7	0.3	0.2	0.7	0.0	0.0
South Ea st	57.5	42.5	3.9	2.5	3.1	3.7	4.0	6.1	5.2	7.2
Kwen eng Ea st	53.7	46.3	11.8	10.7	11.9	9.4	11.8	13.7	5.6	17.8
Kwen eng West	46.1	53.9	2.6	3.4	2.3	2.2	1.1	0.8	2.6	0.0
Kgatleng	57.4	42.6	3.9	4.6	4.8	5.6	6.6	3.8	6.6	3.0
Centra l Serowe -Palapye	46.7	53.3	7.3	11.4	10.1	9.5	10.4	11.8	15.5	8.0
Centra l Maha lapye	47.6	52.4	6.0	7.1	6.3	4.7	5.5	4.8	6.8	11.8
Centra l Bobirwa	48.6	51.4	3.3	5.1	5.0	3.5	2.8	2.8	1.2	0.0
Centa l Letlhakane	55.5	44.5	2.3	2.3	2.8	1.5	1.7	3.8	0.9	3.0
Centra l Tutume	48.6	51.4	5.9	7.6	6.3	7.8	11.0	8.8	10.7	8.8
North East	42.7	57.3	2.2	3.5	3.8	2.8	3.8	3.2	4.4	2.3
Ngam iland East	53.8	46.2	4.1	3.7	2.9	2.3	2.5	2.4	7.8	4.4
Ngam iland We st	40.7	59.3	3.3	3.9	2.3	2.0	2.7	1.3	2.6	9.8
Ngam iland -Chobe	70.0	30.0	1.9	0.9	1.4	0.5	0.2	1.2	1.9	0.0
Ghanzi	63.6	36.4	2.6	2.7	3.5	0.6	0.0	0.0	1.2	0.0
Kga lagad i South	63.2	36.8	1.6	1.7	1.7	0.5	0.8	1.0	0.0	0.0
Kga lagad i North	54.0	46.6	1.4	1.0	0.9	0.9	0.7	0.0	0.0	2.3
Tot al Per centage	**53.3**	**46.7**	**29.8**	**25.4**	**21.7**	**14.3**	**4.9**	**2.1**	**0.9**	**2.3**
Tot al Number	**265073**	**231983**	**148109**	**126153**	**107647**	**70995**	**24228**	**10619**	**4612**	**1708**

Table 3.1.3: Percentage Distribution of Head of Household by Gender and by Number of People per Household

G	ender	
Number of People	M ale	Female
1	68.3	31.7
2	58.6	41.4
3	46.5	53.5
4	49.7	50.3
5	46.6	53.4
6	45.6	54.4
7	42.5	57.5
8	40.5	59.5
9	42.0	58.0
10+	51.4	48.6
Total Number 2	**21191**	**192734**
Place of Residence		
Cities	56.7	43.3
Towns	64.1	35.9
Urban Villages	50.6	49.4
Rural	52.3	47.7
Total	**53.3**	**46.7**

Table 3.2.2: Percentage Distribution of Type of Housing Unit by Tenure of the Housing Unit

Type of Housing Unit	**Tenure of Housing Unit**									
	Bought	**BHC**	**Govt**	**Council**	**Indiv.**	**Compny**	**VDC**	**Free**	**Inhrited**	**Self Built**
Traditional	0.5	0.0	0.1	0.0	0.5	0.0	0.1	7.0	4.0	87.6
Mixed	0.5	0.0	0.1	0.0	2.5	0.0	0.1	4.7	6.3	85.0
Detached	4.4	3.4	5.2	4.2	16.3	4.4	1.6	6.1	3.6	50.8
Semi Detach	0.8	0.8	66.9	4.7	5.3	4.2	0.8	10.7	0.3	5.2
Town House	15.1	3.3	3.4	0.5	16.0	10.6	0.0	2.8	0.0	48.3
Flats/Apartmts	0.0	21.5	9.4	3.2	11.0	44.1	0.0	9.5	0.0	1.4
PartComm.Bld	5.5	0.0	0.0	0.0	13.2	0.0	0.0	60.4	0.0	7.7
Movable	6.7	0.0	7.7	0.0	2.7	4.6	0.0	61.1	0.0	17.3
Shack	0.0	0.0	0.7	0.0	4.7	0.0	0.0	33.8	0.7	59.4
Rooms	0.8	0.1	0.4	0.0	65.8	1.8	0.8	6.1	2.5	21.5
Modified Trad	1.4	0.0	0.3	0.1	7.1	0.3	0.2	5.5	7.3	76.9
Total	**11385**	**7775**	**19599**	**9485**	**95293**	**12373**	**4369**	**33341**	**19305**	**282290**
Percent	**2.3**	**1.6**	**3.9**	**1.9**	**19.2**	**2.5**	**0.9**	**6.7**	**3.9**	**56.9**

Table 3.2.3: Percentage Distribution of Housing Wall Structure by Tenure of the Housing Unit

Tenure of Housing Unit	**Wall Structure**								
	Conventiona l Brick	**Mud Brick**	**Mud & Pole/ cow dung/ thatch reeds**	**Poles & Reeds**	**Corrgated Iron / Z inc /Tin**	**Asbestos**	**Wood**	**Stone**	**Total**
Traditional	5.2	62.8	26.3	4.1	1.0	0.0	0.5	0.1	**15.5**
Mixed	84.4	12.2	2.5	0.2	0.6	0.0	0.1	0.1	**17.8**
Detached	98.8	0.5	0.1	0.1	0.1	0.3	0.0	0.1	**41.9**
Semi Detached	98.7	0.3	0.0	0.0	0.0	1.0	0.0	0.0	**2.4**
Town House	97.4	0.0	0.0	2.6	0.0	0.0	0.0	0.0	**0.4**
Flats/Apartmts	98.3	0.0	0.0	0.0	1.7	0.0	0.0	0.0	**0.4**
PartComm. Bld	87.4	0.0	0.0	0.0	6.3	6.3	0.0	0.0	**0.1**
Movable	60.1	0.0	0.0	0.0	31.7	8.2	0.0	0.0	**0.3**
Shack	16.1	0.5	4.7	3.9	69.3	1.3	4.1	0.0	**1.3**
Rooms	97.3	1.5	0.2	0.1	0.2	0.6	0.1	0.1	**17.3**
Modified Trad.	30.6	44.7	9.1	0.2	5.8	0.0	0.2	0.4	**2.6**
Total No.	**389458**	**67284**	**25543**	**3793**	**7290**	**1563**	**934**	**339**	**496204**
Total Percent	**78.5**	**13.6**	**5.1**	**0.8**	**1.5**	**0.3**	**0.2**	**0.1**	**100**

Table 3.2.4: Percentage Distribution of Housing Floor Structure by Tenure of the Housing Unit

Tenure of Housing Unit	Floor Structure					Total
	Cement	Mud/ Mud and Dung	Wood	Bricks/Stone	Other	
Traditional	11.2	84.5	0.3	0.0	3.9	**15.5**
Mixed	89.6	9.7	0.0	0.0	0.7	**17.8**
Detached	90.6	0.5	0.2	0.3	8.4	**41.9**
Semi Detached	68.2	0.4	0.0	0.0	13.0	**2.4**
Town House	76.9	0.0	2.0	0.0	21.1	**0.4**
Flats/Apartmts	56.9	0.0	2.8	0.0	40.3	**0.4**
PartComm.Bldg	100	0.0	0.0	0.0	0.0	**0.1**
Movable	16.6	19.6	5.1	0.0	58.7	**0.3**
Shack	20.2	59.9	0.8	31.5	14.8	**1.3**
Rooms	98.6	0.8	0.0	0.0	0.6	**17.3**
Modified Trad.	67.7	31.8	0.2	0.0	0.3	**2.6**
Total No.	**381977**	**83658**	**881**	**867**	**28672**	**496055**
Percentage	**77.0**	**16.9**	**0.2**	**0.2**	**5.8**	**100**

Table 3.2.5: Percentage Distribution of Housing Roof Structure by Tenure of the Housing Unit

Tenure of Housing Unit	Roof Structure							Total
	Slate	Thatch/Straw	Roof Tiles	Corrugated Iron	Asbestos	Concrete	Other	
Traditional	0.2	88.1	0.5	11.0	0.0	0.1	0.2	**15.5**
Mixed	0.4	11.3	5.1	82.9	0.1	0.0	0.2	**17.8**
Detached	1.4	0.6	17.4	79.8	0.8	0.1	0.0	**41.9**
Semi Detached	0.0	0.0	7.1	91.7	1.2	0.0	0.0	**2.4**
Town House	0.5	2.6	62.1	30.9	4.0	0.0	0.0	**0.4**
Flats/Apartmts	2.8	0.0	20.0	48.2	4.5	20.4	4.2	**0.4**
PartComm.Bldg	0.0	0.0	0.0	100	0.0	0.0	0.0	
Movable	0.0	0.0	0.0	46.7	2.4	0.0	50.9	**0.1**
Shack	0.0	7.9	0.0	80.8	0.6	0.0	10.6	
Rooms	1.0	0.6	1.5	96.8	0.1	0.0	0.0	**0.3**
Modified Trad.	1.1	33.4	1.2	64.7	0.0	0.4	0.0	**1.3**
								17.3
								2.6
Total No.	**4346**	**84460**	**44971**	**357507**	**2170**	**673**	**1966**	**496093**
Percentage	**0.9**	**17.0**	**9.1**	**72.1**	**0.4**	**0.1**	**0.4**	**100**

Table 3.2.6: Household Structure by Place of Residence

Wall Structure	Cities & Towns	Urban Villages	Rural	Total
Conventional Bricks	98.4	93.7	58.0	**78.5**
Mud bricks	0.6	4.2	26.6	**13.6**
Mud/Poles/cow	0.0	0.7	10.8	**5.1**
dung/ reeds	0.1	0.0	1.6	**0.8**
Poles and Reeds	0.3	1.2	2.3	**1.5**
Corrugated Iron	0.6	0.1	0.3	**0.3**
Asbestos	0.1	0.1	0.3	**0.2**
Wood	0.0	0.1	0.1	**0.1**
Stone				
Total	**116273**	**153246**	**226928**	**496447**
Percentage	**23.4**	**30.9**	**45.7**	**100**
Floor Structure				
Cement	91.0	89.4	61.4	**77.0**
Mud/Mud and Dung	0.4	3.9	34.1	**16.9**
Wood	0.2	0.2	0.2	**0.2**
Bricks/Stone	0.4	0.1	0.1	**0.2**
Other	8.1	6.5	4.2	**5.8**
Total	**116232**	**153193**	**226871**	**496296**
Percentage	**23.4**	**30.9**	**45.7**	**100**
Roof Structure				
Slate	1.8	0.8	0.4	**0.9**
Thatch/Straw	0.1	5.6	33.5	**17.0**
Roof Tile	16.0	11.2	4.1	**9.1**
Corrugated Iron	80.2	82.0	61.1	**72.0**
Asbestos	1.4	0.2	0.1	**0.4**
Concrete	0.4	0.1	0.1	**0.1**
Others	0.0	0.2	0.7	**0.4**
Percentage	**116273**	**153245**	**226820**	**496338**
Total	**23.4**	**30.9**	**45.7**	**100**

Table3.3.1: Percentage Distribution of Place of Residence by Source of Water

Source of Water	Cities and Towns	Urban Villages	Rural	Total	Percentage
Pipe Indoor	43.7	21.8	8.0	**102364**	**20.6**
Pipe Outdoor	41.4	59.4	24.2	**194197**	**39.1**
Community Tap	12.2	13.2	41.6	**128730**	**25.9**
Bouser/Tanker	0.3	0.3	1.7	**4612**	**0.9**
Well	0.0	0.1	3.1	**7184**	**1.4**
Borehole	0.0	0.1	12.5	**28496**	**5.7**
River/Stream	0.1	0.0	3.0	**6942**	**1.4**
Dam/Pan	0.0	0.0	3.0	**6828**	**1.4**
Rain water tank	0.0	0.0	0.1	**317**	**0.1**
Spring water	2.3	5.1	2.8	**16689**	**3.4**

Table 3.4.1: Percentage Distribution of Place of Residence by Toilet Facility

Toilet Facility	Cities and Towns	Urban Villages	Rural	Total	Percentage
Own Flush Toilet	50.1	23.5	8.7	**113992**	**23.0**
Ventilated Improved Pit (VIP) Latrine	27.1	39.2	23.1	**143881**	**29.0**
Pit Latrine	18.4	24.5	16.7	**96873**	**19.5**
Enviro-Loo	0.0	0.2	0.1	**533**	**0.1**
Community Flush Toilet	1.4	0.3	0.6	**3398**	**0.7**
Community VIP	0.6	0.4	0.1	**1646**	**0.3**
Community Pit Latrine	1.3	2.1	1.4	**7926**	**1.6**
Neighbour's Toilet	0.6	4.6	6.6	**22761**	**4.6**
Other	0.6	5.2	42.6	**104528**	**21.3**

Table 3.5.1: Percentage Distribution of Place of Residence by Source of Energy

Energy for Lighting	Cities & Towns	Urban Villages	Rural	Total	percentage
Electricity	60.2	49.1	15.8	**181228**	**36.5**
Solar Power	0.0	0.2	0.6	**1772**	**0.4**
Gas (LPG)	0.5	0.5	0.1	**1522**	**0.3**
Bio Gas	0.0	0.1	0.1	**321**	**0.1**
Wood	0.0	0.5	9.2	**21538**	**4.3**
Paraffin	28.5	35.1	48.1	**196238**	**39.5**
Candle	6.6	6.2	13.5	**48014**	**9.7**
Paraffin/candle	4.1	8.2	11.1	**42566**	**8.6**
Other	0.0	0.1	1.4	**3284**	**0.7**
Energy for Cooking					
Electricity	15.6	7.1	2.3	**34279**	**6.9**
Solar Power	0.1	0.3	0.0	**638**	**0.1**
Gas (LPG)	69.4	55.5	18.8	**208317**	**42.0**
Bio Gas	1.3	1.0	0.6	**4435**	**0.9**
Wood	6.4	33.5	76.7	**232959**	**46.9**
Paraffin	7.1	2.5	1.2	**14671**	**3.0**
Cow-dung	0.0	0.0	0.3	**713**	**0.1**
Coal	0.1	0.1	0.1	**288**	**0.1**
Energy for Heating					
Electricity	30.1	18.2	5.4	**75087**	**15.1**
Solar Power	0.5	0.7	0.4	**2371**	**0.5**
Gas (LPG)	5.1	3.1	0.9	**12725**	**2.6**
Wood	15.2	44.6	75.2	**256613**	**51.7**
Paraffin	1.1	1.3	0.8	**4923**	**1.0**
Cow-dung	0.1	0.0	0.2	**624**	**0.1**
Coal	0.3	0.1	0.1	**714**	**0.1**
Charcoal	0.2	0.0	0.0	**254**	**0.1**
None	47.5	31.7	17.1	**142389**	**28.7**
Other	0.1	0.3	0.0	**706**	**0.1**

Table 3.5.2: Percentage distribution of Place of Residence by Refuse Disposal

Method of Disposal	Place of Residence			Total
	Cities & Towns	Urban Villages	Rural	
Collected	94.4	23.6	10.3	**34.1**
Burning	1.7	34.5	34.3	**26.7**
Roadside Dumping	3.1	5.9	9.7	**7.0**
Rubbish Pit	0.9	35.9	45.5	**32.1**
Other	0.0	0.1	0.1	**0.1**
Total	**116273 1**	**53159**	**226860**	

Table 3.5.3: Percentage Distribution of Place of Residence by Frequency of Refuse Collection

Frequency of Collection	Place of Residence			Total
	Cities & Towns	Urban Villages	Rural	
Regularly	83.4	58.8	58.9	**74.7**
irregularly	16.6	41.4	41.1	**25.3**
Total	**109761**	**36029**	**23279**	

Table 3.6.1: Percentage Distribution of Ownership of Durable goods

ITEM P	ERCENTAGE OF T HE TOTAL HOUSEHOLD	PERCENTAGE WITHIN AN ITEM			TOTAL
		CITIES AND TOWNS	URBAN VILLAGES	RURAL	
Van/Bakkie	11.1	33.0	36.9	30.1	**58773**
Car	11.6	44.0	37.1	18.9	**61328**
Tractor	1.4	8.8	40.8	50.4	**7334**
Donkey Cart	13.4	4.0	22.9	73.1	**70919**
Bicycle	13.6	19.8	30.3	49.9	**71853**
Wheelbarrow	39.5	13.8	36.1	50.1	**209111**
Radio	67.0	26.2	33.6	40.2	**355111**
TV	37.2	37.7	39.2	23.1	**196832**
Computer	6.7	58.2	31.8	10.0	**35539**
Landline Phone	13.2	35.8	39.5	24.7	**69910**
Mobile Phone	57.4	31.8	37.9	30.3	**304171**
Mokoro/Boat	0.9	12.1	18.5	69.4	**4907**
Sewing	6.8	25.9	36.0	38.1	**35937**
Machine	0.4	33.9	23.4	42.7	**2278**
Motor Bike	16.4	5.5	24.5	70.0	**86685**
Plough					

Table 3.6.2: The Percentage Distribution of Critically Ill Persons by District

District	Presence of Critically Ill Person	
	Yes	**No**
Gaborone	5.7	12.4
Francistown	3.1	4.8
Lobatse	0.7	1.7
Selibe Phikwe	2.6	3.0
Orapa	0.6	0.7
Jwaneng	0.2	1.0
Sowa	0.2	0.2
Southern Ngwaketse	8.7	6.1
Southern Borolong	7.0	3.0
Southern Ngwaketse West	0.7	0.6
South East	4.4	3.4
Kweneng East	6.6	11.4
Kweneng West	2.2	2.6
Kgatleng	5.5	4.6
Central Serowe-Palapye	4.2	9.7
Central Mahalapye	4.9	6.2
Central Bobirwa	1.8	4.1
Cental Letlhakane	3.0	2.3
Central Tutume	11.2	7.0
North East	4.4	3.1
Ngamiland East	4.6	3.4
Ngamiland West	12.9	2.8
Ngamiland-Chobe	0.4	1.3
Ghanzi	0.8	2.4
Kgalagadi South	2.3	1.4
Kgalagadi North	1.3	1.0
Place of Residence		
Cities & Towns	13.1	23.7
Urban Villages	29.6	30.9
Rural	57.3	45.4
Total Population Percentage	**2.7**	**97.3**
Total Number	**13338**	**483183**

CHAPTER 4

CHAPTER 4: POPULATION CHARACTERISTICS

This chapter provides a profile of the household population who were interviewed in the 2006 Botswana Demographic Survey. First, information is presented on a host of basic characteristics such as age, sex, and marital status, level of education, citizenship and religion. Then, the chapter explores the pattern of disability across all the districts and age groups as reported by the respondents. Information on population characteristics is intended to help understand and appreciate the results of the 2006 BDS. In addition, it may provide useful input for social and economic development planning in the country.

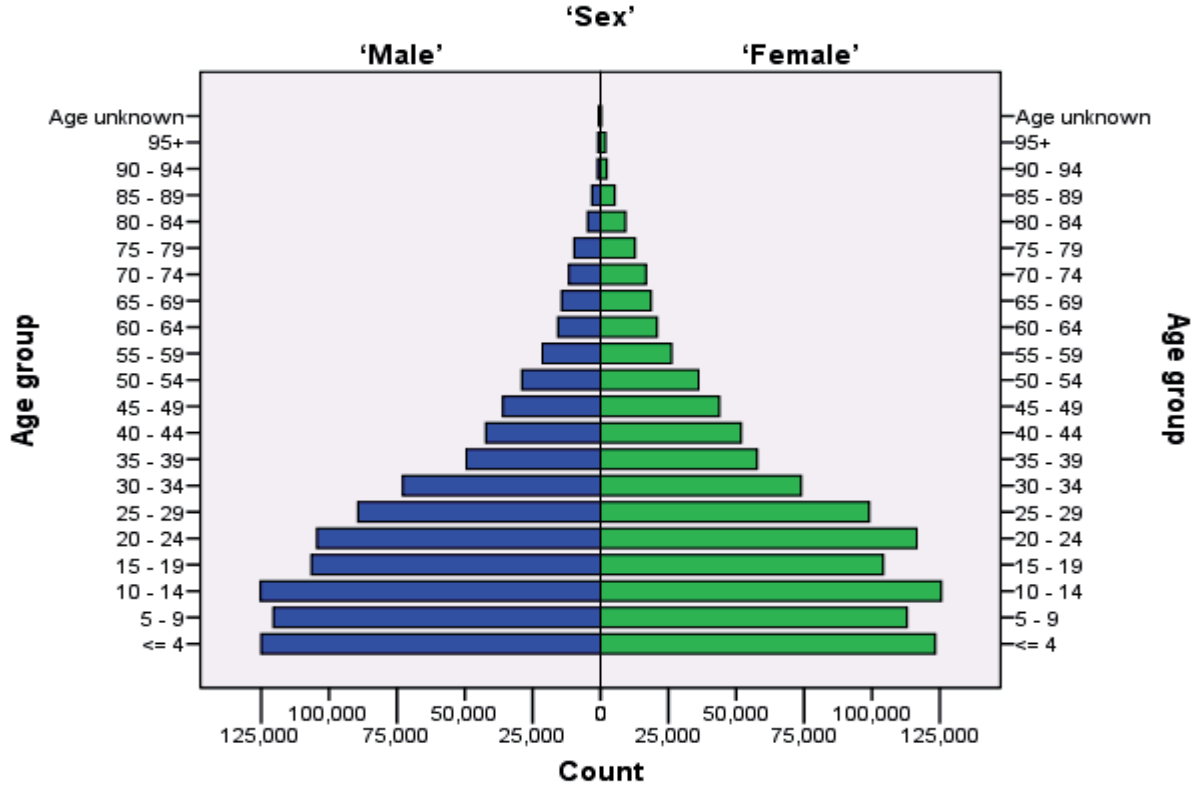
4.1 Background Characteristics

Table 4.1.1 presents the basic population characteristics namely age, Sex, marital status, residential background and level of education. The age distribution shows that 35.6 percent of the population is below 15 years, 57.5 percent between 15-59 years and 6.9 percent above 60 years. Compared with the 2001 population census, this age structure shows a slight decline in the proportion of young dependents and a slight increase in the 15- 59 age group. The 2001 census age distribution showed that 36.6 percent of the population belonged to 0-14 years, 56.7 percent to 15-59 years and 6.7 percent belonged to 60 + population.

Table 4.1.1: Population by Background Characteristics (age, sex, marital status, and level of education): Botswana, 2006.

Age Group	Number	Percent
0-4	205,841	12.1
5 - 9	191,799	11.3
10 - 14	207,295	12.2
15 - 19	175,079	10.3
20 - 24	187,974	11.0
25 - 29	161,968	9.5
30 - 34	125,886	7.4
35 – 39	91,501	5.4
40 – 44	80,141	4.7
45 – 49	67,133	3.9
50 – 54	53,156	3.1
55 - 59	37,831	2.2
60 - 64	28,683	1.7
65 - 69	25,917	1.5
70 - 74	21,198	1.2
75 - 79	17,417	1.0
80 - 84	11,127	0.7
85 – 89	6,542	0.4
90 – 94	2,575	0.2
95+	2,171	0.1
Age Unknown	1,779	0.1
Total	1,703,014	100.0
Sex		
Male	817,843	48.0
Female	885,171	52.0
Total	1,703,014	100.0
Marital Status		
Never Married	781,256	64.2
Married	220,331	18.1
Living Together	140,544	11.6
Separated	3,582	0.3
Divorced	11,937	1.0
Widowed	58,515	4.8

Fig. 4.1.1 Population Pyramid Botswana 2006



As far as the sex distribution is concerned, females outnumber men in Botswana as observed in all the previous censuses. The sex ratio comes to 924 males per 1000 females, a significant reduction from 2001 census (940 males per 1000 females).

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The majority of the population (64.2 percent) has 'never married'. Around 18 percent of the population is married, while 11.6 percent are cohabiting couples. Whereas 4.8 percent of the population is widowed, only a small proportion, i.e. 1.3 percent is divorced or separated

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Concerning the residential background of the study population, majority (57.4 percent) are living in cities/towns and urban villages. The share of rural population is 42.6 percent. Over three fourth (76.1 percent) of the population possess an educational attainment of primary or secondary level. A proportion of 21.3 percent of the total population has never attended school. Unfortunately, data on tertiary level education are not available.

Table 4.1.2: Population Distribution by Age, Sex and Residence: Botswana 2006.

Age Group	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
0-4	103,752	12.7	102,088	11.5	205,840	12.1
5 - 9	98,434	12.0	93,364	10.5	191,798	11.3
10 - 14	102,587	12.5	104,708	11.8	207,295	12.2
15 - 19	87,159	10.7	87,921	9.9	175,080	10.3
20 - 24	88,232	10.8	99,742	11.3	187,974	11.0
25 - 29	76,999	9.4	84,969	9.6	161,968	9.5
30 - 34	63,022	7.7	62,864	7.1	125,886	7.4
35 - 39	42,069	5.1	49,432	5.6	91,501	5.4
40 - 44	36,344	4.4	43,798	4.9	80,142	4.7
45 - 49	30,826	3.8	36,307	4.1	67,133	3.9
50 - 54	23,987	2.9	29,169	3.3	53,156	3.1
55 - 59	16,902	2.1	20,929	2.4	37,831	2.2
60 - 64	12,051	1.5	16,632	1.9	28,683	1.7
65 - 69	11,076	1.4	14,841	1.7	25,917	1.5
70 - 74	8,210	1.0	12,988	1.5	21,198	1.2
75 - 79	7,322	0.9	10,095	1.1	17,417	1.0
80 - 84	3,832	0.5	7,295	0.8	11,127	0.7
85 - 89	2,342	0.3	4,199	0.5	6,542	0.4
90 - 94	864	0.1	1,711	0.2	2,575	0.2
95+	711	0.1	1,460	0.2	2,171	0.1
Age unknown	1,122	0.1	658	0.1	1,780	0.1
Total	817,843	100.0	885,171	100.0	1,703,014	100.0
Median Age	**20.04**		**22.73**		**21.90**	
Place of Residence						
Cities/Towns	176,502	21.6	185,242	20.9	361,744	21.2
Urban Villages	287,353	35.1	328,836	37.2	616,189	36.2
Rural	353,988	43.3	371,093	41.9	725,081	42.6
Total	**817,843**	**100.0**	**885,171**	**100.0**	**1,703,014**	**100.0**

Table 4.1.2 shows the age distribution by sex. The sex differentials in age are vividly distinct in Botswana. While the median age for the whole population is 21.9 years, it is 22.7 for females and 20.0 for males, implying a clear edge of about 3 years for females over their male counterparts. This is an indication of a speedier aging process among females. Again, the proportion of young dependents (below 15 years) is slightly lower among females; 33.8 percent while it is 37.2 percent for males and 35.6 percent for the whole population. This reduction in population is compensated by an increase in the labour force age group (15- 64 years). Around 60 percent of the females are in this age group while it is around 58 percent for the males.

The sex differentials in the place of residence are only marginal. Slightly more males are residing in rural areas, 43.3 percent as against 41.9 percent for females.

Table 4.1.3: Distribution of Population by District and Sex: Botswana 2006

District	Male	Percent	Female	Percent	Total	Percent
'Gaboron e'	88119	10.77	93966	10.62	182085	10.69
'Francistown'	37972	4.64	40089	4.53	7806 2	4.58
'Lob atse'	13942	1.70	15051	1.70	28993	1.70
'Selibe Phikwe'	22959	2.81	22897	2.59	45856	2.69
'Orapa'	6369	0.78	7652	0.86	14020	0.82
'Jwaneng'	6101	0.75	4440	0.50	10542	0.62
'Sow a'	1041	0.13	1146	0.13	2187	0.13
'South ern Ngw aketse'	55546	6.79	62046	7.01	117592	6.90
'South ern Boro long'	28465	3.48	28556	3.23	57021	3.35
'South Ngw aketse West'	5078	0.62	5026	0.57	10104	0.59
'South E ast'	26516	3.24	26816	3.03	53332	3.13
'Kw eneng East'	94942	11.61	104456	11.80	199398	11.71
'Kw eneng West'	17324	2.12	18202	2.06	35525	2.09
'Kg atleng'	38582	4.72	40653	4.59	79234	4.65
'Central Serow e_Palapye'	72008	8.80	78332	8.85	150340	8.83
'Central Mahalapye'	46727	5.71	51991	5.87	98718	5.80
'Central Bob irwa'	32478	3.97	35700	4.03	68178	4.00
'Central Letlhakane'	21926	2.68	24180	2.73	46106	2.71
'Central Tutum e'	56459	6.90	64875	7.33	121334	7.12
'North E ast'	24830	3.04	29018	3.28	53849	3.16
'Ng amiland East'	33763	4.13	36785	4.16	70548	4.14
'Ng amiland West'	28697	3.51	36790	4.16	65488	3.85
'Ng amiland-Chob e'	10899	1.33	9664	1.09	20562	1.21
'Gh anzi'	26314	3.22	24983	2.82	51297	3.01
'Kg alagadi South'	12544	1.53	12718	1.44	25262	1.48
'Kg alagadi Nort h'	8244	1.01	9139	1.03	17382	1.02
Total	**817,843**	**100.00**	**885,171**	**100.00**	**1,703,014**	**100.00**

Table 4.1.3 looks at the distribution of population according to districts. Kweneng East, Gaborone, Central Serowe, Central Tutume, Ngwaketse South, in that order, are the most populated districts in Botswana while Sowa, Jwaneng, Ngwaketse South West, Orapa, Ngamiland-Chobe and Kgalagadi North are the least populated districts.

Table 4.1.4: Population Distribution by Age and Sex - Cities/Towns: Botswana, 2006

	Male		Female		Total	
Age Group	Number	Percent	Number	Percent	Number	Percent
Cities/Towns						
0-4	17,565	10.0	16,396	8.9	33,961	9.4
5-9	15,086	8.5	14,730	8.0	29,816	8.2
10-14	16,997	9.6	17,724	9.6	34,721	9.6
15-19	17,341	9.8	19,966	10.8	37,307	10.3
20-24	23,210	13.2	28,706	15.5	51,916	14.4
25-29	23,890	13.5	25,119	13.6	49,009	13.6
30-34	18,888	10.7	16,750	9.0	35,638	9.9
35-39	12,765	7.2	14,381	7.8	27,146	7.5
40-44	10,049	5.7	9,512	5.1	19,561	5.4
45-49	7,506	4.3	8,247	4.5	15,753	4.4
50-54	5,422	3.1	5,463	2.9	10,885	3.0
55-59	2,787	1.6	2,418	1.3	5,205	1.4
60-64	2,095	1.2	2,051	1.1	4,146	1.1
65-69	1,187	0.7	1,419	0.8	2,606	0.7
70-74	649	0.4	1,012	0.5	1,661	0.5
75-79	567	0.3	,409	0.2	976	0.3
80-84	208	0.1	,445	0.2	653	0.2
85-89	70	0.0	,232	0.1	302	0.1
90-94	115	0.1	191	0.1	306	0.1
95+	105	0.1	71	0.0	176	0.0
Total	**176,502**	**100.0**	**185,242**	100.0	**361,744**	100.0
Median Age	**24.58**		**24.14**		**24.34**	

Table 4.1.5: Population Distribution by Age and Sex - Urban Villages: Botswana, 2006

	Male		Female		Total	
Age Group	Number	Percent	Number	Percent	Number	Percent
Urban Villages						
0-4	35,631	12.4	36,088	11.0	71,719	11.7
5-9	35,178	12.2	34,201	10.4	69,379	11.3
10-14	36,451	12.7	39,751	12.1	76,202	12.4
15-19	32,441	11.3	35,773	10.9	68,214	11.1
20-24	32,175	11.2	36,967	11.2	69,142	11.2
25-29	27,691	9.6	32,698	9.9	60,389	9.8
30-34	22,054	7.7	25,014	7.6	47,068	7.7
35-39	14,460	5.0	18,711	5.7	33,171	5.4
40-44	12,794	4.5	16,562	5.0	29,356	4.7
45-49	11,232	3.9	13,022	4.0	24,254	3.9
50-54	8,337	2.9	9,154	2.8	17,491	2.8
55-59	5,524	1.9	6,676	2.0	12,200	2.0
60-64	3,358	1.2	5,705	1.7	9,063	1.5
65-69	3,051	1.1	5,104	1.6	8,155	1.3
70-74	1,709	0.6	4,654	1.4	6,363	1.0
75-79	2,372	0.8	3,870	1.2	6,242	1.0
80-84	1,413	0.5	2,476	0.8	3,889	0.6
85-89	582	0.2	1,310	0.4	1,892	0.3
90-94	285	0.1	456	0.1	741	0.1
95+	615	0.2	644	0.2	1,259	0.2
Total	**287,353**	**100.0**	**328,836**	100.0	**616,189**	100.0
Median Age	**20.57**		**22.48**		**21.69**	

Table 4.1.6: Population Distribution by Age and Sex - Rural Areas: Botswana, 2006

	Male		Female		Total	
Age Group	Number	Percent	Number	Percent	Number	Percent
Rural						
0-4	50,556	14.3	50,605	13.6	101,161	13.9
5-9	48,169	13.6	44,432	11.9	92,601	12.8
10-14	49,139	13.9	47,233	12.7	96,372	13.3
15-19	37,376	10.6	32,182	8.6	69,558	9.6
20-24	32,846	9.3	34,070	9.2	66,916	9.2
25-29	25,418	7.2	27,150	7.3	52,568	7.2
30-34	22,082	6.2	21,100	5.7	43,182	5.9
35-39	14,844	4.2	16,340	4.4	31,184	4.3
40-44	13,501	3.8	18,286	4.9	31,787	4.4
45-49	12,089	3.4	15,039	4.0	27,128	3.7
50-54	10,787	3.0	14,551	3.9	25,338	3.5
55-59	8,592	2.4	11,836	3.2	20,428	2.8
60-64	6,599	1.9	8,876	2.4	15,475	2.1
65-69	6,838	1.9	8,318	2.2	15,156	2.1
70-74	5,854	1.7	7,322	2.0	13,176	1.8
75-79	4,384	1.2	5,816	1.6	10,200	1.4
80-84	2,211	0.6	3,375	0.9	5,586	0.8
85-89	1,344	0.4	2,071	0.6	3,415	0.5
90-94	454	0.1	531	0.1	985	0.1
95+	905	0.3	1960	0.5	2,865	0.4
Total	353,988	100.0	371,093	100.0	725,081	100.0
Median Age	**18.90**		**21.70**		**20.25**	

Table 4.1.4, Table 4.1.5, and Table 4.1.6 show the age distribution of population by sex and residential background. The median age of the urban (cities/Towns) population is comparatively higher i.e. 24.3 years while that of urban villages is 21.7 and rural areas 20.3. There is no significant sex differential in age distribution in the cities/ towns whereas there are considerable sex differentials in both urban villages and rural areas. Females have higher median ages in both urban villages and rural areas; the difference being 2 and 3 years respectively.

Fig. 4.1.2 Population Pyramid- Cities/Towns

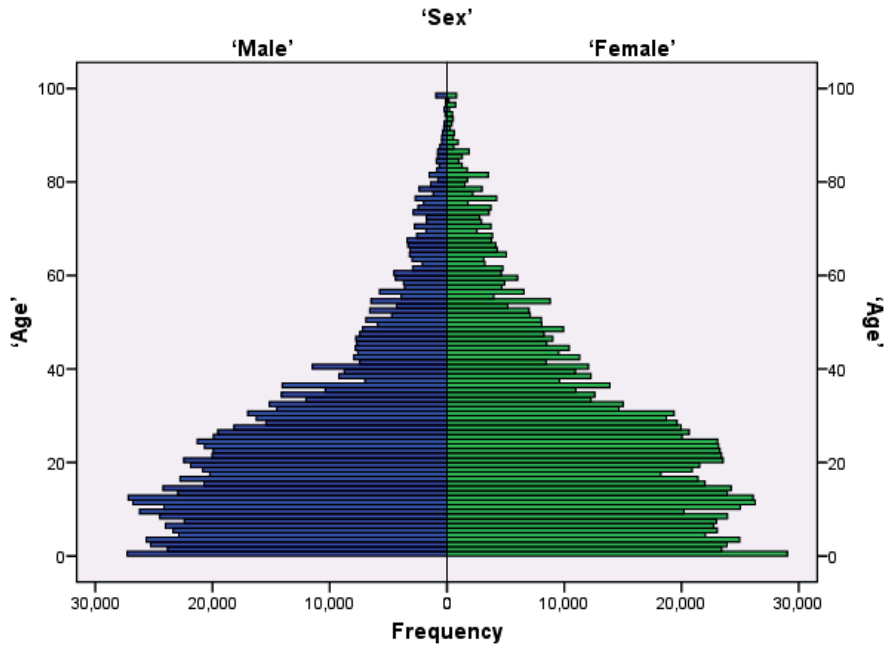


Fig. 4.1.3 Population Pyramid - Urban Villages

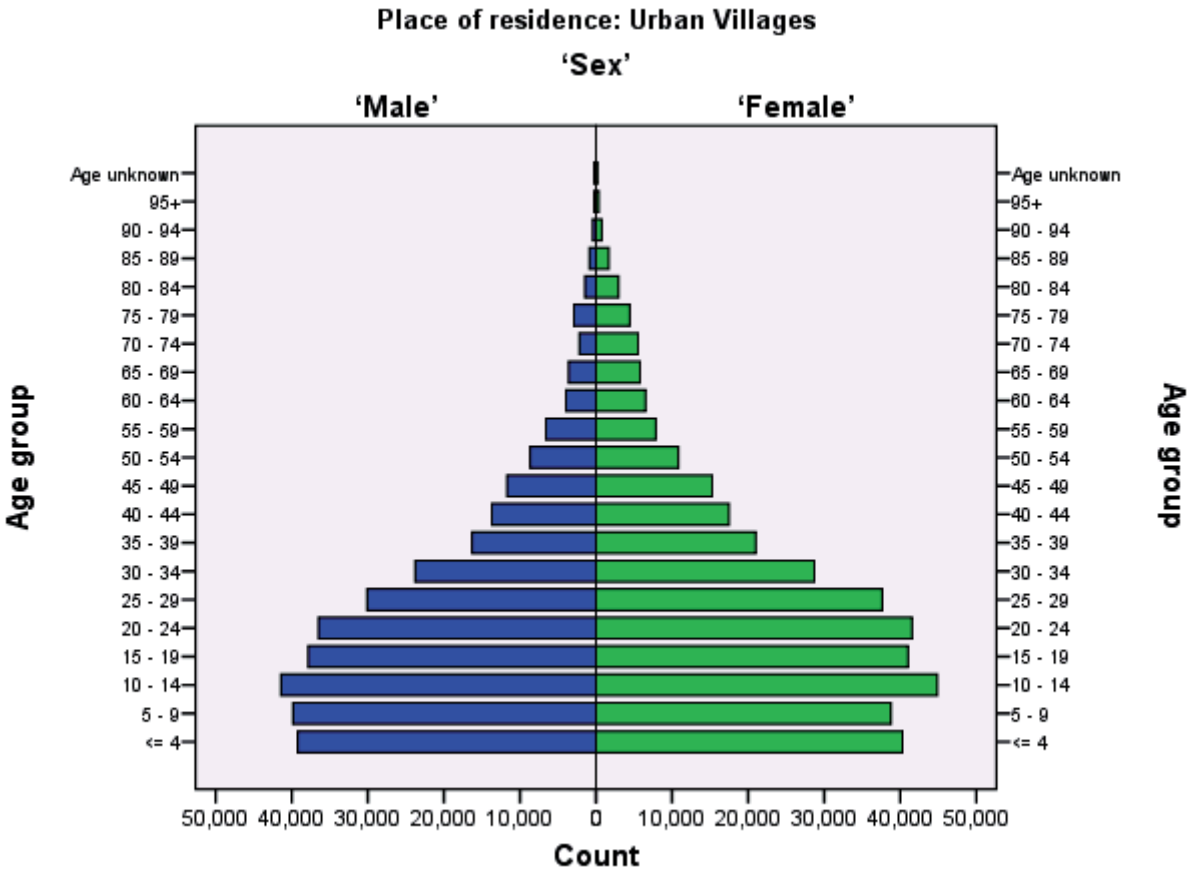


Fig. 4.1.4 Population Pyramid - Rural Areas

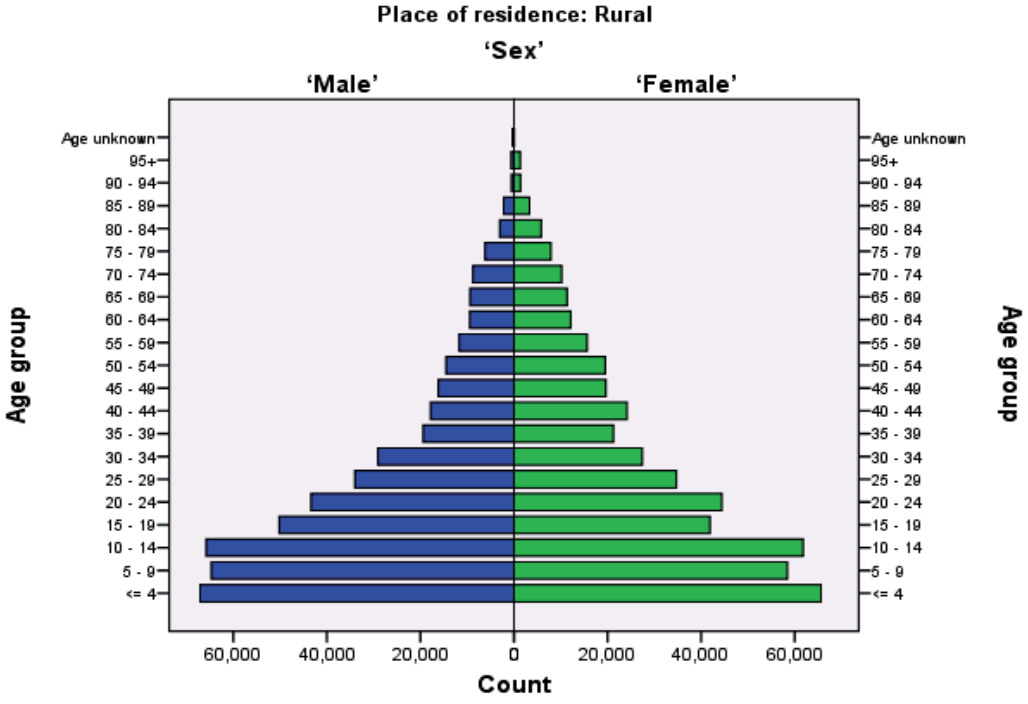


Table 4.1.7: Total Population by Citizenship, Sex and Residence: Botswana 2006

	Batswana		Non Batswana		Total	
	Number	Percent	Number	Percent	Number	Percent
Male	785,795	47.7	32,014	57.9	817,843	48.0
Female	861,886	52.3	23,252	42.1	885,171	52.0
Total	1,647,681	100.0	55,266	100.0	1,703,014	100.0
Cities/Towns	332,049	20.2	29,629	53.6	361,744	21.2
Urban Villgs	600,216	36.4	15,971	28.9	616,189	36.2
Rural	715,416	43.4	9,666	17.5	725,081	42.6
Total	1,647,681	100.0	55,266	100.0	1,703,014	100.0

Table 4.1.7 provides the sex distribution and residence patterns by nativity status, i.e. Batswana and Non-Batswana populations. Among Batswana population, sex ratio is favourable to females as seen earlier. However, it is reversed in the context of non-Batswana population. More than half (58 percent) of non-Batswana population are males. The sex ratio is 1377 males per 1000 females. As far as the residential background is concerned, 43.4 percent of the Batswana population resides in rural areas as against 17.5 percent among non-Batswana population. A vast majority (82.5percent) of non- Batswana population reside in urban villages, cities and towns.

Table: 4.1.8 Population by District, Citizenship and sex: Botswana 2006

	Male				Female			
District	Batswana		Non-Batswana		Batswana		Non-Batswana	
	Number	%	Number	%	Number	%	Number	%
'Gaborone'	76,107	9.7	12,012	37.5	84,471	9.8	9,495	40.8
'Francistown'	35,007	4.5	2,965	9.3	38,212	4.4	1,878	8.1
'Lobatse'	13,260	1.7	682	2.1	14,719	1.7	332	1.4
'Selibe Phikwe'	22,231	2.8	728	2.3	22,351	2.6	545	2.3
'Orapa'	6,152	.8	217	.7	7,335	.9	317	1.4
'Jwaneng'	5,823	.7	278	.9	4,291	.5	150	.6
'Sowa'	1,021	.1	20	.1	1,137	.1	9	.0
'Southern Ngwaketse'	54,962	7.0	584	1.8	61,649	7.2	397	1.7
'Southern Borolong'	28,389	3.6	76	.2	28,556	3.3	0	.0
'South Ngwaketse West	5,002	.6	77	.2	5,026	.6	0	.0
'South East'	24,977	3.2	1,540	4.8	25,349	2.9	1,466	6.3
'Kweneng East'	91,111	11.6	3,831	12.0	101,580	11.8	2,876	12.4
'Kweneng West'	17,220	2.2	103	.3	18,107	2.1	95	.4
'Kgatleng'	37,401	4.8	1,181	3.7	40,022	4.6	630	2.7
'Centr Serowe_Palapye'	70,358	9.0	1,651	5.2	77,356	9.0	976	4.2
'Central Mahalapye'	45,758	5.8	968	3.0	51,602	6.0	389	1.7
'Central Bobirwa'	32,201	4.1	277	.9	35,508	4.1	192	.8
'Central Letlhakane'	21,774	2.8	152	.5	24,152	2.8	28	.1
'Central Tutume'	55,351	7.0	1,108	3.5	64,373	7.5	502	2.2
'North East'	24,435	3.1	396	1.2	28,215	3.3	804	3.5
'Ngamiland East'	32,653	4.2	1,110	3.5	36,158	4.2	627	2.7
'Ngamiland West'	28,248	3.6	449	1.4	35,815	4.2	975	4.2
'Ngamiland-Chobe'	9,586	1.2	1,313	4.1	9,445	1.1	219	.9
'Ghanzi'	26,208	3.3	106	.3	24,766	2.9	217	.9
'Kgalagadi South'	12,353	1.6	192	.6	12,634	1.5	84	.4
'Kgalagadi North'	8,244	1.0	0	.0	9,092	1.1	47	.2
Total	785,829	100.0	32,014	100.0	861,919	100.0	23,252	100.0

Table 4.1.8 presents the distribution of population by district, citizenship and sex. Batswana are concentrated in Kweneng East, Gaborone, Central Serowe - Palapye, Central Tutume, Ngwaketse South and Central Mahalapye in that order whereas non-Batswana population are concentrated in Gaborone, Kweneng East, Francistown, South East, and Central Serowe - Palapye. There is no significant sex differentials observed among Batswana as well as non-Batswana population in terms of place of residence.

Table 4.1.9: Population by age and citizenship, Botswana 2006

Age Group	Batswana	%	Non-Batswana	%
0-4	202073	12.3	3767	6.8
5 - 9	189783	11.5	2015	3.6
10 - 14	204289	12.4	3006	5.4
15 - 19	172696	10.5	2384	4.3
20 - 24	181915	11.0	6059	11.0
25 - 29	152562	9.3	9406	17.0
30 - 34	117375	7.1	8511	15.4
35 - 39	85381	5.2	6120	11.1
40 - 44	75893	4.6	4249	7.7
45 - 49	63630	3.9	3503	6.3
50 - 54	51281	3.1	1875	3.4
55 - 59	36351	2.2	1480	2.7
60 - 64	27754	1.7	929	1.7
65 - 69	25297	1.5	620	1.1
70 - 74	20792	1.3	406	0.7
75 - 79	17078	1.0	339	0.6
80 - 84	10815	0.7	312	0.6
85 - 89	6493	0.4	49	0.1
90 - 94	2523	0.2	52	0.1
95+	2131	0.1	40	0.1
Age unknown	1636	0.1	144	0.3
Total	1647748	100.0	55266	100.0

Table 4.1.9 presents the age profile of Batswana and Non-Batswana population. As expected, non-Batswana population is considerably older. Large majority (81 %) of population belongs to the age group 15-64 years. Both younger and older dependent populations are proportionately smaller, i.e. 15.8 % and 3.3 % respectively. The median age of Non- Batswana population is 30.4 years. Among Batswana population, 36.2 % belong to the age group 0-14years, 58.6 % to the age group15-64 years and 5.2 % to the age group 65+ years.

Table 4.1.10: Foreign Population by Region of citizenship: Botswana, 2006.

Region of Citizenship	**Number**	**%**
SADC Countries	43598	78.9
Other African Countries	2602	4.7
Other Continents (America, Asia, Europe, Australia)	9066	16.4
Total	52266	100.0

In Botswana, 3.2 % of the population is foreign nationals. Among them, about 79 % belong to SADC countries, 5 % come from other African countries and 16% from other continents such as America, Asia, Europe and Australia.

4.2 Religious Affiliation

Table 4.2.1 shows the age distribution of population aged 10 years and above by age and religious affiliation in Botswana. The majority of Botswana population (60.2 %) professes Christianity as their religious affiliation. Interestingly, nearly 9 % of the population does not follow any religion at all. 'Badimo' is the only other religion which has some following in Botswana with 3 % followers. All other religious faiths combined have less than one % following in the country.

Table 4.2.1: Population Aged 10 Years and Over By Age and Religious Affiliation, Botswana 2006

Age	'Christian'		'Muslim'		'Bahai'		'Hindu'		'Badimo'		'No Religion'	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 - 14	75020	62.1	274	.2	219	.2	300	.2	1910	1.6	11365	9.4
15 - 19	104695	60.1	806	.5	180	.1	64	.0	3588	2.1	15714	9.0
20 - 24	110191	58.8	998	.5	407	.2	206	.1	5555	3.0	18344	9.8
25 - 29	94331	58.3	704	.4	144	.1	397	.2	4828	3.0	14708	9.1
30 - 34	72407	57.6	974	.8	296	.2	328	.3	2953	2.3	11625	9.2
35 - 39	57436	62.9	432	.5	208	.2	445	.5	2370	2.6	7917	8.7
40 - 44	50526	63.2	463	.6	178	.2	416	.5	2558	3.2	5568	7.0
45 - 49	43645	65.1	372	.6	117	.2	280	.4	1859	2.8	5693	8.5
50 - 54	32511	61.2	171	.3	120	.2	179	.3	2253	4.2	4124	7.8
55 - 59	22752	60.2	157	.4	269	.7	87	.2	1539	4.1	2718	7.2
60 - 64	18231	63.7	243	.8	108	.4	0	.0	1058	3.7	2242	7.8
65 - 69	15637	60.6	96	.4	124	.5	35	.1	1394	5.4	1758	6.8
70 - 74	12126	57.3	130	.6	0	.0	35	.2	1245	5.9	1838	8.7
75 - 79	9311	53.5	104	.6	34	.2	68	.4	1278	7.3	1317	7.6
80 - 84	6392	57.4	0	.0	0	.0	52	.5	1149	10.3	731	6.6
85 - 89	3649	55.8	47	.7	23	.4	0	.0	517	7.9	675	10.3
90 - 94	1352	52.5	0	.0	0	.0	52	2.0	55	2.1	287	11.2
95+	1093	50.3	0	.0	0	.0	0	.0	323	14.9	68	3.1
Age un Known	239	49.5	0	.0	0	.0	0	.0	58	11.6	194	33.1
Total	731694	60.2	5971	.5	2426	.2	2944	.2	36531	3.0	106838	8.8

4.3 Language Spoken

As Table 4.3.1 shows, Setswana is spoken by the vast majority (72.3 %) of Botswana population. The other major languages spoken are Ikalanga, Shekgalagari, Sebirwa, Sesarwa, and Setswapong. English is spoken by 2 % of population.

Table 4.3.1: Number of Persons Aged 2 Years and over By District and Language Spoken. Botswana 2006.

Language	Number	%
'Ikalanga'	134313	8.3
'Shekgalagari'	54435	3.4
'Herero'	8244	0.5
'Sebirwa'	41381	2.6
'Mbukushu'	30348	1.9
'Sesarwa'	41602	2.6
'Shona'	20047	1.2
'Ndebele'	10776	0.7
'Setswapong'	35538	2.2
'Afrikaans'	7190	0.4
'Subiya'	5040	0.3
'Shiyeyi'	6992	0.4
'Setswana'	1167789	72.3
'English'	32526	2.0
'Other'	17867	1.1
Total	1614088	100.0

4.4 Disability

Table 4.4.1 shows the distribution of population by disability. Defect of vision (both eyes) is found the most common among the reported disabilities. Next in order are hearing impairment, mental challenges and inability to use legs. This pattern is more or less the same across all the districts, especially regarding vision impairment. Vision impairment is found common across all age groups as well. The latter phenomenon calls for further epidemiological studies to validate and explore the reasons. Detailed tables are given in Appendix.

Table 4.4.1 Total population by type of disability

Disabilty	Number	%
'Defect Of Seeing In 1 Eye'	3267	4.4
'Defect Of Seeing In 2 Eyes'	13733	18.7
'Blindness In 1 Eye'	1536	2.1
'Blindness In 2 Eye'	1529	2.1
'Defect Of Hearing In 1 Ear'	1578	2.1
'Defect Of Hearing In 2 Ears'	4993	6.8
'Deafness In 1 Ear'	235	0.3
'Deafness In 2 Ears'	526	0.7
'Inability To Speak'	1417	1.9
'Inability To Use 1 Leg'	2572	3.5
'Inability To Use 2 Legs'	1451	2.0
'Inability To Use 1 Arm'	1324	1.8
'Inability To Use 2 Arms'	400	0.5
'Mental Challenges'	3917	4.0
Total	31763	43.2

CHAPTER 5

CHAPTER 5: ECONOMIC ACTIVITY AND THE LABOUR FORCE

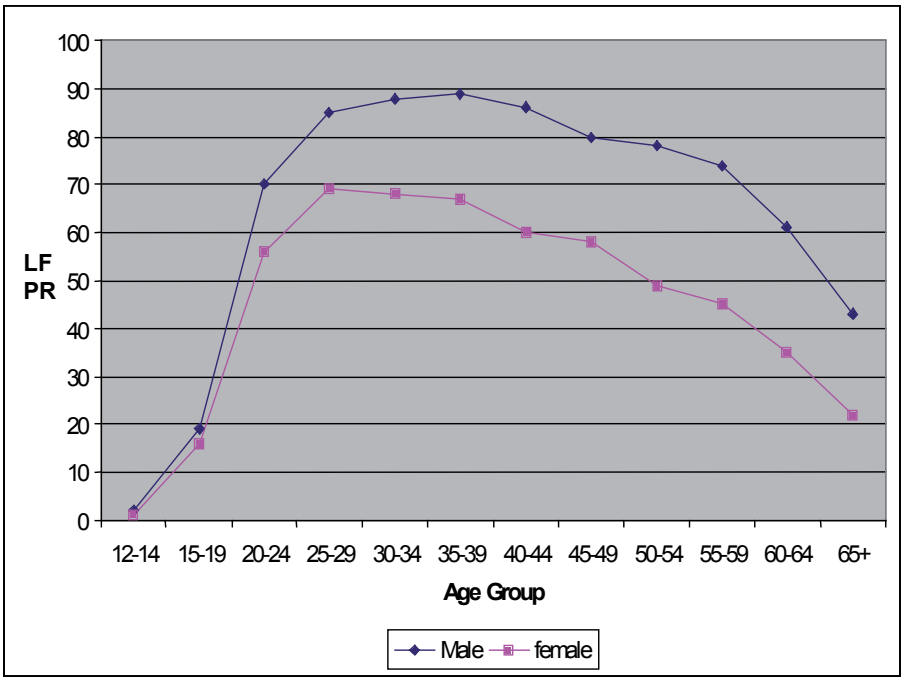
5.1 Activity Status of Labour Force

Botswana's labour force is defined as people aged 12 years and above who are either employed or unemployed. Of the people aged 12 years and above some are not participating in the labour force (i.e. they are not economically active). These include students, retired persons, sick persons and those doing housework. A measure of the extent of utilization of the labour force is the Labour Force Participation Rate (LFPR), which is defined as: X100, where, LF is the labour force and P is the relevant population (Batswana aged 12 years and above- i.e. both active + not active). This measures the general use of labour in an economy, and its rise generally indicates some progress in that more people now belong to the labour force. When it is not improving however, it does not necessarily mean that the economy is not doing well. It may be declining because an increasing number of the population is enrolling in school and therefore not part of the labour force. For most countries there has been a significant increase in the Labour Force participation rate due to more women entering the labour market as a consequence of a number of socio-economic and cultural changes.

In the 2006 Demographic Survey the number of people aged 12 years and above was estimated to be 1,220,665. Fifty-three (53percent) of these were female. An estimated 640,853 were economically active or were members of the labour force as is commonly defined and 579,812 were not economically active. These include students, retired persons, the sick, etc. The estimated Labour force participation rate (LFPR) is 53percent. The labour force participation rate of males is generally higher at 61percent compared with that of females at 45percent. The labour force participation rate generally rises with age, reaching a peak at age 35-39 for males and 25-29 age group for females. The labour force participation rate is higher for males at all age groups, with the gap increasing as the age increases. This is summarized in figure 5.1.

For those who were economically active, 467,610 were employed while, 173,243 were actively looking for work. The estimated unemployment rate (ratio of those actively seeking work to the labour force) is 27.0percent. Most of the economically inactive were home makers and students at 47percent and 44percent respectively. For males, the majority of the economically not active were students at 60percent, followed by those who were "home makers" at 29percent of the total. For females, most of the economically not active were "home makers" at 54percent followed by those who were students at 39percent.

Figure 5.1.1: Labour force participation rate by gender



5.2 The Employed Labour Force

The estimated number of employed workers was 467,610, out of which 437,040(93.5percent) were citizens of Botswana. Of those employed, 267,736(56percent) were male and 204,873 (44percent) were female. In terms of industry, the biggest employers are Agriculture and Wholesale and Retail absorbing 14percent of total employment each (Table 5.2.1). Public Administration follows at 13percent. Mining employs 3.3percent of the total labour force while Construction employs 7percent of the labour force. The major employer of male workers (Table 5.2.2), is Agriculture at 19percent followed by Public Administration at 15percent and Construction

and Wholesale and Trade at 11percent each. For females, the biggest employer is Wholesale and Retail at 19percent (Table 5.2.3), followed by Education at 12percent. Agriculture and Public Administration employ an estimated 8.5 and 11percent respectively. Female employees as a percentage of the total employees dominate in most industries. These include Hotels and Restaurants (73percent), Private Households (81percent), Education (65percent), Health and Social Workers (64percent), and Wholesale and Retail (57percent). Women are least represented in Construction and Mining at 8percent and 12percent respectively. A majority of the non citizens are employed in Wholesale and Retail at 18percent followed by Construction and Agriculture and Fishing at 14percent and 9percent respectively. The other significant employers of non citizens are in Manufacturing, Real Estate and Private Households at about 9percent, 7and 6percent each respectively.

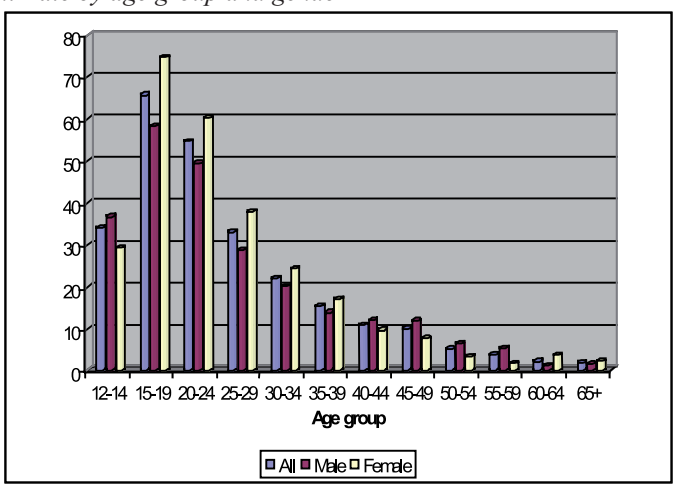
In terms of employed persons by age, a majority of them were aged 25-29 at 18percent (Table 5.2.4). The other major age groups are 30-34 and 35-39 at 16 and 13percent respectively. The dominant occupations (Table 5.2.5), are Elementary occupations and Service at 19percent and 16percent respectively. These are followed by Craft and Trade workers (12percent), Technicians and Associate Professionals (10percent). In terms of distribution by gender, most male employees are in Elementary occupations (18percent), Craft and Trade workers (17percent and Skilled Agricultural workers (12percent). Most females are in Service (21percent) followed by Elementary (20percent) and Technicians and Associated Professionals (13percent). There is an occupational segregation of workers by gender, which is typical of Botswana's labour market. Table 5.2.5 also shows that women dominate in the following occupations; Clerks (70percent), Technical and Associated Professionals (59percent), Service (56percent). Females are less represented in Plant and Machine Operators (9percent), Craft and Trade Workers (20percent), and Skilled Agricultural workers (30percent), Legislators and Managers (30percent) and Professionals (44percent). In terms of regional distribution of the employed population, a majority (35percent) of those employed were employed in rural areas (mainly in Agriculture), followed by those employed in urban villages at 34percent and cities/towns with 31percent of the total employed labour. In terms of districts, Gaborone employed the largest number with 16percent of those employed, followed by Kweneng East at 12percent and Francistown with 6percent. The distribution of employees by district is summarized in Table 5.2.6. In terms of employment status (Table 5.2.7), most workers were employees paid in cash (68percent). The second largest group is those who were Self employed with no employees at 9percent and those working at the land/cattle posts at 8percent. The other employment status is self employed with employees at 4percent.

5.3 Unemployed Labour Force

The unemployed who were actively seeking employment were estimated at 173,243 (Table 5.3.1 and Table 5.3.2), out of which 85,458(49percent) were male and 87,745(51percent) were female. Most of the unemployed are aged 20-24, making 37percent of the total of unemployed. The other significant age groups are 25-29(24percent) and 15-19 (12percent). These three age groups together comprise 73 percent of the unemployed persons seeking work during the survey. Figure 5.3.1 summarises the unemployment rate by age and gender. Unemployment rate is highest for those aged 15-19 at 66percent, followed by 20-24 at 55percent, and 25-29 at 33percent. Unemployment is therefore more concentrated in the youth. The youth in general have less labour market experience and some also have no skills and training. Unemployment is higher for women for all age groups generally. Women generally face fewer employment opportunities than their male counterparts, which is partly due to occupational segregation.

Most of the unemployed resided in the urban villages at 41percent, followed by rural areas at 38percent. Those in towns/cities made up 21percent of the unemployed to the total. A majority of the unemployed had secondary education (73percent) followed by those with primary education (19percent) and those who have never attended schools at 9percent (Table 5.3.3 and Table 5.3.4). Consistent with the fact that most of the unemployed are the youth, most of them (81percent) have never been married. The second largest group is those living together at 13 percent. Those married comprise 5percent of the total unemployed population. Most of the unemployed have no training (85percent). For those unemployed with training, most of them (37percent) were in commerce, business and public administration. The other major groups are those with construction trade (20percent) and other craft (14percent). In terms of highest level of training obtained or to be obtained 27percent obtained "other certificate", followed by vocational certificate (17percent), and brigade certificate (24percent).

Figure 5.3.1: Unemployment Rate by age group and gender



The unemployment rate is highest for urban villages at 31percent, followed by rural areas with 28.3percent. The cities/ urban areas have an unemployment rate of 20.5percent. In terms of districts, the highest unemployment rates are recorded in Ngamiland West and Kweneng west at 53percent and 47percent respectively. The lowest estimates are for Sowa and Ngamiland-Chobe at about 15.8percent and 7.7percent respectively. Unemployment rates by districts are summarised in table 5.3.6. Given limited job opportunities, females face a higher unemployment rate of 30percent compared with that of males estimated at 24.5percent. The highest unemployment rate is for those with secondary education at 32percent, followed by those with pre-school (25percent) and those with primary education at 21percent. The lowest unemployment rate is for those with non-formal education at 6.6percent. Unemployment rates by level of education are shown in figure 5.3.2

In terms of citizenship, the unemployment rate is highest for citizens at 28percent compared with that of non-citizens at 10.4percent. Unemployment by age and citizenship are shown in tables 5.3.1 and 5.3.2. Citizen unemployment rate is generally higher than that of non citizens for all ages except ages 50-54 and 55-59. In terms of unemployment rate by education and citizenship (Table 5.3.3 and Table 5.3.4), citizens generally have higher unemployment rates for all education levels except for those who never attended school where the non citizens have a higher unemployment rate of 23percent compared with 17percent for citizens. Females face higher unemployment rates than males for both citizens and non citizens. The unemployment rate for citizen males and citizen females is higher than that of non citizen males and non citizen females respectively. This summary is shown in Table 5.3.5.

Figure 5.3.2: Unemployment rate by level of education

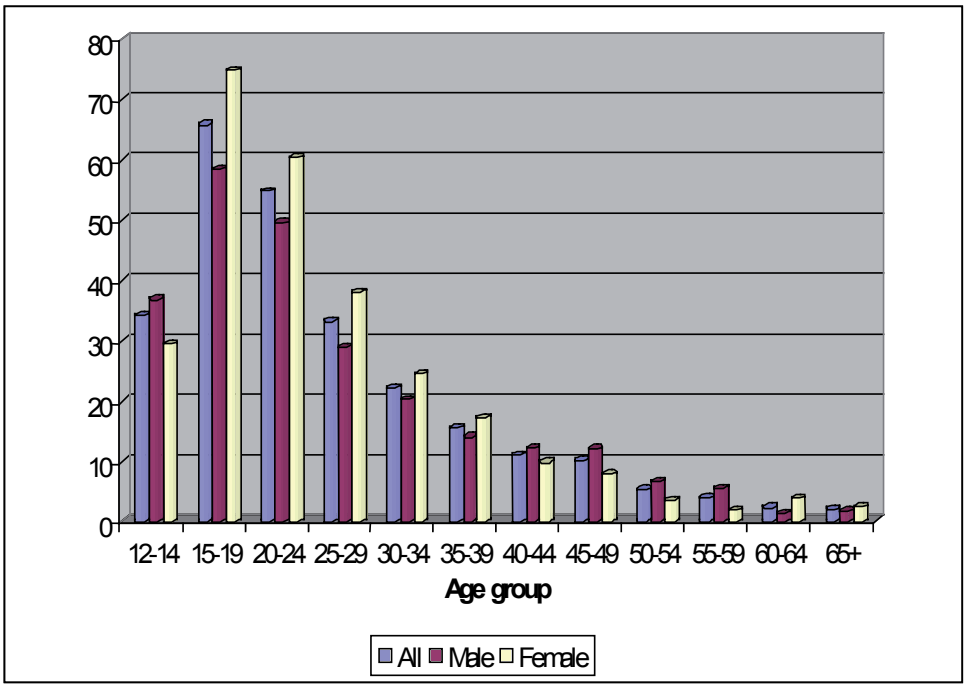


Table 5.2.1: Employed population by industry(All Sexes) and citizenship, Botswana 2006

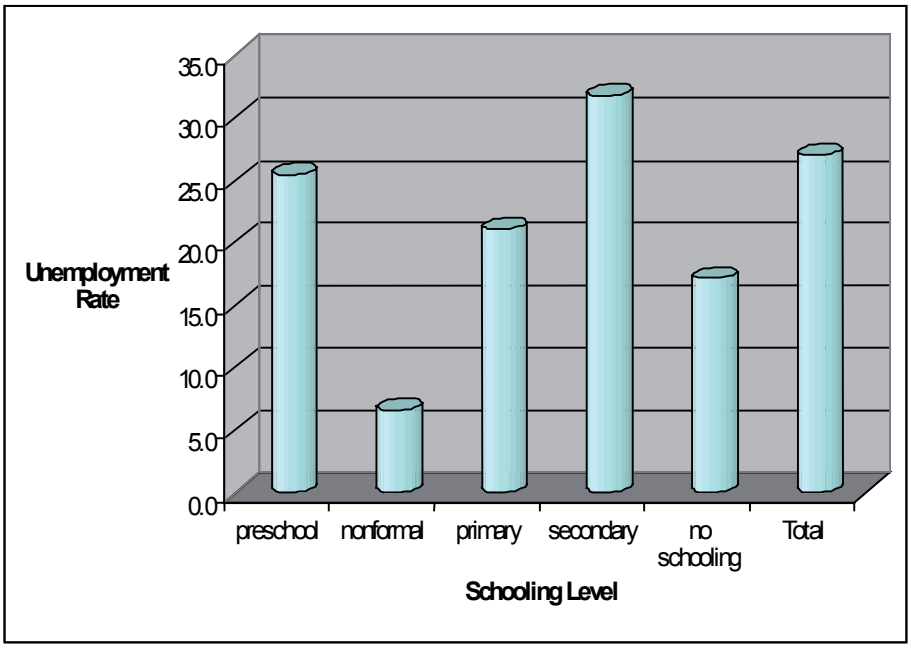


Table 5.2.2: Employed population by industry (Males) and citizenship, Botswana 2006

Industry	citizen	non citizen	Total
Agricu lture, huntin g and fishing	69519	2918	72437
Mining and quarrying	15163	484	15647
Manufa cturing	28070	2857	30927
Electricity and water	3209	426	3635
Constru ction	30682	4154	34836
Whole sale and trade	65735	5596	71331
Hot els and restau rants	10101	425	10526
Transport and commun ications	17254	1681	18935
Finan cial serv ices	7871	709	8580
Real estates	19865	2086	21951
Publi c administration	60507	1223	61730
Educ ation	37617	1773	39390
Health and Social Work	12608	1427	14035
Other Commun ity and persona l servi ces	14205	1723	15928
Priv ate Households	15926	2353	18279
Foreign Missions	467	263	730
Not Stated	763388	18379	781767
Tot al	1172187	48477	1220664

Table 5.2.3: Employed Population by industry (females) and citizenship, Botswana 2006

Industry	citizen	non citizen	Total
Agricu lture, huntin g and fishing	50705	2510	53215
Mining and quarrying	13353	484	13837
Manufa cturing	14803	2388	17191
Electricity and water	2376	400	2776
Constru ction	27859	3975	31834
Whole sale and trade	26090	4291	30381
Hot els and restau rants	2575	242	2817
Transport and commun ications	12406	1404	13810
Finan cial serv ices	3144	635	3779
Real estates	13685	1719	15404
Publi c administration	38301	674	38975
Educ ation	12781	818	13599
Health and Social Work	4361	771	5132
Other Commun ity and persona l servi ces	7316	1054	8370
Priv ate Households	3082	475	3557
Fore ign Missions	246	123	369
Not Stated	313403	5956	319359
Tot al	546486	27919	574405

These include teachers, nurses, and others that are traditionally dominated by females.

Table 5.2.4: Employed population by age group and sex. Botswana 2006

Age Group	Male	Female	All
12-14	639	415	1054
15-19	7023	3480	10503
20-24	31136	21944	53080
25-29	46722	36243	82965
30-34	44420	32453	76873
35-39	32443	27258	59701
40-44	27459	23824	51283
45-49	21622	19409	41031
50-54	17532	13676	31208
55-59	11856	9341	21197
60-64	7231	5599	12830
65+	14654	11231	25885
Total	262737	204873	467610

Table 5.2.5:Employed Population by Occupation, sex and citizenship, Botswana 2006

	All			Citizens			Non-citizens		
Occupation	Male	Female	Total	Male	Female	Total	Male	Female	Total
Legislators and managers	14987	6545	21532	11450	5549	16999	3537	996	4533
Professionals	15791	12431	28222	12075	11224	23299	3716	1207	4923
Technicians and associated Professionals	19286	26400	45686	16757	24969	41726	2529	1430	3959
Clerks	8502	18931	27433	8274	18768	27042	228	163	391
Service and Sales workers	33600	42706	76306	32454	41378	73832	1146	1328	2474
Skilled agricultural workers	30177	13275	43452	29715	13141	42856	463	134	597
Craft and trade workers	44057	11177	55234	38195	10772	48967	5863	404	6267
Plant and Machine operators	31743	3118	34861	30090	3092	33182	1653	26	1679
Elementary occupations	47104	40486	87590	44510	38422	82932	2594	2064	4658
Others and unclassified	17489	29805	47294	16942	29263	46205	547	541	1088
Total	262736	204874	467610	240462	196578	437040	22276	8293	30569

Table 5.2.6: Employed Population by District and sex, Botswana 2006.

District	Male	Female	Total
'Gaborone'	41611	35305	76916
'Francistown'	17155	12780	29935
'Lobatse'	5548	4830	10378
'Selibe Phikwe'	10919	6795	17714
'Orapa'	2362	2154	4516
'Jwaneng'	3514	1434	4948
'Sowa'	511	401	912
'Southern Ngwaketse'	13591	11304	24895
'Southern Borolong'	4684	3275	7959
'Southern Ngwaketse West'	1644	745	2389
'South East'	11792	9336	21128
'Kweneng East'	30894	24627	55521
'Kweneng West'	3114	2495	5609
'Kgatleng'	12577	8471	21048
'Central Serowe_Palapye'	20995	16827	37822
'Central Mahalapye'	14323	11227	25550
'Central Bobirwa'	8828	6368	15196
'Central Letlhakane'	6412	4545	10957
'Central Tutume'	12687	13390	26077
'North East'	6419	7544	13963
'Ngamiland East'	10535	8450	18985
'Ngamiland West'	4545	4116	8661
'Ngamiland-Chobe'	6440	2493	8933
'Ghanzi'	5416	2580	7996
'Kgalagadi South'	3987	1636	5623
'Kgalagadi North'	2232	1743	3975
Total	262735	204871	467606

Table 5.2.7: Employed population by industry and employment status, Botswana 2006

Industry/ Employment status	'Employee- Paid Cash'	'Employee Paid In Kind'	'Self Employed -No Employees'	'Self Employed -With Employees'
Agriculture and Fishing	21842	329	3980	1635
Mining and quarrying	15417	41	26	25
Manufacturing	23465	0	4272	2125
Electricity and Water	3371	47	105	52
Construction	24152	210	3824	4238
Wholesale and trade	41097	91	19529	5274
Hotels and restaurants	9144	0	204	907
Transport and communications	14632	41	2675	1202
Financial sector	7528	0	384	408
Real estates	19642	27	712	1074
Public administration	60036	274	156	132
Education	38545	0	67	134
Health and social services	13339	96	210	119
Community and personal services	9453	111	4090	1648
Private households	15226	76	749	236
Foreign missions	730	0	0	0
Not stated	801	23	130	69
Total	318420	1366	41113	19278

Table 5.3.1: Unemployment Rate by Age Group: Citizens

Age Group	Employed	Unemployed	Labour Force	Unemployment Rate
12-14	1054	533	1,586	33.6
15-19	10,237	20,080	30,318	66.2
20-24	50,147	63,158	113,305	55.7
25-29	76,899	40,078	116,977	34.3
30-34	70,547	21,124	91,670	23.0
35-39	54,832	10,618	65,450	16.2
40-44	47,882	6,250	54,132	11.5
45-49	39,073	4,558	42,632	10.7
50-54	29,779	1,632	31,412	5.2
55-59	20,117	864	20,981	4.1
60-64	12,246	300	12,547	2.4
65+	25,227	490	25,717	1.9
Total	437,040	169,686	606,725	28.0

Table 5.3.2: Unemployment Rate by Age Group- Non- Citizens

Age Group	Employed	Unemployed	Labour Force	Unemployment Rate
12-14	0	14	14	100.0
15-19	265	130	396	32.9
20-24	2,934	978	3,911	25.0
25-29	6,066	1,128	7,194	15.7
30-34	6,326	657	6,983	9.4
35-39	4,869	320	5,189	6.2
40-44	3,401	118	3,519	3.4
45-49	2,958	54	3,012	1.8
50-54	1,430	110	1,540	7.2
55-59	1,079	48	1,127	4.2
60-64	584	0	584	0.0
65+	658	0	658	0.0
Total	30,570	3,557	34,127	10.4

Table 5.3.3: Unemployment Rate by education Level- Citizens

Education Level	Employed	Unemployed	Labour Force	Unemployment Rate
Preschool	325	124	449	27.6
Non formal	7,884	564	8,448	6.7
Primary	118,861	32,050	150,911	21.2
Secondary	243,155	123,169	366,324	33.6
Never attended	66,814	13,779	80,593	17.1
Total	437,040	169,686	606,725	28.0

Table 5.3.4: Unemployment Rate by Education Level- Non- Citizens

Education Level	Employed	Unemployed	Labour Force	Unemployment Rate
Preschool	38	0	38	0
Non formal	70	0	70	0
Primary	1,757	155	1,912	8.1
Secondary	28,113	3,222	31,335	10.3
Never attended	592	180	772	23.3
Total	30,570	3,557	34,127	10.4

Table 5.3.5: Unemployment Rate by Gender and Citizenship

Gender	Employed	Unemployed	Labour Force	Unemployment Rate
Male	240,461	83,769	324,229	25.8
female	195,579	85,917	282,496	30.4
Total	437,040	169,686	606,725	28.0
Non- Citizens				
Gender	**Employed**	**Unemployed**	**Labour Force**	**Unemployment Rate**
Male	22,276	1,689	23,965	7.0
female	8,294	1,868	10,162	18.4
Total	30,570	3,557	34,127	10.4

Table 5:3.6: Unemployment Rate by district and sex, Botswana 2006

District	Unemployed(M)	Unemployed(F)	Unemployed(All)	Employed(M)	Employed (F)	Employed(All)
'Gaborone'	7692	9252	16944	41611	35305	76916
'Francistown'	4497	4479	8976	17155	12780	29935
'Lobatse'	1521	1854	3375	5548	4830	10378
'Selibe Phikwe'	1312	2789	4101	10919	6795	17714
'Orapa'	595	1455	2050	2362	2154	4516
'Jwaneng'	643	1123	1766	3514	1434	4948
'Sowa'	85	85	170	511	401	912
'Southern Ngwaketse'	6325	5975	12300	13591	11304	24895
'Southern Borolong'	2341	2476	4817	4684	3275	7959
'Southern Ngwaketse West'	423	457	880	1644	745	2389
'South East'	3246	3329	6575	11792	9336	21128
'Kweneng East'	11060	10405	21465	30894	24627	55521
'Kweneng West'	2794	2220	5014	3114	2495	5609
'Kgatleng'	4418	3373	7791	12577	8471	21048
'Central Serowe_Palapye'	7887	7302	15189	20995	16827	37822
'Central Mahalapye'	3522	3854	7376	14323	11227	25550
'Central Bobirwa'	4158	3849	8007	8828	6368	15196
'Central Letlhakane'	2680	2552	5232	6412	4545	10957
'Central Tutume'	4393	4457	8850	12687	13390	26077
'North East'	1918	2436	4354	6419	7544	13963
'Ngamiland East'	4272	4550	8822	10535	8450	18985
'Ngamiland West'	4453	5256	9709	4545	4116	8661
'Ngamiland-Chobe'	322	425	747	6440	2493	8933
'Ghanzi'	3131	2467	5598	5416	2580	7996
'Kgalagadi South'	1112	1080	2192	3987	1636	5623
'Kgalagadi North'	657	284	941	2232	1743	3975
Total	85457	87784	173241	262735	204871	467606

CHAPTER 6

CHAPTER 6: FERTILITY

The information in this chapter is based on the respective birth histories of women aged 15-49 years interviewed in the 2006 Botswana Demographic Survey. Each woman was asked the number of sons and daughters she has ever given birth to, distinguishing between those living with her, those living elsewhere, and those dead. She was then asked for each birth, the month and year of birth, name, sex, and survival status of the child and for those who died, the age at death. If the child was still living, information was collected on the child's current age and whether the child was still living with the mother or not. The information from the birth history was cross-checked against the reported number of children ever born for consistency. This information was used to obtain measures of fertility levels and trends, differentials in fertility by residence, education, and marital status. It should be noted that fertility analysis at district level gave unstable and outrageous results because of the small number of births at that level. It was therefore decide to leave out fertility analysis at the district level.

6.1 Current Fertility Levels

The level of current fertility is important because of its direct relevance to population policies and programmes. Botswana's National Population Policy aims at reducing the level of fertility from a total fertility rate (TFR) of 4.03 in 1996 to 3.4 in 2011. The measures of current fertility include age-specific fertility rates (AS FRS), total fertility rate, and general fertility rate (GFR). Age-specific fertility rates provide information on the age pattern of current fertility.

Table 6.1.1: Age-specific fertility rates and total fertility rates, by maternal age and by place of residence, Botswana 2006

Age of women	Age-specific fertility rates			
	Cities & towns	Urban villages	Rural	Total
15-19	0.046	0.039	0.080	0.055
20-24	0.117	0.174	0.256	0.186
25-29	0.115	0.124	0.204	0.147
30-34	0.094	0.123	0.148	0.124
35-39	0.051	0.107	0.151	0.105
40-44	0.035	0.050	0.072	0.056
45-49	0.012	0.027	0.013	0.018
Total fertility rate	2.350	3.220	4.620	3.460
General fertility rate	80.755	102.063	147.526	108.21
Crude birth rate				29.8
Child-woman ratio				442.6

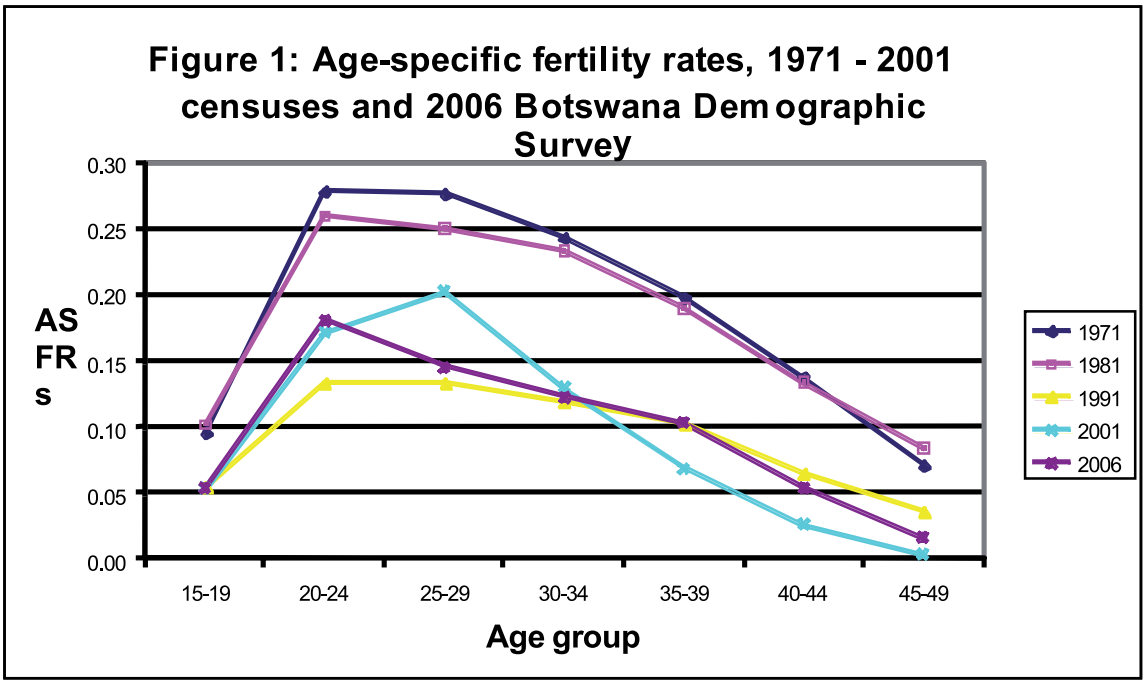
Estimates of current fertility for Botswana are given in Table 6.1. The results show that total fertility rate in Botswana in 2006 was 3.5 births. This figure suggests that the fertility transition has stalled between 2001 and 2006. In 2001, total fertility rate was estimated to be 3.3 live births. The Trussell P/F Ratio technique was used to assess the reliability of the data and showed total fertility rate of 3.4 live births, using P4/F4 adjustment factor. In short total fertility rate in Botswana can be taken to be 3.5 live births. Fertility levels are higher in the rural areas (TFR of 4.6 children) than either in cities and towns (TFR of 2.4 children) or urban villages (TFR of 3.2 births). Total fertility rate in urban areas is 2.8 births.

The age pattern of fertility indicates that childbearing in Botswana starts relatively early in the reproductive ages. The ASFRs in Table 6.1 show that a woman will have given birth to 1.9 children (more than half of her lifetime births) by age 30, and 2.5 children (approximately three-quarters of her lifetime births) by age 35.

The childbearing peak occurs in the ages 20-24. However, fertility declines substantially thereafter, with the ASFR being only 16 births per 1000 women at age group 45-49 (see Figure 6.1). The age pattern of fertility is similar to that observed in 1971 and 1981 population censuses.

Figure 6.1 shows a comparison of fertility data from the 1971 to 2001 population censuses and the 2006 Botswana Demographic Survey. From this figure, it is evident that between 2001 and 2006, fertility was much lower in 2006 among women aged 25-29 years and relatively high for older women in the age groups 35 years and above.

Figure 6.1.1: Age specific fertility rates, 1971 – 2001 censuses and 2006 Botswana Demographic Survey



6.2 Differentials in Current Fertility

This section of the chapter presents differences in fertility levels between various subgroups of the population. Table 6.2 presents the TFR and the mean number of children ever born to women aged 45-49 years (completed fertility) for selected subgroups of the population.

The comparison of the mean number of children ever born with the TFR provides an indication and magnitude of fertility change in the country during the past 20-25 years. The results suggest that there has been a decline of one birth in the fertility level during this period as shown by a TFR of 3.5 births, compared to a mean number of children ever born to women aged 45-49 of 4.7 children. This decline is confirmed by looking at trends in TFRs obtained from previous surveys and censuses (see section 6.3)

As expected, fertility is relatively high in rural areas compared to urban settings. Again, women with higher levels of education tend to have low levels of fertility compared to those with low levels of education. The same conclusions can be reached even when using the mean number of children ever born to women aged 45-49.

Table 6.1.2: Total fertility rates (TFRs) and mean number of children ever born (CEB) to women aged 45-49 in Botswana by selected characteristics, Botswana 2006

Characteristic	Total fertility rate	Mean CEB of women aged 45-49
Place of residence		
Cities & towns	2.4	3.8
Urban villages	3.2	4.7
Rural	4.6	5.2
Education		
Never attended	4.7	5.8
Primary	4.5	4.9
Secondary	3.1	3.3
Marital status		
Never married	3,2	4.0
Currently married	5.8	5.1
Once married	2.6	4.9
Total	**3.5**	**4.7**

The differentials in current fertility by marital status show that women who were once married (separated, divorced and widowed) have low levels of fertility compared to other women (see Table 6.2). Currently married women portray a substantially high levels of fertility compared to both never married and once married women.

6.3 Fertility Trends

Table 6.3 presents the trend in current fertility in Botswana by comparing the results of the Botswana Demographic Survey with those of previous censuses. From this table, it is evident that Botswana's total fertility rate (TFR) fell by more than three points between 1971 and 2001, from 6.5 to 3.3 births per woman. Between 1971 and 1981, it remained stagnant at about 6.5 births per woman. In 1981 the TFR started a sustained decline, falling from 6.6 to 3.3 births per woman in 2001 and remaining roughly at 3.5 births in 2006.

Table 6.1.3: Reported age specific fertility rates and total fertility rates: 1971-2006

Age	1971 (Adjusted)	1981	1991	2001	2006
15-19	0.0955	0.1015	0.0536	0.0533	0.055
20-24	0.2778	0.2599	0.1340	0.1713	0.186
25-29	0.2760	0.2504	0.1338	0.2021	0.147
30-34	0.2432	0.2336	0.1191	0.1296	0.124
35-39	0.1983	0.1902	0.1023	0.0686	0.105
40-44	0.1383	0.1341	0.0641	0.0258	0.056
45-49	0.0709	0.0837	0.0358	0.0032	0.018
Adjusted TFR	6.5	6.6	4.2	3.3	3.460

It is clear from this trend that the fertility reduction programmes in Botswana are achieving their intended goals. It should be noted that the fertility target set by the National Population Policy of achieving a TFR of 3.4 births in 2011 was achieved in 2001. However, there appears to be indications that fertility transition has started to stall in Botswana.

6.4 Retrospective Fertility (Children Ever Born)

Measures of lifetime fertility reflect the accumulation of births over the past 30 years or so and therefore have limited relevance to current fertility levels, especially if the country has experienced a decline in fertility. This is a measure of lifetime fertility, showing the accumulation of births in the past.

Table 6.4 presents the percent distribution of all women and currently married women aged 15-49 years by the number of their live births as reported in the 2006 BDS. As expected, the highest proportion of all women who had no children (86.7percent) was in the 15-19 age-group and this percentage fell increasingly with age. One in ten women aged 15-19 had even one live birth.

However, the situation is different among the currently married women, where 41percent of currently married women aged 15-19 years had no children. Overall, a third of all women compared to 8percent of currently married women had no children. Women in Botswana have an average of 1.7 children. Fertility increases with age. Women who are nearing the end of their reproductive years (those aged 45-49 years) have an average of almost 5 births. It is evident from this table that overall, Botswana is a country of a relatively low level of fertility.

Table 6.1.4: Percent distribution of all women and currently married women aged 15-49 by number of CEB and mean number of CEB, according to 5-year age groups, Botswana 2006

	Number of children ever born												
Age group	0	1	2	3	4	5	6	7	8	9	10+	No of women	Mean no of CEB
ALL WOMEN													
15-19	86.7	10.0	1.7	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	104074	0.1519
20-24	45.0	34.5	15.0	3.8	0.8	0.2	0.1	0.0	0.0	0.0	0.0	116232	0.8068
25-29	21.4	32.3	26.0	13.6	4.4	1.6	0.3	0.1	0.0	0.0	0.1	98939	1.5444
30-34	10.5	20.0	27.3	21.0	11.8	5.5	2.1	1.0	0.2	0.2	0.1	73862	2.3943
35-39	5.9	11.6	21.8	21.6	15.9	11.2	6.9	2.9	1.3	0.5	0.3	57590	3.1939
40-44	3.4	7.8	14.2	16.9	18.1	14.1	10.6	7.3	3.7	1.8	1.8	51737	4.0956
45-49	2.3	5.6	11.0	14.6	15.8	14.0	12.9	9.0	6.7	3.2	4.2	43750	4.7345
Total	32.5	20.2	16.4	11.2	7.2	4.7	3.1	1.9	1.1	0.5	0.6	546185	1.6819
CURRENTLY MARRIED WOMEN													
15-19	41.4	45.9	9.7	1.6	0.0	0.0	0.0	1.4	0.0	0.0	0.0	2841	0.7960
20-24	20.2	43.8	24.7	8.4	1.6	0.5	0.0	0.2	0.0	0.2	0.0	18420	1.3000
25-29	12.8	30.2	29.9	17.6	6.3	2.5	0.8	0.1	0.0	0.0	0.0	31023	1.8550
30-34	6.9	17.2	29.1	23.5	10.7	6.1	3.4	2.0	0.4	0.5	0.1	297757	2.6240
35-39	5.3	9.2	19.2	22.6	16.8	12.8	8.2	3.2	1.7	0.7	0.2	27768	3.4020
40-44	1.5	5.9	11.9	15.8	18.4	16.3	12.3	9.2	3.7	1.8	2.8	26896	4.4600
45-49	1.9	3.9	9.2	12.4	16.5	13.8	14.7	9.7	8.5	3.1	6.2	22814	5.1600
Total	8.3	18.1	20.9	17.2	11.8	8.6	6.4	3.9	2.2	1.0	1.4	159520	

6.5 Teenage Fertility

Teenage fertility in this context refers to fertility of women aged 15-19 years. The National Population Policy and other related policies discourage early childbearing in order to avert social and health risks associated with teenage childbearing. Table 6.5 presents the percentage of teenagers 15-19 who were mothers according to the place of residence. Out of all the live births that took place in the past year, approximately 9.7percent of them were to teenagers (5,927 out of 61,053). It is clear that the prevalence of teenage fertility has been declining over the years since the late 1980s. Teenage fertility declined from 23.7percent in 1988 to 9.7percent in 2006. This information provides evidence that programmes aimed at reducing teenage childbearing are producing the desired results.

Table 6.1.5: Percentage of teenagers 15-19 who are mothers, 1971 to 2006, according to urban-rural residence

Year U	rban R	ural T	otal
1971	N/A	N/A	15.4
1981	17.4	21.1	20.3
1984	17.6	24.6	22.6
1988	21.0	24.8	23.7
1996	N/A	N/A	16.6
2001			
2006			9.7

CHAPTER 7

CHAPTER 7: MIGRATION

7.1 Introduction

The literature on internal and international migration in Botswana testifies to the great importance of these movements to national and regional development since the 18th Century (Campbell, 2007; Gwebu, 1987, 2003; Lucas, 1982; Lucas and Stark, 1985; Oucho, 2000a, 2000b; Taylor, 1986, 1990). Internal migration was predominantly from rural to urban areas up to 1981 when 37 percent of internal migration was rural-urban. But this changed by 1991 when urban to urban migration became dominant (urban-urban migration was 34 percent while rural-urban migration was 26 percent). International migration was predominantly of unskilled labour from Botswana to South Africa. This changed in the 1980s as the country became a major destination of skilled migrants from Africa and beyond. These movements have had significant implications for economic, social and demographic changes in the country. Age and sex ratios have changed over time, birth rates have reduced remarkably and remittances have assisted households in especially rural areas. Meanwhile, the capital city attained primate city status in 1991. From census data, the primacy index of Gaborone was 0.812 in 1991 and 0.809 in 2001. It would not be appropriate to compute the Gaborone's primacy index in 2006 because the population estimates were derived from a sample survey.

The current study was designed to obtain information about the volume and patterns of migration in Botswana, the factors that influenced the movements and the duration of residence of migrants. The place of birth approach is used here to distinguish migrants from non-migrants. Though information exists about the place-of-previous residence of the population, the birth place was preferred partly because of its simplicity. More so, it has been widely found that there is no significant difference between the volumes of migration obtained from birthplace and place-of-previous residence data. To obtain the most reliable information on place of birth, respondents were asked to stay where their mothers resided when they were born. This approach removes the ambiguous effect of traditional movements in Africa and Asia by pregnant women to their mothers' place of residence for delivery and nurturing of the babies.

It is noteworthy that the measurement of migration rate is from the formula Mij / Pi, where M = number of migrants from all districts of birth to the district of enumeration, P = total population of all districts, i = source (districts of birth) and j = destination (district of enumeration). This method gives measures of the probability (or risk) of migrating from a source to destination area (United Nations, 1970). It was used in the measure of rates in the 1981 Botswana Census Analytical Report and is more appropriate that the migration ratio method which gives measures of migration impact at the destination with no reference to the source area. Where necessary, the index of dissimilarity method was used to demonstrate the extent of the difference between two factors. This method is expressed as $[(Ai/A - Bi/B)/Bi/B] \times K$, where i = 1, 2, 3…n and A = total number of observations in a study category (e.g. male and female, where Σ Ai is the sum of males). B = total number of females in the ith categories (i.e. ΣBi). K is a constant which is usually expressed as 100 (United Nations, 1970). Among the merit of this method is that it measures relative (not absolute) differences. Hence the differential proportions provide plausible estimates of the actual differential. Also, it does not add any error to the existing data. The computation of these proportions standardizes each variable for easy interpretation of the results. Further, it facilitates plausible quantitative expression of the qualitative differences between two factors. This method is particularly useful here because the weighted data does not permit application of statistical methods. For convenience, we merged Chobe and Ngamiland Delta.

Results

In the total population of 1,703,014people, 677,058 (39.8 percent) had migrated within Botswana (internal migrants) at least once. Hence 60.2 percent of the population had never migrated since they were born. This statement includes the effect of international migration. Only 3 percent of the total population was non-citizens. Though most of them may have been born outside the country, this study is about their movements within it. Seventy-nine percent of non-citizens originated in SADC countries. From the absolute totals in Table 7.1 female migrants exceeded their male counterparts, with the sex ratio been 0.91. The dominance of females among internal migrants is not new in Botswana. Whereas internal migration was generally dominated by men throughout the

Table 7.1.1: percentage of Migrants and Non-Migrants in Botswana by Sex and Citizenship

Citizenship and Sex	Migrant	Non-Migrant	Total	N
Botswana	Male 40.9	59.1	∞	745464
	Female 40.1	59.9	100.0	817011
SADC Countries	Male 92.0	8.0	∞	22885
	Female 92.5	7.5	100.0	15497
Other African Countries	Male 73.2	26.8	∞	1892
	Female 89.3	10.7	100.0	665
Americas, Europe and Australia	Male 96.8	3.2	∞	1677
	Female 93.6	6.4	100.0	1623
Asia	Male 81.4	18.6	∞	3111
	Female 83.1	16.9	100.0	2350

developing world, Botswana has exceptionally experienced a dominance of women before the 1980s (Gwebu, 1987: 2005, Vanderpost, 1995). This exceptional situation has also been observed in Swaziland. It is not clear why this phenomenon exists in Botswana. There are speculations that it is associated with emigration of men to South African mines, leaving women in charge of many rural households. This role switch may have much to do with subsequent economic and social development of women in the country. It is important, however, to note that the dominance of females in internal migration exists only in absolute terms. Within each sex, males were relatively more prone to migrate between districts than females. It may therefore be conjectures that the propensity to undertake internal migration in Botswana is greater among males than females.

With 45 percent, the peak ages of migrants were 15-34 years (See Table 7.2). The next most migratory population was in the age group 35-54 years (26 percent) and the least

Table 7.1.2: Percentage Distribution of the Population by Migration Status and Age

Age	Migrant N	on-Migrant I	ndex of Dissimilarity.
0-4	4.0	18.0	-14.0
5-14	13.1	30.8	-17.7
15-34	45.1	32.7	12.4
35-54	26.4	10.8	15.6
55-74	8.7	5.5	3.2
75+	2.7	2.2	0.5
Total	100.0	100.0	Coeff. Of Dissimilarity
N	676776	934273	= 31.7

migratory was 75 years of age and over. The non-migrants were mostly distributed within the 5-34 years age group. It reflects the latent effect of previously high fertility considering that 49 percent of the population in the age group was children. The indices of dissimilarity confirm this position as it reveals much difference between the distribution of migrant and non-migrant children (coefficient of dissimilarity = 31.7). Relatively, there were more migrants than non-migrants from age 15 years to the end. Indeed, migrants exceeded non-migrants by 31.7 percentage points. Meanwhile, the distribution of the potential labour force (15+ years) favours migrants as the dominant group. Table 7.3 indicates an association between education and migration. While the least migratory group comprised of children who were at pre-school level (1 percent), the proportion of migrants increased sharply to 36 percent for those who had attained primary school education. In absolute and relative terms, there were more male and female migrants who had attained secondary school education than the non-migrants with similar qualification. Again the relative increase of migrants at this level (from those with primary education) was quite substantial (25.1 and 24.5 percentage points for males and females, respectively). The association between migration and education is reflected in the low coefficient of dissimilarity (0.8) between the distribution of male

and female migrants in the levels of education. The corresponding coefficient for non-migrants is higher (2.3). The effect of education on migration propensity is a reflection of Botswana's stable and rewarding political economy. Where political economies have

Table 7.1.3: Percentage Distribution of the Population by Migration Status and Education

Education	Migrant		Non-Migrant	
	Male	Female	Male	Female
Pre-School	1.1	1.2	2.4	2.5
Primary	36.3	36.2	55.9	53.7
Secondary and Over	61.4	60.7	40.7	42.2
Non-Formal	1.2	1.9	0.8	1.6
Total	100.0	100.0	100.0	100.0
N	267404	290335	297397	341432
Coefficient of Dissimilarity	0.8		2.3	

declined, as was the case in West and East Africa, the effect of education on migration was not always significant.

Table 7.4 indicates little difference between the proportions of migrants and non-migrants in the levels of religion. The indices of dissimilarity are low (coefficient of dissimilarity = 3.4). On the contrary, marital status seems to have had significant influence on migration decisions. But the pattern is not consistent with expectation (see Table 7.5). Within modernizing societies it is expected that people who are single, especially if never married, should have greater propensity to migrate than those who are married. But the table indicates otherwise. While the volume of migrants aged 15 years and over who had never married was 20.8 percentage points less than for non-migrants, the proportion of married migrants was 23.1 percentage points more than their counterparts who had never married.

This implies that in Botswana, instead of disrupting migration decisions, being married enhances the chances of migration of individuals and couples. This conclusion is further strengthened by the observation that couples who live in consensual unions (live together) also tend to be relatively more than less migratory. This pattern is the same for males and females. Why are the never married less likely to migrate than married? A factor worth considering is the fertility behaviour of migrant and non-migrant women.

Table 7.1.4: Percentage Distribution of the Population by Migration Status and Religion

Religion M	igrant N	on-Migrant I	ndex of Dissimilarity
Christian	61.3	58.5	2.8
Muslim	0.7	0.3	0.4
God	26.3	28.9	-1.9
No religion	8.1	9.6	-1.5
Others	3.6	3.4	0.2
Total	100.0	100.0	Coeff. of Dissimi-
N	590080	560740	Larity = 3.4

Table 7.1.5: percentage Distribution of the Population by Migration Status and Marital Status

Marital Status M	igrant N	on-Migrant T	otal N
Never Married	43.2	56.8	∞ 736376
Married	66.3	33.7	∞ 211227
Living together	70.7	29.3	∞ 133080
Separated	61.6	38.4	∞ 3516
Divorced	61.7	38.3	∞ 11300
Widowed	52.2	47.8	100.0 56184

Hence, while being single should enhance motivation to migrate, single women in Botswana may be constrained by the reality of having to include the effect of accompanying offspring when rationalizing the costs and benefits of taking decisions to migrate. This dilemma is consistent with the disruption theory of migration-fertility interrelations (Lee and Farber, 1984; Lee and Pol, 1993).

This strange phenomenon may be partly explained by the society's increasing tolerance of pre-marital childbearing in post-traditional Botswana (Shapera, 1947; Seboni, 1994). Within the traditional cultures of the Tswana, pre-marital pregnancy was frowned upon by the society and the guilty individuals were heavily sanctioned. But with greater exposure to and acceptance of modern ways of life, the society gradually lost its negative perception of pre-marital pregnancy and this increasingly encouraged anticipation that the child's grandmother would help to take care of the child (this was and is not the case in several African societies). However, the development of aspirations for self-improvement coupled with increased prices of essential and luxury commodities have increased the cost to grandmothers of playing long-term nannies to their grandchildren. The burden of child care has therefore shifted to the parent. Meanwhile the cost of maximizing the quality of children in Botswana has increased considerably since the 1970s. The price of educating a child has increased, school fee was recently re-introduced in public schools and nationals are now expected to pay (albeit minimal amount) for medical treatment in government health centres. The data reveals that employment was considerably higher among married persons (71 percent males and 42 percent females) than those that had never married (32 percent males and 24 percent females). With increasing pressure on women to improve their social and economic status within a modernizing economy, the total cost of pre-marital childbearing should be quite high for the majority of single parents who are not financially prepared for responsible parenthood. Still, there is much to be done to obtain the true explanation of this phenomenon. The data shows that the number of children born to women 15 years and over did have disruptive effect on migration decisions. A major factor is that there were relatively more women with one child among the never married than those married. Beyond one child, the frequency of married women exceeded that of never married women. Table 7.6 implies that women with more than two children (boys and girls) were less likely to migrate than their counterparts who had no child or one to two children.

7.2 Employment and Migration

Employment rate was higher for migrants than non-migrants who were 15 years of age and over (51 percent and 22 percent, respectively). As is typical in most developing countries, there was gender difference in the employment rates. Table 7.7 indicates that relatively more male migrants were employed than females (62 percent and 40 percent, respectively). However, the non-migrants had much lower employment rates (26 percent for males and 18 percent for females).

Table 7.1.6: Percentage Distribution of Migrants and Non Migrants by Number of Sons and Daughters Ever Born

S	ons D		aughters	
Number of Children Born M	igrant N	on M igrant M	igrant N	on Migrant
0	20.3	18.9	19.7	18.5
1	32.6	30.7	34.0	32.1
2	21.3	20.2	20.2	18.9
3	12.5	12.6	11.8	13.5
4	6.8	8.3	7.4	8.2
5	3.4	4.7	4.0	4.9
6	1.8	3.0	1.8	2.0
7+	1.3	1.6	1.1	1.9
Total	100.0	100..0	100.0	100.0
N	225235	180247	225235	180247

Table 7.1.7: Percentage Distribution of People 15+ years by Employment, Migrant Status and Sex

Employment Status	Migrant		Non Migrant	
	Male	Female	Male	Female
Employed	61.9	39.7	26.1	18.2
Not Employed	38.1	60.3	73.9	81.8
Total	100.0	100.0	100.0	100.0
N	286343	303822	255528	303826

Employment was highest among those who were 35-54 years old. Sixty-nine percent of migrants and 44 percent of non-migrants were employed. Among those who were 15-34 years, 48 percent of migrants and 20 percent of non-migrants were employed. The table therefore supports reports of very high unemployment among citizen youth in Botswana.

The least employed persons in the country are those aged 75 years and over. However, the figure for migrants suggests that employment within the group could be higher than it was in 2006 when the survey was done. Indeed, among non-migrant males the employment rate of persons aged 75 years and over was similar to that of the population that was 15-34 years of age (20 percent and 23 percent, respectively). With only 5 percent of the women 75 years and over employed, their employment potential relative to males may not seem promising. However, given the strides that women have made in the areas of education and employment since independence, it may be conjectured that in future women aged 75 years and over would have increased their employment prospects remarkably. Currently, the skill levels of the population in this age group would be relatively quite low. The post-independence education policy would not have had nearly as much impact on them as it has on the younger generations of Batswana. But according to Nair (2007), the country's population may be aging. Thus the succeeding generations of persons aged 75 years and over could possess increasingly more skills than the current one. Moreover, those who would have escaped the debilitating effects of HIV/AIDS should be more energetic mentally and physically than the current group. Thus, employment policies in Botswana should now include provisions for increased contribution of the aged to the national socioeconomic development.

Among non-citizens, the employment rates of migrants and non-migrants were considerably higher (67 percent and 39 percent, respectively) than was the case with citizens (49 percent and 22 percent). This may be partly explained by higher levels of skills acquired by immigrants or offspring of immigrants. They are therefore more likely than citizens to be employed especially within fast growing economies.

7.3 Urban and Rural Patterns

Movement from rural to urban centres still dominates the patterns of internal migration in Botswana. Forty-five percent of all movements were from rural to urban centres (see Table 8). Urban-rural migration was a distant second (21 percent), followed by urban-urban migration. Rural-rural migration, which predominated prior to 1966 when political independence was attained, is now at the lowest ebb of the migration patterns. The survey also revealed that Gaborone received the highest volume of urban-ward migrants who originated in urban areas (62439 or 42 percent). Twenty-two percent went to urban villages. Meanwhile, the highest volume of rural-urban migrants (160565 or 48 percent) went to urban villages. The second most important destination was Gaborone (18 percent). The last time a report presented data on patterns of migration

Table 7.1.8: Percentage Distribution of Migrants by Patterns of Internal Migration and Sex Ratio of Migrants

Patterns of Migration	Number (Migrants)	percentage 2006	percentage 1981*	Sex Ratio 2006
Rural to Rural	65923	10.4	28.6	1.001
Rural to Urban	287582	45.2	36.5	0.905
Urban to Urban	148579	23.3	7.4	0.948
Urban to Rural	134697	21.1	27.5	1.068
Total	636781	100.0	100.0	

* Source: Table 4.3 in Taylor, J. (1987) Population movements…….

consistent with the current one is twenty years ago. The report of the 2001 census referred to towns, thereby excluding the independent effect of urban villages and this makes it difficult to compare the current result with the one derived from the 2001 census. Table 7.8 reveals considerable changes in the patterns of internal migration since 1981. Rural-urban and urban-urban migrations have increased considerably while rural-rural and urban-rural movements have declined.

The sex ratios of people who made rural-rural and other patterns of migration were more or less split evenly between the four patterns. More males undertook rural-rural and urban-rural migrations than females (sex ratio = 1.001 and 1.068, respectively). Meanwhile, migration to urban areas was dominated by females. Urban-ward migration reflects greater desire towards maximizing personal developmental skills and quality of life than is the case otherwise. It may therefore be conjectured that this observation of sex differential patterns of migration is an underlying factor I the remarkable socioeconomic achievements of women in Botswana since 1966.

The ages of people who migrated to cities/towns (henceforth referred to as towns) are more or less distributed according to the duration of existence of the town as well as their economic status. For instance, younger towns like Orapa and Sowa attracted relatively more children (28 percent and 27 percent, respectively) aged 0-14 years than other towns while Lobatse, the oldest town in Botswana had a greater proportion of older migrants (10 percent aged 55 years and over) than other towns. Meanwhile 82 percent of those who went to Gaborone, which is the economic, political and infrastructural capital of the country, were 15-54 years old. The importance of urban destinations to the labour force is reflected in their relatively lower representation among migrants to rural areas.

For instance migrants aged 15-54 formed 54 percent and 52 percent of those who went to rural areas in Barolong and Ngwaketse South, respectively. Table 7.9 indicates that migration to towns and urban and rural villages is age-selective. Migrants aged 15-54 years preferred to move to towns more than the urban and rural villages while children less than 15 years of age moved more to urban and rural villages than towns. These differential preferences bring out the closer link that urban villages share with rural centres than they have with the highly urbanized cities and towns. It should be noted that several urban villages in the country are socio-culturally more rural than urban. Substantially more migrants aged 55 years and over migrated to rural villages than their counterparts who chose to go elsewhere. It is very likely that, given the dominance of previous migrations from rural to urban areas, the movement of relatively old migrants to rural areas reflect return migration. The dominance of the very active population in migration to towns most probably reflects the pull of economic and social development in towns (employment and bright light effects).

Table 7.9 indicates no difference between the proportions of pre-school migrants in towns and rural areas (1.4 percent each). But there were considerably more migrants with secondary or more education living in towns than in rural areas (72 percent and 48 percent, respectively). Similarly, the proportion of migrants in towns with primary education (26 percent) is much less than it is in rural areas (49 percent). The distribution of migrants by educational attainment in towns and rural areas reflect variation in the level of skill required for employment and occupational mobility in the industrialized and non-industrialized parts of a country. Living in cities requires skills that are technically different from those that exist in rural areas. The skills required in cities demand levels of education that are higher than primary. Hence there are relatively more migrants within informal education in rural villages than in towns.

Table 7.1.9: Percentage Distribution of Migrants living in Towns and Rural villages, by Age and Education

Age (years)	City/Town	Urban Village R	ural Village
0-4	3.6	9.5	9.4
5-14	10.5	21.9	19.8
15-34	52.2	42.1	36.0
35-54	27.6	19.6	20.5
55-74	5.2	5.2	10.5
75+	0.9	1.7	3.8
Total	100.0	100.0	100.0
N	243082	192788	204147
Education			
Pre-School	1.4	2.0	1.4
Primary	26.4	42.0	48.9
Secondary & over	71.5	55.0	47.7
Informal	0.7	1.0	2.0
Total	100.0	100.0	100.0
N	223590	153218	142372

7.4 Migration Rate

With in-migration rate of 8.7 percent Gaborone remained the single most attractive district in the country (See Table 7.10 and Appendix Table 7.1). Being the most developed district in the country, 72 percent of the capital's population were internal migrants. This shows that though Gaborone has lost some of its ability to attract migrants due to developments within especially urban villages, economic and social centrality makes it the ultimate destination of all migrants (internal and international). Francistown had the second highest rate of migration (3.1 percent) by 2006. Selibe Phikwe and Central Tutume were the third and fourth most attractive districts to migrants. The least attractive district was Kgalagadi South. Due to its arid conditions and poor environmental development, the district had net in-migration of 1469 people. Almost two-thirds of the out-migrants from Kgalagadi South (5790) went to urban villages, 8 percent went to the cities (Gaborone (471) and Francistown (247) and 2 percent went to other towns. But other districts lost even more than they gained. For Serowe/Phalapye for instance, the net volume of in-migration was -8357 (i.e. there were 28814 in-migrants and 37171 out-

Table 7.1.10: Number of In and Out Migrants and In and Out Migration Rate by District

District of Enumeration	In-Migrants	Sex Ratio (In)	Out-Migrants	In Rate Total (percent)	Male In (percent)	Female In (percent)	Out Rate (percent)
Gaborone	125951	0.94	6626	8.66	8.71	8.62	3.79
Francistown	48248	0.95	1599	3.11	3.14	3.08	2.07
Lobatse	17276	0.94	1423	1.08	1.08	1.07	5.00
Selebi Phikwe	29100	1.01	1007	1.84	1.92	1.76	2.24
Orapa	11656	0.84	537	0.72	0.69	0.76	3.84
Jwaneng	8854	1.64	222	0.55	0.68	0.43	2.16
Sowa Town	1999	1.00	65	0.12	0.13	0.12	3.02
Urban Villages	193077	0.87	16407	18.15	17.29	18.98	4.21
Ngwaketse South	23326	1.02	1444	1.48	1.55	1.41	2.62
Barolong	11508	0.96	754	0.73	0.74	0.72	1.33
Ngwaketse West	2111	1.52	635	0.13	0.16	0.10	6.37
South East	8413	1.11	679	0.52	0.57	0.48	5.03
Kweneng East	13202	0.96	1397	0.84	0.85	0.83	2.65
Kweneng West	2387	1.12	621	0.15	0.16	0.14	2.15
Kgatleng	17571	1.38	1258	1.11	1.34	0.90	2.89
Cn. Serowe/ Palapye	19435	1.04	1048	1.24	1.31	1.18	1.60
Central Mahalapye	11140	1.03	1503	0.71	0.74	0.67	2.99
Central Bobonong	18055	1.07	1421	1.14	1.22	1.05	3.68
Central Boteti	7716	1.11	886	0.48	0.53	0.44	3.11
Central Tutume	25037	0.95	2048	1.62	1.64	1.60	2.47
North East	15943	0.93	1096	1.01	1.01	1.01	2.04
Ngamiland South	6145	1.22	170	0.38	0.43	0.33	1.05
Ngamiland West	5440	0.64	1113	0.35	0.28	0.41	2.11
Chobe/Ngamiland	2198	1.86	426	0.14	0.18	0.09	4.18
Ghanzi	5927	1.05	405	0.37	0.39	0.35	2.51
Kgalagadi South	1703	1.20	234	0.11	0.12	0.09	1.25
Kgalagadi North	3363	1.10	149	0.21	0.23	0.19	1.86
Total	636781	0.96	45173	-	-	-	-

Percent = Rates are in percentage

migrants), representing almost 30 percent of all in-migrants. However, much more of them (13 percent) than those from Kgalagadi South went to the cities while 7 percent went to other towns and 69 percent chose other urban villages as their destination.

The in-migration rates in Appendix Table 7.1 shows clearly the importance of distance in migrants' choices of destinations. For

example, with the exception of Chobe District, South East, Kweneng East and Kgatleng Districts record the highest rates of migration to Gaborone while Francistown received the highest rate of migration from North East District. Similarly, the highest rates of migration in Central Serowe-Phalapye and Central Mahalapye occurred between the two districts. In the north, Ngamiland West attracted the highest rates of migration from Chobe and Kgalagadi North received most migrants from Kgalagadi South.

Though the sex ratio of in-migrants was low (0.96), there were variations within the district level ratios. Table 7.10 reveals an excess of females among people who migrated to Gaborone, Francistown, Lobatse and Orapa. Migration to urban villages was also dominated by female. Meanwhile males were clearly the majority of those who went to Selibe Phikwe, Jwaneng and Sowa. Males also surpassed females among migrants who went to rural villages. Seventy-four percent of the rural villages attracted more males than females. Only in four (out of 19) rural districts did females dominate. These are Kweneng East, Central Tutume, North East and Ngamiland West (with the lowest sex ration).

Table 7.10 indicates that Barolong District had the highest out-migration rate (6.4 percent) among all districts in the country. Meanwhile, Kgalagadi North seems to have the lowest potential to send migrants to other parts of the country. Among the townships, Lobatse had the highest rate of out-migration (5 percent). This may partly be due to the relatively slow occurrence of its economic and infrastructural growth versus the more vibrant growth of Gaborone which is located within 65 kilometres of Lobatse.

7.5 Reason for In-Migration

The primary reason for migration into the district of enumeration was to join parents and relatives (36 percent) while the secondary reason is associated with assumption of employment duties or job transfer. Though this pattern is inconsistent with classic migration theories, it is plausible. Indeed the total economic influence on migration is 24 percent after considering that running business and farming (as in Table 7.11) are related to employment. Meanwhile, non-citizens (from other SADC countries and elsewhere) migrated internally primarily for job-related reasons (48 percent). A distant second factor

Table 7.1.11: percentage Distribution of Migrants by Reason for Moving into District of Enumeration, and Citizenship of Migrant.

Reason fo r Moving	Bots wana	SADC	Other Africa	Amer icas & Carib-Bean	Europe	Asia	Aust - ralia
Marria ge	6.3	8.4	9.4	4.3	14.6	14.5	0.0
Job s tation/T ran.	23.8	42.7	38.4	56.7	41.9	40.2	100.0
Health	0.5	0.1	0.0	0.0	1.7	0.0	0.0
Educ ation	5.9	1.4	12.8	0.0	4.1	0.0	0.0
Retirement	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Old Age	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Run Busi ness	0.6	3.0	11.4	5.5	3.6	17.8	0.0
Returning R esid.	4.9	0.6	0.0	0.0	1.8	0.0	0.0
Join Parent	36.4	17.5	19.4	25.8	20.2	17.9	0.0
Far m ing	3.5	0.4	0.0	0.0	1.6	0.0	0.0
All ocated Pl ot	5.3	0.4	0.0	0.0	0.0	0.0	0.0
Other	12.3	25.5	8.6	7.7	10.5	9.6	0.0
Tot al N	100.0 631336	100.0 35520	100.0 1980	100.0 866	100.0 2132	100.0 4485	100.0 144

Note: Tran. = transfer; Resid. = Resident.

was to join parents and relatives (18 percent). Table 7.11 shows that economic factors are clearly given higher priority by non-citizens than citizens when internal migration decisions are made. Considering the three economic categories within reasons for moving (job station, business and farming), the table suggests the existence of association between geographical distance of non-citizens' countries from Botswana and the primacy of economics in decisions to migrate within Botswana. Australia is among the farthest countries from Botswana, and every Australian interviewed moved or transferred to work. Very many citizens of the Americas and Caribbean (62 percent) also migrated for economic reasons. Next in this order are Asians, other Africans and citizens of other SADC countries. The exception is Europeans who were the least influenced by economic factors to migrate. This may be partly due to a familial relationship they have with Botswana. Of all non-citizens, only Europeans reportedly migrated to their destinations as returning residents, thereby suggesting strong geographical affiliation within the country. When the data is examined by sex, it is revealed that the proportion of

European men who migrated for economic reason is consistent with argument that economic reasons may be associated with distance from Botswana.

In Botswana, there are notable variations within different areas. Industrialized cities of Gaborone and Francistown as well as the other towns (Lobatse, Selibe Phikwe, Jwaneng, etc.) attracted migrants primarily by their potential to offer employment. On the contrary, while migration to urban villages was high, just about a quarter of all migrants went to urban areas for reasons associated with economic factors. Rural villages apparently got little attention from migrants whose decisions to move were influenced by employment factors. Only 17 percent went to rural villages for job-related factors while the majority (41 percent) moved to rural villages to join their parents and relatives. The attraction of higher order localities to those who sought education is apparently inversely associated with the socio economic status of the locality. The proportion of those who moved for educational reason reduced progressively from cities to rural villages. Ten percent of the migrants moved to Gaborone and Francistown for educational reasons, but the comparative proportion fell to 7 percent in the towns, 6 percent in urban villages and 2 percent in rural villages.

Very few people migrated to retire or because of old age. It appears that when Botswana citizens return home, there is little intention to stop participating actively in the labour force. Even in rural villages, only 0.3 percent admittedly moved there to retire. Seemingly, most returnees referred to themselves as returning residents than "retirees". While returning residents formed 0.8 percent of city-ward migrants and 0.1 percent of those who went to other towns, the comparative proportion in urban and rural villages was 7 percent each. Farming constitutes 9 percent of the motivation for migration to rural villages. In general, people do not appear to have migrated much for health reasons. Given the migratory pattern that emerged with the advent of HIV/AIDS in Botswana, this observation seems implausible.

Unlike citizens, non-citizens in the country consistently migrated for economic reasons. The relative influence of economic factors on movement of all non-citizen migrants was 47 percent in Gaborone and Francistown, 51 percent in other towns, 50 percent in urban villages and 48 percent in rural villages. These motivating patterns of movement are consistent with adult immigrants' persistent urge to obtain and retain employment in the host country. Given the increasing tendency of immigrants to take their spouses and offspring along with them, where it is economically beneficial to do so, the most important reason for moving is to join parents and relatives. In this regard, marriage becomes a close third factor among non-citizens' motivation for migrating. The progressive reduction in the proportion of spouses who accompanied immigrants to the cities, other towns, urban and rural villages (12 percent, 10 percent, 6 percent and 6 percent, respectively) reflect the differential levels of economic and social opportunities for the migrant to move with their spouses. The city would, ceteris paribus, offer better incentives for spousal and family travels, etc. than an urban or rural village would. It is noteworthy that relatively more non-citizens than citizens of Botswana migrated for marital reasons. These may be largely explained by the economics of distance. A family that is separated by longer distances would generally incur greater household maintenance costs than where the distance is short. Moreover, traditional living arrangements in Botswana make it easier for families to accommodate separation within reasonable distance and time.

7.6 Reason for In-Migration by Sex

Table 7.12 reveals considerable gender dissimilarity within the factors that influence migration decisions to towns, urban villages and rural areas. Though in general males and females migrated to be with their parents and relatives, the primary reason men moved to towns was job-related. Meanwhile women who migrated to towns were influenced almost as much by employment as the desire to be with their parents and relatives (28 percent and 29 percent influenced by jobs and reunion with parents/relatives respectively). Women dominated among those who moved because of marriage. The progressive increase in the proportion of women in this category who moved to towns, urban and rural villages (9 percent, 11 percent and 15 percent, respectively) may be partly due to the effect of traditional roles of husbands and wives in the household. As traditional bread-winners, husbands were expected to be more adventurous with occupational mobility and women tended to accompany their spouses if it was necessary for the family to be at the same place.

Table 7.1.12: Percentage Distribution of Migrants by Reason for moving into the Enumeration areas by Sex and Region

	Towns		Urban V illages		Rural villages	
Reason for moving	Male	Female	Male	Female	Male	Female
Marriage	0.5	9.2	1.0	10.9	0.9	15.4
Job related	43.9	28.4	31.2	17.8	22.5	9.6
Health	0.3	0.6	0.2	0.9	0.4	0.4
Education	9.3	9.2	6.4	5.8	2.0	2.0
Retirement	0.1	0.1	0.8	0.5	0.5	0.1
Old age	0.0	0.2	0.0	0.2	0.0	0.2
Run business	1.6	0.8	1.3	0.3	0.6	0.6
Returning Resident	0.9	0.6	6.8	6.4	6.5	6.6
Join parent/relative	26.4	29.3	34.2	37.5	41.7	40.3
Farming	0.1	0.0	0.4	0.3	10.3	7.1
Allocated own plot	1.4	1.6	4.5	4.5	8.3	8.6
Other	15.5	20.0	13.2	14.9	6.3	9.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	111319	113907	94451	104589	125177	127023
Coeff. Of Dissim.*	16.8		15.8		17.9	

* Coefficient of dissimilarity (CD)

Generally, migrants of almost all ages moved to join their parents and relatives. An exception is the age group 35-54 years where 45 percent moved for economic reasons while 10 percent moved to join their parents and relatives. The other is the age group 55-74 years where 16 percent moved for job-related reasons, 14 percent moved to do farming, 16 percent moved because of marriage and only 9 percent moved to join their parents and relatives. However, there is considerable variation where migration is examined on a sectoral basis. Among those aged 15 years and over who moved to cities (Gaborone and Francistown), employment activities were the primary motivating factors. Forty-two percent of them went there for job-related reasons while 20 percent went to join their parents and 10 percent moved to attain education. The proportion of migrants 15 years and over who went to the other towns to work, look for work or start business (45 percent) was slightly greater than for those who went to the cities. Meanwhile, children less than 15 years of age migrated to the cities mostly to be with their parents (86 percent) as well as to attend school (11 percent). Though the proportion of migrants 15 years of age and over in urban villages who were influenced by desire for employment was much less (30 percent) than it was in the cities, employment was still the primary factor motivating migration to urban villages. A close second was the decision to join parents and relatives. However in rural villages the influence of employment was a distant second (21 percent) to joining parents and relatives (which peaked at 30 percent). In summary, considering the effect of age, it is evident that job-related factors were as important in motivating internal migration as decisions associated with joining parents and relatives.

Generally, the dominant influence of employment factors in migration decisions in Botswana occurred only where migrants had attained secondary school or more education (37 percent against 29 percent for joining parents and relatives). Otherwise (primary and non-formal education), the dominant motivation to migrate was to join parents and relatives. Among those who moved to Gaborone and Francistown employment was the dominant migration motivator where secondary or more levels of education had been attained. It was 41 percent in Gaborone and 40 percent in Francistown. Notwithstanding the "other" category of migration motivators, it is noteworthy that migrants with non-formal education who moved to the cities and towns were also influenced to do so primarily by employment factors (32 percent in Gaborone and 42 percent in Francistown). Indeed, the proportion of those with non-formal education who moved to other towns for employment reasons was considerably higher than it was for migrants with secondary or more level of education. However, the primary factor driving migration of those with non-formal education to urban and rural villages was not economic.

7.7 Reason for Out-Migration

With the exception of rural villages, people migrated from the enumeration district primarily for visitation (or vacation or when on leave) and this suggests that the moves were definitely temporary. Over 50 percent of those who moved from urban areas did so to visit, etc. (see Table 7.13). Out-migration from rural villages occurred primarily for educational reasons. The contribution of employment factors to the total out-migration motivators is apparently small (16 percent) compared to what was observed from examining in-migrants. This could be partly an effect of the absence of the individuals in question. Experiences elsewhere have exhibited the introduction of psycho-

Table 7.1.13: Percentage Distribution of Out-Migrants by Region

Reason for moving away	Cities	Towns	Urban Village	Rural Village
Duty/Business/Looking for job	13.7	16.8	25.2	10.6
Health	2.4	1.5	2.8	3.0
Visit/vacation/leave	58.2	49.1	51.0	28.0
Education	20.1	18.6	12.0	43.8
Church/wedding/burial ceremony	4.4	12.0	4.9	7.7
Institutionalized	1.2	2.0	3.5	5.1
Other	0.0	0.0	0.6	1.8
Total	100.0	100.0	100.0	100.0
N	9718	3331	23767	34298

epiphenomenal factors in labour migrants' reports about their reasons for moving. Campbell (1986) observed that labour migrants in Sierra Leone who were not employed at the time of enumeration were likely to report that they were visiting. Likewise, it is possible that several of those who reportedly informed the head of household (before departure) that they were leaving for visitation purposes may actually have left to look for jobs at the destination. On the issue of persons who were in various institutions at the time of the survey, it is interesting to note that the highest proportion of institutionalized migrants (5 percent) were from rural villages. If the institutions include mental hospitals, there may be need to investigate this result further to find out its policy relevance.

The motivation to migrate from districts to work elsewhere was higher among males (23 percent) than females (9 percent). On the contrary, females were influenced to move away much more by desires to visit (47 percent) than males (35 percent). Meanwhile males tended to move out for educational reasons more so than females (30 percent and 28 percent, respectively). But females were more prone than males to move out to attend social ceremonies (8 percent and 6 percent, respectively). Controlling for the effect of age, it was observed that out-migrants who were 15-34 years old left primarily because of education (42 percent) while visitation was second (33 percent) and employment (to work or look for work) third (14 percent). In all other age groups visitation was the primary reason for moving out. Among those who were 35-54 years, 35 percent left for economic reasons.

Among non-citizens of Botswana, visitation was also the most frequent reason for moving away (45 percent); and it was four percentage points higher than the case with citizen out-migrants. Apparently, considerably more non-citizens left the enumeration district for educational than economic reasons (23 percent and 18 percent, respectively). Controlling for the effect of education produced a more reasonable scenario. Among those with pre-school and primary education, the primary reason for moving was visitation (87 percent and 52 percent, respectively). But for out-migrants who had attained secondary or more education and those with informal education, the position was different. Those with secondary or more education moved out primarily for educational reasons (42 percent), followed by visitation (31 percent). The contribution of employment was 17 percent. Meanwhile those with non-formal education left mostly to attend social ceremonies (34 percent) and work (33 percent). Just 20 percent moved out to visit.

7.8 Duration of Residence of In-Migrants

Over three quarters of all in-migrants had been in the destination for less than fifteen years. The peak duration of residence of in-migrants was one to fourteen years. Though 63 percent of males and 60 percent of females had been in the enumeration district that long, there was actually no sex difference in the duration of residence of migrants. Still, a substantial proportion of migrants had recently moved into the area of current district of residence. Relatively few had resided at the current residence for more than 54 years. From Table 7.14, it appears that there is practically no difference between the duration of stay of males and females who migrated to cities and towns. The position seems similar when considering urban villages. But the coefficient of dissimilarity reveals substantial differences between the duration of residence of males and females in the towns and urban villages (2.3 and 3.7, respectively). The residence of migrants in rural villages seems to be shorter for males than females. Indeed, the coefficients of dissimilarity in

Table 7.1.14: Percentage Distribution of In-Migrants by Duration of Residence and Region and Sex

Duration of Residence	City/Town		Urban Village		Rural Village	
	Male	Female	Male	Female	Male	Female
Less than 1 year	13.5	13.5	18.3	17.9	18.1	14.9
1 – 4 years	31.0	28.9	33.4	32.4	32.9	28.3
5 – 14 years	33.8	33.6	32.5	30.2	27.0	26.5
15 – 34 years	20.2	22.1	12.6	14.7	15.8	20.3
35 – 54 years	1.5	1.9	2.6	4.1	5.3	8.5
55 years and over	0.0	0.1	0.6	0.7	0.9	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	111355	113983	94335	104851	125120	126870
*Coeff. Of Dissim.**	*16.8*		*15.8*		*17.9*	

** Coefficient of dissimilarity (CD)*

Table 7.1.15: Percentage Distribution of In-Migrants by Duration of Residence and Age

Duration of Residence	0–4 Years	5–14 Years	15–34 Years	35-54 Years	55-74 Years	75+ Years
Less than 1 year	49.7	18.4	19.9	7.9	4.2	3.5
1 – 4 years	50.3	47.5	36.4	20.3	10.0	8.8
5 – 14 years	-	34.1	33.2	34.0	19.2	11.6
15 – 34 years	-	-	10.5	33.8	39.1	26.5
35 – 54 years	-	-	-	4.0	25.0	34.3
55 years and over	-	-	-	-	2.5	15.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	26694	88300	305377	178475	58854	18529

education (68 percent) had spent between one and fourteen years in the enumeration district. Very few of those in this education category (0.7 percent) had lived as migrants in the enumeration district for more than 34 years.

Variation also exists in the duration of residence within the marital status of migrants who were 15 years old and over. The peak duration of residence of those who had never married was between one and fourteen years (i.e. 66 percent shared equally between 1-4 and 5-14 years). But the peak duration of those who were currently married was much higher (15-34 years). Thirty-one percent were in this group while 29 percent had been in the enumeration district for 5-14 years. Ideally this difference should reflect greater geographical mobility among people who had never married than those who were married. However, as observed earlier, married people in Botswana seem to be more mobile than those that had never married. The peak duration of residence of those who were cohabiting and separated (38 percent and 35 percent, respectively) was 5-14 years while that of the divorced was more or less split between 5-14 and 15-34 years. Assuming that the widowed lived with their spouses in the enumeration district till death occurred, it appears that marriage does influence longer duration of residence than where people were never married.

The effect of marriage on increased duration of residence seems to be strengthened by the results in Table 7.16. Here the peak duration of residence of those who migrated for marital reasons (15-34 years) is the longest of all. Only been allocated plots of land attracted a peak of more than 14 years. The duration of residence of people who migrated for health reasons is skewed towards recent periods. Almost 80 percent of them moved to the enumeration district after 1991 (fourteen years prior to the survey date). With a peak of 1-4 years, it is plausible that education has not attracted as much permanence in the duration of stay as marriage did. This may be explained by the temporary nature of educational training which provides skills that may be marketed anywhere. Similarly, employment prospects appear to be associated with relatively shorter duration of residence than marriage. Eighty-four percent of those who were motivated to migrate by jobs had spent less than 15 years in the enumeration district. This may be partly due to the localization policy of the government which encouraged new skills to move between jobs frequently as better opportunities became available.

Table 7.1.16: Percentage Distribution of In-Migrants by Duration of Residence and Reason for Moving

Reason for Moving	0 Year	1-4 Years	5–14 Years	15-34 Years	35-54 Years	55+ Years	Total
Marriage	4.4	16.0	27.5	36.0	13.4	2.7	44101
Job related	17.5	34.4	31.8	15.0	1.2	0.1	169586
Health	25.0	28.9	24.3	16.2	4.2	1.4	3252
Education	17.8	40.5	28.7	12.1	0.9	0.0	38043
Retirement	17.8	20.0	33.4	21.9	6.9	0.0	2215
Old age	0.0	33.2	45.5	18.7	2.6	0.0	740
Run business	14.8	23.7	45.3	14.1	2.1	0.0	5649
Return Resident	14.5	26.5	30.8	20.4	7.4	0.4	31104
Join parent/rel.	17.3	34.0	31.4	14.2	2.6	0.5	237352
Farming	13.4	19.2	27.6	24.0	13.1	2.7	22463
Allocated plot	5.1	14.9	28.0	35.4	13.9	2.7	33769
Other	19.2	31.8	27.8	17.5	3.6	0.1	87433

Note: percentage total at each row is 100.

7.9 Conclusion

This study supports previous observations about the immense importance of internal migration in the distribution of the population of Botswana. The rapid rise of urbanization in the country since 1966 was due to major economic and social development policies by the national government which led to increased generation of employment and educational opportunities for citizens of both sexes. From the reasons for moving, it is apparent that these developments also necessitated movements within and between families; and it may be conjectured that these were done in the best interest of family members, especially children. From Table 7.16 the two least dissimilar reasons for in-migration are "job related" and "join parent/relative" (coefficient of dissimilarity = 1.8). The massive outflow of human resource from rural areas indicates a positive effect of the government's decentralization policy on rural development. This is now manifested in a remarkable decline of the rural population as the national population increasingly attained the transition towards modernity. From observations that females moved more than males for marital reason and a tendency for females to stay longer than males in rural villages, marriage may be a significant factor in the duration of stay of women.

7.10 Limitation of the study

It is necessary to note that the 2006 Botswana Demographic Survey suffers from an apparent inadequacy of supervision of the data collection and data entry. This has considerable implications for the usefulness of parts of the data. The volume of out-migration does not reflect the true position partly because information about absentees was obtained from proxy respondents at the source. As a rule, the volume of in-migrants and out-migrants should be the same; hence the difference between the two should be zero. But this is not the case with this survey's data. It is partly due to the age of respondents, changes in household headship and characteristics and duration of out-migration. Where the respondent was much younger than the out-migrant, errors may occur due to ignorance about the intentions of the absentee. Also, the survivorship of in- and out-migrants may contribute to errors in the migration statistics. Moreover, as Lucas (1982) noted, absentee is a difficult concept to comprehend within the cultural framework in Botswana. However, it is very unlikely that migration data from surveys and censuses would be prefect. Much effort was made to obtain reliable statistics from this survey; and the migration data seems to be quite adequate as it stands.

Table 7.1.17: In- Migration Rates in Botswana by District of Enumeration and District of Birth

	District of Enumeration								
District of Birth	Gaborone	Francistown	Lobatse	Selibe Phikwe	Orapa	Jwaneng	Sowa	'Urban villages'	'Southern Ngwake tse'
Gaborone	-	.0108	.0037	.0031	.0022	.0006	.0004	.1934	.0143
Francistown	.0650	-	.0029	.021 4	.0060	.0029	.0021	.1487	.0016
Lobatse	.0951	.0054	-	.0022	.0054	.0200	.0004	.1539	.1154
Selibe Phikwe	.0475	.0239	.0050	-	.0016	.0020	.0017	.1818	.0096
Orapa	.0405	.0134	0	.0096	-	.0024	0	.1543	
Jwaneng	.0294	.0084	.0119	.0032	.0152	-	.0009	.2206	.3110
Sowa Town	.0176	0	0	.0162	.0130	0	-	.2964	
Urban Villages	.0948	.0282	.0122	.0186	.0068	.0080	.0008		
Ngwaketse South	.0617	.0026	.0355	.0019	.0015	.0259	.0002		
Barolong	.0891	.0020	.0537	.0066	.0019	.0064	0		
Ngwaketse West	.0093	0	.0066	0	.0027	.0181	0	.0455	
South East	.0917	.0194	.0201	.0034	.0415	.0026	0	.5704	.0091
Kwenen g East	.1065	.0049	.0073	.0055	0	.0025	.0002	.5404	.0050
Kwen eng West	.0719	.0020	.0023	.0033	0	.0020	.0004	.1416	.0111
Kgatleng	.0910	.0018	0	.0034	.0022	0	0	.4014	.0386
Cent ral Serowe	.0678	.0306	.0053	.0466	.0067	.0033	.0024	.4521	.0021
Cent ral Mahalapye	.1312	.0276	.0142	.0455	.0101	.0067	.0007	.3725	.0024
Cent ral Bobonong	.0643	.0500	.0020	.1045	.0033	.0041	.0006	.3903	.0014
Cent ral Boteti	.0104	.0175	0	.0045	.1033	0	.0038	.29 96	.0014
Cent ral Tutume	.0739	.1075	.0051	.0253	.0107	.0016	.0066	.2853	
North East	.1004	.1904	.0030	.0411	.0080	.0046	.0041	.0640	
Ngamiland South	.0018	.0125	.0081	0	0	0	.0007	.6407	
Ngamiland West	.0056	.0032	.0009	.0064	.0011	0	.0002	.2094	
Chobe	1.3446	.2308	.0929	.0824	.0285	.0164	.0040	.2712	
Ghanz i	.0022	0	0	0	0	0	0		.0006
Kgalagadi South	.0252	.0132	.0020	.0015	0	.0063	0		
Kgalagadi North	.0100	.0025	.0265	.0017	0	.0013	0		.0021
Total	1747 42	77247	28488	44945	13994	10259	2155	.3573	.0045
									.0211

District of Birth	Urban Villages	Ngwaketse South	Barolong	Ngwaketse West	South East	Kweneng East	Kweneng West	Kgatleng	Central Serowe Palapye	Central Mahalapye
Gaborone	.0830	.0060	.0028	0	.0020	.0172	.0016	.0093	.0079	.0048
Francistown	.0945	.0011	0	0	.0005	.0021	.0005	.0045	.0066	.0022
Lobatse	.1238	.0953	.0558	.0025	.0288	.0033	.0009	.0075	.0086	0
Selibe Phikwe	.1194	.0066	.0025	0	0	.0043	0	.0115	.0322	.0168
Orapa	.0398	0	0	0	0	0	0	0	.0047	0
Jwaneng	.1137	.1455	.0141	.0170	0	.0052	0	0	.0030	0
Sowa Town	.0339	0	.0172	0	0	0	0	.0181	0	0
Urban Villages	-	.0198	.0098	.001 1	.0078	.0092	.0011	.0181	.0176	.009 2
Ngwaketse South	.0940	-	.0228	.0097	.0082	.0040	.0042	.0011	.0007	.0019
Barolong	.0639	.0226	-	.0011	.0100	.0011	.0022	.0014	.0037	.0014
Ngwaketse West	.0836	.0585	.0115	-	0	0	.0035	0	.0072	.0039
South East	.1139	.0043	0	0	-	0	0	.0027	.0017	.0048
Kweneng East	.3914	.0240	.0035	.0012	.0033	-	.0138	.0192	.0065	.0031
Kweneng West	.2200	.0453	.0067	.0087	.0014	.0236	-	.0067	0	0
Kgatleng	.1114	.0028	0	0	.0009	.0065	0	-	.0008	0
Central Serowe	.2183	.0022	.0016	0	.0033	.0065	0	.0048	-	.0309
C. Mahalapye	.4248	.0024	.0105	0	.0012	.0064	.0013	.0193	.0446	-
C. Bobonong	.2449	.0034	.0029	0	.0011	.0052	0	.0015	.0209	.0213
Central Boteti	.2021	0	0	0	0	.0021	0	.0013	.0241	.0014
C. Tutume	.1503	0	.0004	0	.0004	.0098	0	.0046	.0061	.0025
North East	.0792	0	.0007	0	.0027	.0087	.0015	.0075	.0067	.0016
Ngamiland South	.4600	0	0	0	0	0	0	0	.0063	0
Ngamiland West	.3397	.0008	0	0	.0031	0	0	0	0	0
Chobe	1.1016	.0655	.0648	.0050	.0814	.0548	.0035	.0939	.0346	.0470
Ghanzi	.2647	0	0	0	0	.0011	0	0	0	.0040
Kgalagadi South	.3102	.0184	.0144	.0019	.0011	.0220	.0058	.0022	0	0
Kgalagadi North	.1871	.0225	.0035	.0141	0	0	0	.0022	.0019	0
Total Population	**5657 88**	**55118**	**56774**	**9972**	**134 6 2**	**52712**	**28910**	**53522**	**65689**	**50331**

	District of Enumeration							
District of Birth	Central Bobonong	Central Boteti	Central Tutume	North East	Ngamiland East	Ngamiland West	Ngamiland Chobe	Ghanzi
Gaborone	.0025	.0004	.0051	.0053	.0008	0	0	.0003
Francistown	.0039	.0019	.0597	.0511	.0015	.0003	0	.0005
Lobatse	0	0	.0019	.0037	0	0	0	.0038
Selibe Phikwe	.0414	.0012	.0147	.0171	0	0	0	0
Orapa	0	.0352	.0029	0	0	0	0	.0034
Jwaneng	0	0	.0039	0	.0035	0	0	.0046
Sowa Town	0	.0079	0	0	0	0	0	0
Urban Villages	.0196	.0091	.0207	.0090	.0065	.0030	.0015	.0063
Kgwaketse South	.0005	0	0	.0006	.0013	0	0	0
Barolong	.0027	0	.0047	0	0	.0024	0	.0014
Kgwaketse West	0	0	0	.0041	.0052	0	0	.0066
South East	0	0	0	0	0	0	0	0
Kweneng East	0	.0007	.0017	.0017	0	.0004	0	0
Kweneng West	0	0	0	.004 1	0	0	0	.0016
Kgatleng	.0023	.0007	0	.0029	.0007	.0008	0	0
Central Serowe	.0125	.0018	.0113	.0071	0	.0011	.0010	.0038
C. Mahalapye	.0032	.0020	.0039	.0061	.0013	0	.0057	.0019
C. Bobonong	-	.0018	.0157	.0099	0	0	.0009	0
Central Boteti	.0021	-	.0532	.0025	.0098	.0030	0	0
Central Tutume	.0293	.0082	-	.0306	.0013	.0018	.0031	.0004
North East	.0038	.0076	.0562	-	.0042	.0010	.0069	0
Ngamiland South	.0020	.0138	.0014	.0022	-	.0074	.0077	.0297
Ngamiland West	0	.0016	.0013	.0034	.0179	-	.0045	.0028
Chobe	.0316	.0017	.0487	.0710	.0240	.2890	-	.0175
Ghanzi	0	.0016	0	0	.0089	.0037	0	-
Kgalagadi South	0	0	0	0	0	.0027	0	.0136
Kgalagadi North	.0036	0	0	0	.0017	.0040	0	.0265
Total Population	**38649**	**28476**	**82909**	**5384 8**	**16212**	**52721**	**10199**	**16154**

District of Birth	District of numeration	
	Kgalagadi South	'Kgalagadi North'
Gaborone	.0007	.0007
Francistown	0	.0012
Lobatse	.0015	.0010
Selibe Phikwe	0	.0010
Orapa	0	0
Jwaneng	.0041	.0046
Sowa Town	0	0
Urban Villages	.0004	.0011
Kgwaketse South	.0047	.0026
Barolong	.0036	0
Kgwaketse West	.0227	.0649
South East	0	0
Kwenen g East	0	0
Kwenen g West	0	.0027
Kgatleng	0	0
Central Serowe	0	0
C. Mahalapye	.0007	.0055
C. Bobonong	0	.0010
Central Boteti	0	0
Central Tutume	0	0
North East	0	.0009
Ngamiland South	0	.0029
Ngamiland West	0	0
Chobe	.0192	0
Ghanzi	.0046	0
Kgalagadi South	-	.0590
Kgalagadi North	.0157	-
Total Population	18667	**17349**

Table 7.1.18: Out-Migration Rates in Botswana by District of Enumeration and District of Destination

	District of Enumeration								
District of Destination	Gaborone	Francistown	Lobatse	Selibe Phikwe	Orapa	Jwaneng	Sowa	'Urban villages'	'Ngwaketse South'
Gaborone	-	.0033	.0157	.0018	.0071	.0032	.0056	.1934	.0143
Francistown	.0016	-	.0015	.0018	0	0	.0097	.1487	.0016
Lobatse	.0015	0	-	.0006	0	0	0	.1539	.1154
Selibe Phikwe	.0012	.0021	0	-	0	0	0	.1818	.0096
Orapa	.0002	0	0	0	-	0	0	.1543	
Jwaneng	.0007	0	.0013	0	0	-	0	.2206	.3110
Sowa Town	.0014	0	0	0	0	0	-	.2964	
Urban Villages	.0119	.0033	.0138	.0066	.0194	.0187	.0093		
Ngwaketse South	.0004	0	0	0	0	0	0		
Barolong	.0005	0	.0084	0	0	.0032	0		
Ngwaketse West	.0002	0	0	0	0	0		.0455	
South East	.0013	0	0	0	0	.0033	0	.5704	.0091
Kwenen g East	.0025	.0005	.0013	0	0	0	0	.5404	.0050
Kwenen g West	.0002	0	0	0	0	0	0	.1416	.0111
Kgatleng	.0004	0	0	0	0	0	0	.4014	.0386
Central Serowe	0	.0021	0	.0026	0	.0032	0	.4521	.0021
Central Mahalapye	.0004	0	0	.0018	.0051	0	0	.3725	.0024
Central Bobonong	0	0	0	.0044	0	0	0	.3903	.0014
Central Boteti	0	.0004	0	0	0	0	0	.2996	.0014
Central Tutume	.0010	.0054	0	0	0	0	.0056	.2853	
North East	.0011	.0008	.0012	0	0	0	0	.0640	
Ngamiland South	0	0	0	0	0	0	0	.6407	
Ngamiland West	0	0	0	0	0	0	0	.2094	
Chobe	.0107	.0029	.0063	.0029	.0068	0	0	.2712	
Ghanzi	0	0	0	0	0	0	0		.0006
Kgalagadi South	.0004	0	0	0	0	0	0		
Kgalagadi North	.0002	0	.0004	0	0	0	0		.0021
Total Population	1747 42	77247	28488	44945	13994	10259	2155	.3573	.0045
									.0211

District of Destination	Urban Villages	Southern Barolong	South East	Kweneng East	Kweneng West	Kgatleng	Central Serowe-Palapye	Central Mahalapye
Gaborone	.0062	.0037	.0020	.0059	.0010	.0027	.0010	.0023
Francistown	.0020	0	0	.0013	0	.0013	.0004	.0015
Lobatse	.0009	.0059	0	.0005	0	0	0	0
Selebi Phikwe	.0002	0	0	0	0	0	.0003	.0020
Orapa	.0007	0	0	0	0	0	0	0
Jwaneng	.0005	0	0	0	0	0	0	0
Sowa	0	0	0	0	0	0	0	0
Urban Village	.0131	.0023	.0513	.0084	.0093	.0195	.0094	.0172
S. Ngwaketse	.0016	0	0	0	0	0	0	.0004
Barolong	.0006	-	0	0	.0010	0	0	0
Ngwaketse West	0							
South East	.0009	.0006	-	.0012	0	0	0	0
Kwenen g East	.0021	0	0	-	.0070	0	0	0
Kwenen g West	.0007	0	0	.0002	-	0	0	0
Kgatleng	.0004	0	0	.0007	0	-	0	0
Central Serowe-	.0013	0	0	0	0	0	-	.0067
C. Mahalapye	.0009	0	0	.0016	.0010	0	.0017	-
C. Bobonong	.0003	0	0	0	0	0	0	0
Central Boteti	.0004	0	0	0	0	0	.0005	0
Central Tutume	.0007	0	0	0	0	0	.0005	0
North East	.0001	0	0	0	0	.0011	.0006	0
Ngamiland East	.0010	0	0	0	0	0	0	0
Ngamiland West	.0026	0	0	0	0	0	0	0
Ngam. Chobe	.0031	0	0	.0006	0	.0007	.0003	0
Ghanzi	.0003	0	0	0	0	0	0	0
Kgalagadi South	.0012	0	0	0	0	0	0	0
Kgalagadi North	.0003	.0004	0	0	.0025	0	0	0
Total Population	6948 17	73627	17767	81957	45767	55256	95181	70465

	District of Enumeration							
District of Destination	Central Bobonong	Central Boteti	Central Tutume	North East	Ngamiland East	Ngamiland West	Ngamiland Chobe	Ghanzi'
Gaborone	.0012	.0023	.0040	.0034	0	0	0	.0061
Francistown	.0044	0	.0022	.0072	0	.0012	.0096	0
Lobatse	0	0	0	0	0	0	0	0
Selibe Phikwe	.0053	0	0	0	0	0	0	0
Orapa	0	.0027	0	0	0	0	0	0
Jwaneng	0	0	0	0	0	0	0	0
Sowa Town	0	0	0	0	0	0	0	0
Urban Villages	.0227	.0240	.0123	.0061	.0102	.0214	.0243	.0155
South Ngwaketse	0	0	0	0	0	0	0	0
Barolong	0	0	0	0	0	0	0	0
South East	0	.0012	0	0	0	0	0	0
Kwenen g East	0	0	0	.0006	0	0	0	0
Kwenen g West	0	0	0	0	0	0	0	0
Kgatleng	0	0	0	.0007	0	0	0	0
Central Serowe	.0010	0	.0004	0	0	0	0	0
C. Mahalapye	0	0	0	0	0	0	0	0
C. Bobonong	-	0	0	0	0	0	0	0
Central Boteti	0	-	.0013	0	0	0	0	0
Central Tutume	0	0	-	.0007	0	0	.0037	.0026
North East	0	0	.0033	-	0	0	0	0
Ngamiland East	0	0	0	0	-	0	0	0
Ngamiland West	0	0	0	0	0	-	.0750	0
Chobe	.0015	0	.0015	0	0	.0013	-	0
Ghanzi	0	0	.0006	0	0	0	0	0
Kgalagadi South	0	0	0	0	0	0	0	-
Kgalagadi North	0	0	0	0	0	0	0	0
Total Population	51091	6022	1161 83	67119	20874	67549	14753	22397

District of Destination	District of Enumeration	
K	galagadi South K	galagadi North
Gaborone	0	0
Francistown	0	0
Lobatse	0	0
Selibe Phikwe	0	.0020
Orapa	0	0
Jwaneng	.0067	0
Sowa Town	0	0
Urban Villages	.0107	.0122
South Ngwaketse	.0012	0
Barolong	0	0
South East	0	0
Kwenen g East	0	0
Kwenen g West	0	0
Kgatleng	0	0
Cent ral Serowe	0	.0040
C. M ahalapye	0	0
C. B obonong	0	0
Cent ral Boteti	0	0
Cent ral Tutume	0	0
North East	0	0
Ngamiland East	0	0
Ngamiland West	0	0
Chobe	0	0
Ghanz i	.0022	0
Kgalagadi South	-	0
Kgalagadi North	.0022	-
Total Population	22063	23147

CHAPTER 8

CHAPTER 8: MORTALITY

8.1 Introduction

The effects of increasing incidence of HIV/AIDS in the early 1990's have meant a reversal in the gains in infant and childhood mortality previously achieved through an effective health care system. Since it was first discovered in 1985, HIV/AIDS has become one of the main killer diseases in the country. In 2004, the Botswana AIDS Impact Survey estimated an overall HIV prevalence of 6.4 percent among children under the age of 5, the estimates for males and females were 6.0 and 6.8 respectively. In the general population the prevalence rate was estimated at 17.1 percent for the same period (CSO, 2005).

In responding to the epidemic government has put in place, since 1987, intervention programmes that seek to curb the spread of HIV/AIDS. Of relevance to child survival is the programme on the prevention of mother to child transmission of HIV/AIDS that was rolled out in 2002 at selected sites and it has now been promulgated to all major health centers in the country. Upon its inception the PMTCT programme was intended to avert new HIV infections at birth and thereby reducing the risk of HIV/AIDS related morbidity and mortality among children under the age of 5. In 2004 there were a total of 11622 ANC clients, 9614 tested for HIV and 2885 turned out positive. The total number of deliveries was 9097 and among them 2724 were HIV positive. The number of deliveries on prophylaxis was 2366 of which 654 deliveries on ART were HIV positive. That is 27.6 percent of HIV women on prophylaxis delivered HIV positive babies, averting about 72 percent of new infections among new born babies.

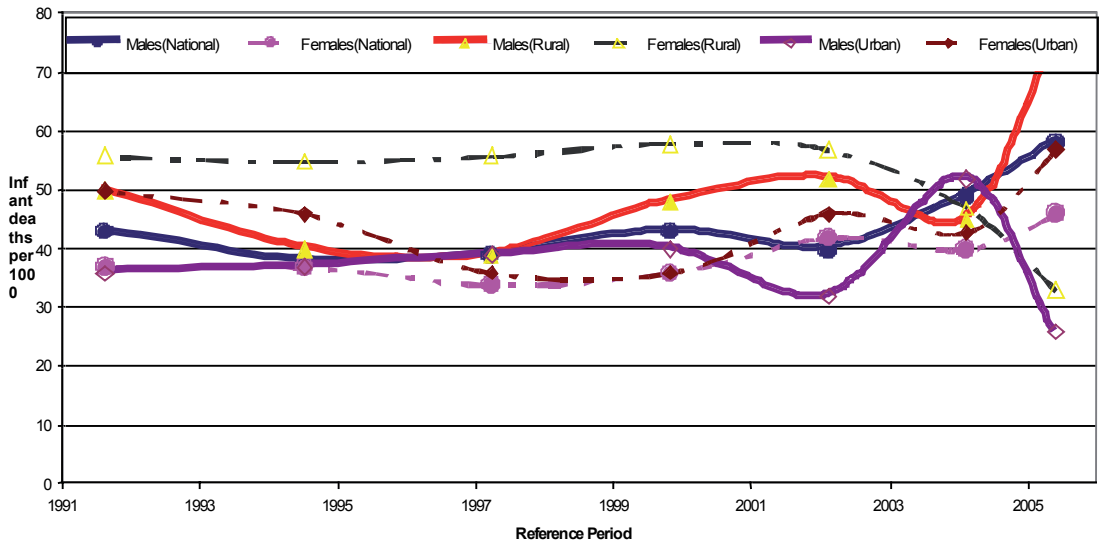
The following sections will therefore assess the levels and trends in infant and child mortality. This though should not delude us into concluding that infants and child deaths are only caused by HIV/AIDS or that this report is an attempt to decipher HIV/AIDS related mortality among children under the age of 5.

8.2 Infant and Childhood Mortality

This section is based on information obtained from the Botswana Demographic Survey data of 2006 (BDS 2006). In this survey questions on infant's deaths, number of children ever born and surviving were posed to the households. This information is useful for direct and indirect estimation of infant and childhood mortality rates and in establishing trends in mortality among children under the age of 5.

In reading and making interpretations of the estimates from BDS 2006, one should proceed with caution since there are fluctuations in the estimates, after the year 2001, against what was anticipated. With the PMTCT programme in place, it was anticipated that infant and childhood mortality would considerably decrease. However, the estimates in BDS 2006 do not seem to support this. One of the reasons that can explain this 'shock' is that in the 12 months or so prior to the survey there was an outbreak of diarrhoea among children under the age of 5. Therefore, estimates for the period between 2000 and 2002 provide our best guesstimate of the true level of infant and childhood mortality. The BDS 2006 data shows that the current levels of Infant and childhood mortality are far much higher than the low levels experienced in the early 1990s. The data suggest that the current levels of Infant and Childhood mortality are similar to those experienced in the early 1980s.

Figure 8. 1.1: Trends in Infant Mortality for National, Rural and Urban Populations by Gender, Botswana 1992-2005



Furthermore, there still exist mortality differentials between the urban and the rural areas, where infant and childhood mortality appears to be high in the rural areas as compared to urban areas. There are also indications that male and female Infants and children in the urban areas enjoy higher chances of survival than their rural counterparts. At national level female children also enjoys relatively higher chances of survival than male children (see figure 8.1, and tables 8.6, 8.7 and 8.8 in the appendix).

One of the Demographic targets set in Botswana National Population Policy was to reduce infant mortality from 48 per 1000 in 1991 to 27 per 1000 in the year 2011 (National Council on Population and Development, 1997). This target was based on the remarkable infant mortality declines recorded during the 1971 to 1991 intercensal period, where infant mortality dropped from 97.1 to 48.0 per 1000 live births (National Council on Population and Development, 1997). The mortality indicators observed in the 2001 census and the current Botswana Demographic Survey of 2006 are almost twice the 2011 targets of 27 infant deaths per 1000 live births. It is now imperative for the Government to re-draw the targets given the reversal of the trends experienced in the period 1991 to 2006.

8.3 Estimation of Infant and Childhood Mortality

The estimation of childhood mortality is based on information collected from mothers about the number of children ever borne and how many of these are still alive. Data on the average number of children ever born alive, by age of mother, and average number of children surviving at the time of the census or survey are employed to estimate the proportion of children dead.

The estimation procedure is based on the assumptions that fertility and mortality levels and patterns have remained constant in the recent past and the risk of dying of a child is a function only of the age of the child and not of other factors (United Nations, 1983). The probabilities of dying between birth and certain ages can then be estimated based on the proportion died among children ever born by five year age groups of mothers. Note that the assumptions proposed could pose some problems if fertility and mortality levels and patterns have been changing in the recent past. Secondly estimates on infant and childhood mortality should be interpreted with caution. This so because estimates on infant and childhood mortality for the recent past (2005-2006) are based on information obtained from women aged 15–19 years, and this group happens to experience heavier mortality because of their biological and socio-economic characteristics.

The estimates on infant and childhood mortality rates were obtained using United Nations computer software for the estimation of mortality (Q5). It should be borne in mind that the estimates of infant and childhood mortality refer to periods of time in the past; consequently the periods in which the estimates refer were calculated.

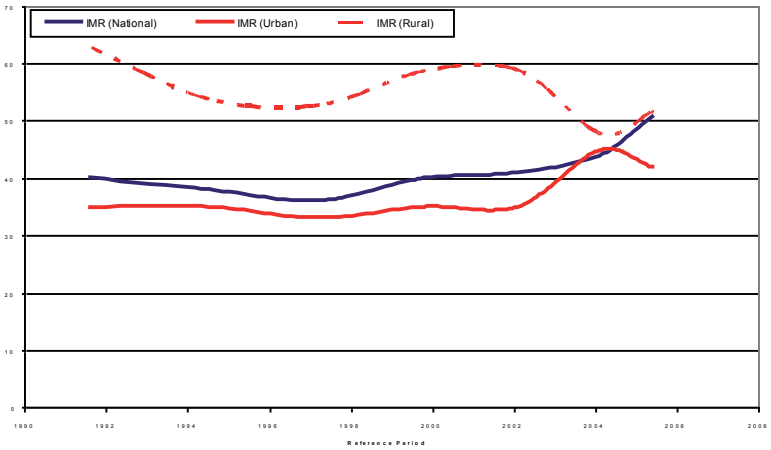
The technique used here provides us with estimates of infant mortality (IMR), childhood mortality rate 4q1 and the probability of dying before age five (q5).

8.4 Levels and Trends in Infant Mortality

Figure 8.2 below and tables 8.6, 8.7 and 8.8 (in the appendix) shows the levels and trends in Infant Mortality rates for the national, rural and urban populations from 1992 to 2005. Figures in the graphs and tables are expressed per 1000. The estimates indicates that Infant Mortality Rates for the national population was estimated at 40 per 1000 in 1992, this figure dropped to 38 and 36 per 1000 in 1994 and 1997 respectively. The year 2000 saw an increase in infant mortality rate by four (4) points from the 1997 estimate of 36 per 1000. The increase is sustained over the period 2000 to 2005, reaching a high of 51 per 1000 in 2005. The rural and urban populations have also experienced similar trends; however, the rural population show higher levels of infant mortality rates overtime when compared to the urban population.

The gains in the chances of survival experienced in the 1990's have been lost with the re-emergence of tuberculosis as a major killer due to the HIV/AIDS epidemic (National Council on Population and Development, 1997). The levels of Infant mortality are now higher than the levels experienced in the mid 1980's to early 1990's.

Figure 8.1.2: Levels and Trends in Infant Mortality Rates for National, Urban and Rural Population, Botswana 1992-2005

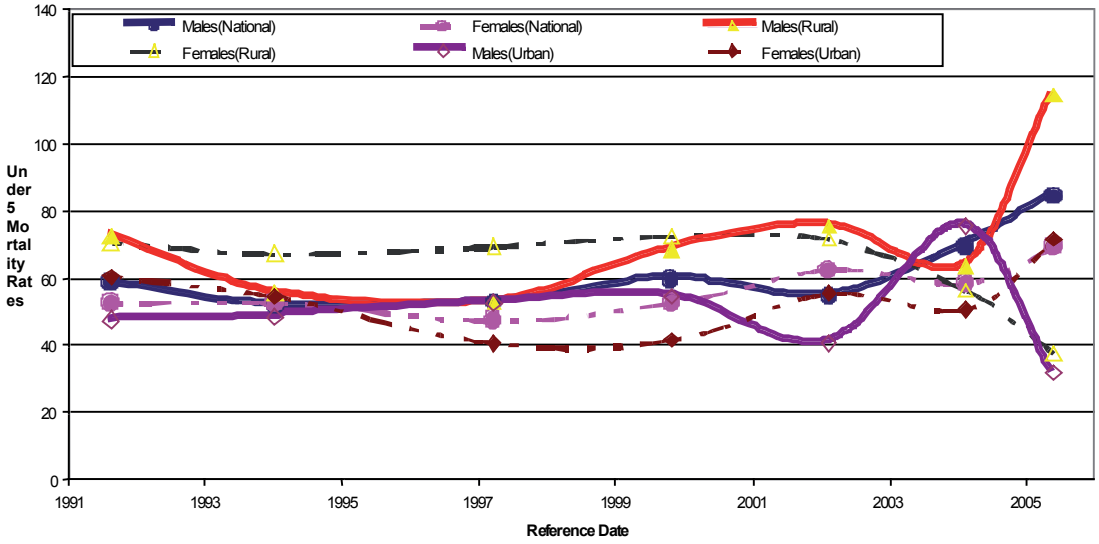


8.5 Sex differentials in Infant Mortality

Figure 8.3 below (also see tables 8.6, 8.7 and 8.8) shows that infant mortality rate is high among males compared to females. The national estimates indicate an infant mortality rate of 58 per 1000 compared 46 per 1000 among females. Male infants in the rural areas experienced the highest mortality level (75 deaths per 1000 births) compared to urban male infants with an infant mortality rate of 26 deaths per 1000 births. Female infant mortality in urban areas, in many instances, appears to be disproportionately higher than male infant mortality. Moreover, female mortality is higher than male mortality. Similarly, in rural areas infant mortality rates reflecting high mortality among females than males were observed for the period 1992-2004 (see tables 8.7 and 8.8 in the appendix).

Infant mortality sex differentials have persisted since 1986 and into the 1990's when mortality was generally low in the country, these were however, in favour of females. In this study, show that there are instances where sex differentials are in favour males than females. The results from this study show a rather disturbing pattern where the differentials in mortality tend to, in some instances, favour males than females as is often observed in Botswana and generally throughout the world. Interestingly, these are only apparent when the data are aggregated by urban and rural and the pattern seems to fade out at the national level. Figure 8.3 presents the trends in under 5 mortality for the period 1992-2005 further reinforces this observation. From this we find indications of the decline in under 5 mortality for the period 1992-1997. Following the year 1997, there is an upward trend in under 5 mortality, both in female and male, though there appear to be high female under 5 mortality to that of males. It is worthwhile to note that in the years before there are fluctuations in under 5 mortality, both in rural and urban areas and among males and females. These findings call for an in-depth study on the causes of these inequalities.

Figure 8.1.3: Trends in the Probability of Dying before Age 5 for National, Rural and Urban Populations by Gender, Botswana 1992-2005



8.6 Levels and Trends in Childhood Mortality

Childhood mortality (the number of deaths to children aged between 1 and 4 years) estimates show a similar pattern as infant mortality estimates. Childhood mortality rates are also shown in table 8.6, 8.7 and 8.8. Figure 8.4 below shows us the trends in childhood mortality. The rate of children who will die between exact age one and exact age five stood at 17 per 1000 in 1992, and declined to a low of level of 15 per 1000 in 1997 and increased to a high level of 26 per 1000 in 2005. The trends show that these rates have been increasing since the year 2000. The government of Botswana has embarked on a programme called "Prevention of Mother to Child Transmission", with the success of this programme we expected to see a decline in both infant and childhood mortality. We also note that the estimates for 2005 cannot be cited without caution, as a consequence of the outbreak of diarrhoea among under 5's 12 months prior to the survey.

Figure 8.1. 4: Trends in Childhood Mortality for National, Urban and Rural Populations, Botswana 1992-2005

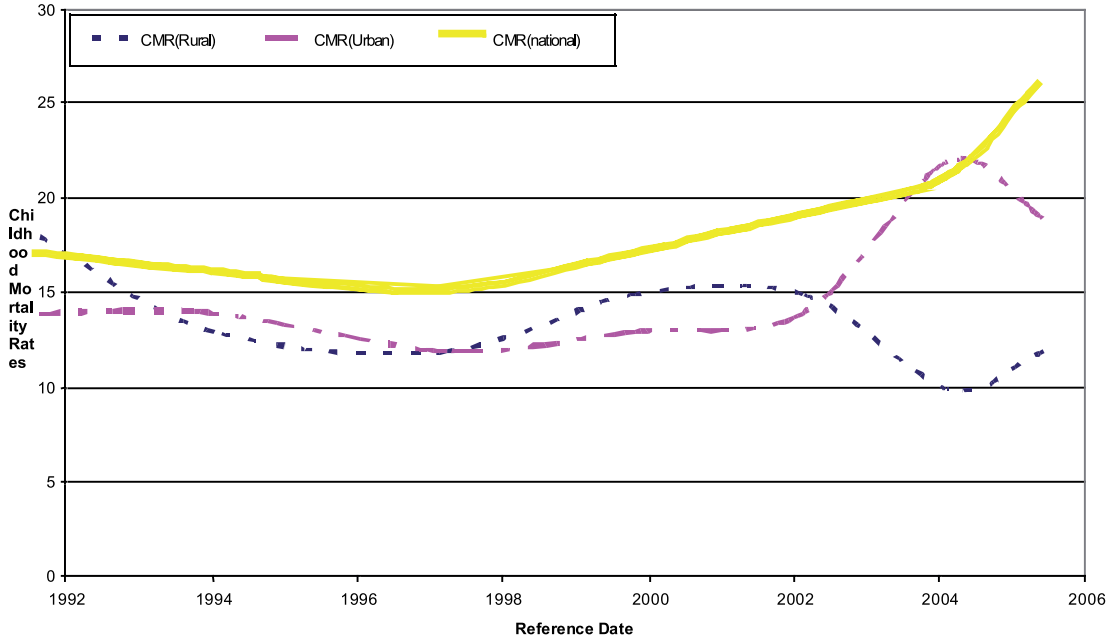
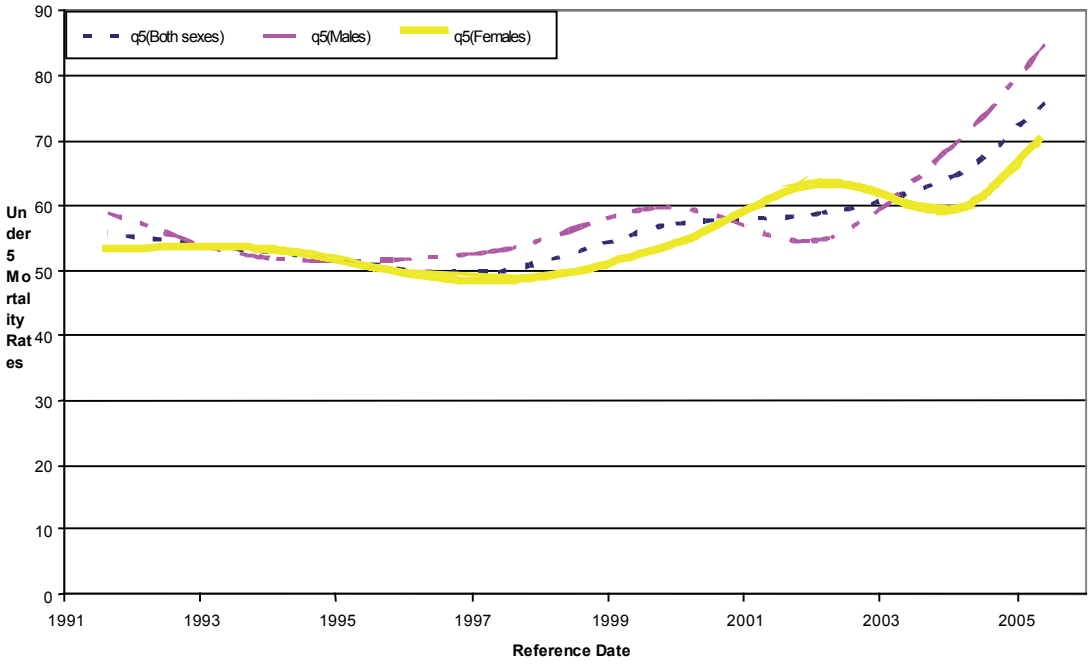


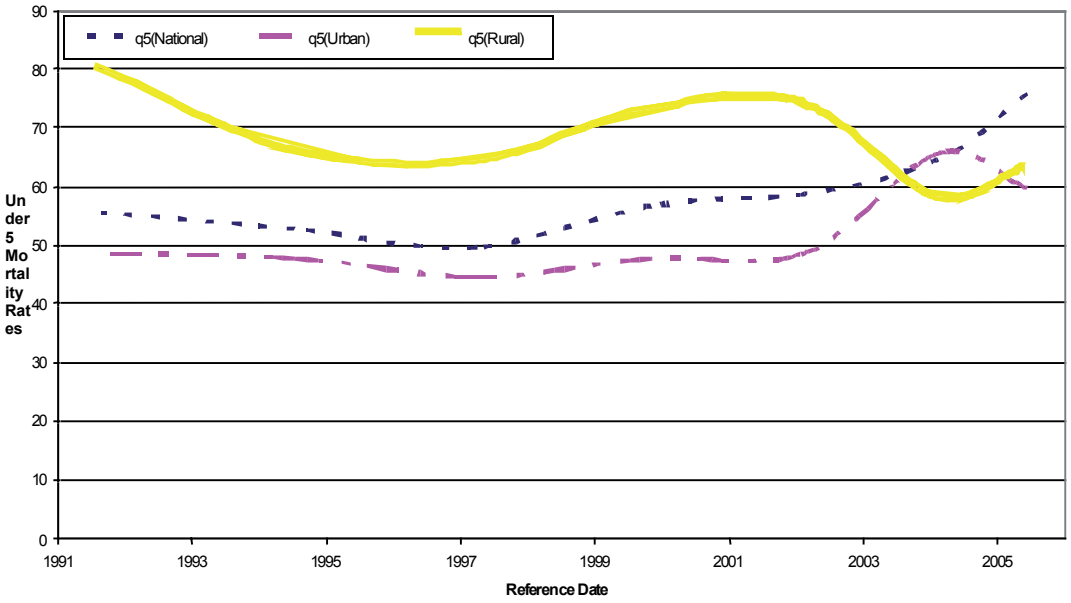
Figure 8.5 below shows similar trends similar to those of Infant and Childhood mortality in the probabilities of dying between birth and exact age five. The gender differentials in mortality still persist in favour of females (this information is also provided in tables 8.6, 8.7 and 8.8 in the appendix).

Figure 8.1.5: Trends in Under 5 Mortality for National Population by Gender, Botswana 1992-2005



The chances of dying during the first five years of life also shows that mortality is high in the rural areas compared to the urban areas as shown in figure 8.6 (also see tables 8.7 and 8.8 in the appendix).

Figure 8.1.6: Trends in Under 5 Mortality for National, Urban and Rural Populations, Botswana 1992-2005



8.7 Adult Mortality Levels and Trends in Botswana

This section is based on the 2006 Botswana Demographic Survey data. In interpreting the indices on mortality we are cognizant of the fact that both morbidity and mortality are influenced by socio-economic and health conditions that prevail at a particular time and can push the indices in either direction (downwards or upwards). Data on diarrhoea among children under the age of five (5) from the Medical Statistics Unit of the Ministry of Health show that there were 37,554 cases in 2005 resulting in 108 deaths. In 2006 there was an outbreak of diarrhoeal disease in which 23,264 cases were reported throughout Botswana, accounting for 470 child deaths (http://www.irinnews.org/report.aspx?reportid=58668). This resulted in a temporal effect on mortality. Secondly, the size of the sample for some districts generates very small numbers for the age and sex distribution of the population and deaths.

It is in view of this that two approaches are employed to capture the temporal effect of the out break of diarrhoea and the second to take into account insufficient data on deaths by age. Therefore, the data on the age-sex distribution of population and of deaths from the survey were employed to estimate the indices at the national level and for urban and rural areas. The data could not be disaggregated at the district level for the reason that the sample size becomes smaller and therefore estimates at the district levels will not be estimated based on this method. Secondly, the number of deaths during the twelve months preceding the 2006 survey was used for the construction of the life tables. Since mortality is a rare event and deaths by age in districts and other categorization could not inform the life tables. Estimates on life expectancy at birth were constructed for the national population, rural, and urban from the crude death rates, the age structure of the population, and a pattern of mortality. This technique notes that there is a relationship among population age and sex structure, the age specific death rates and the crude death rates. It is therefore possible to find a model life table consistent with the population and the rates. For this survey, the Coale and Demeny North mortality pattern has been selected to reproduce the given crude death rates, and indices such as the life expectancy at birth, crude birth rates, infant mortality, rate of natural increase and model life tables for each sex.

However, even with the use of this method the estimates at the district level are highly unreliable since the number of deaths is very small, resulting in some cases from small sample sizes. The data on the annual number of deaths shows an erratic age pattern for smaller districts. The changing age patterns may be caused by both coverage and content errors, since these patterns do not emerge for lager districts we may conclude that the patterns are caused by fewer annual deaths in the small district. Therefore, the indices at the district level will be excluded from this chapter. Secondly, as a result of the assumptions embedded in the model, the indices produced by this method will tend to smooth out the temporal effects of mortality compared to the earlier method which is more reliant on the age distribution of deaths.

In the estimation of adult mortality BDS 2006 data does not provide sufficient data to allow the use of Maternal orphan hood technique in the estimation of levels and trends in female adult mortality. The question relating to the parental survival was only asked of children 0 to 18 years. Maternal mortality estimates could not be ascertained from the current data set, since there were no questions relating to maternal deaths. However, there were questions on the causes of deaths but the information obtained from survey on pregnancy and delivery related deaths was very scanty and could not be used to inform estimates on maternal mortality.

8.8 Overview of Mortality Trends and Levels

Botswana has been experiencing declines in both mortality and fertility levels since the 1980's, from the mid 1990's the country started experiencing an increase in mortality mainly as a result of the HIV/AIDS epidemic. This demographic change has resulted from socio-economic changes and its occurrence underlies much of subsequent social change that the country is undergoing. The estimates from the recent population censuses indicate that the crude death rate declined from 13.7 in 1971 to 11.5 in 1991 and increased to 12.4 in 2001 (CSO, 2001). Comparatively the 2006 Demographic Survey show a crude death rate of 11.2 deaths per 1000 population (see table 8.1), a slightly lower than that of the 2001 census and similar to the rate in 1991. While infant mortality rate dropped from 97.1 in 1971 to 48.0 per 1000 live births in 1991 and increased to 56 per 1000 live births in 2001. The rate of death to one-year-old children who will die before reaching age 5 has declined from 35.8 per 1000 in 1981 to 16 per 1000 in 1991 and increased to 19 in 2001. Life expectancy at birth has increased from 55.5 in 1971 to 56.5 in 1981 and 65.3 years in 1991. For the 2001 the life expectancy at birth was reported at 55.6 years, indicative of the impact of HIV/AIDS on gains in life expectancy previously obtained. The life expectancy for the 2006 shows some improvements, with an index of 54.4 years, an estimate which is not so far away from the 2001 since. This in a way is indicative of the efficiency and effectiveness of HIV/AIDS programmes that are in place.

Table 8.1.1: Summary Demographic Indicators (National)

Item	Both sexes M	ale	Female
Life expectancy	54.4	48.8.	60.0
Crude death rate *	11.2	13.3 9	.3
Total deaths	19,088	10,862 8	,226
* Per 1,000 population.			

8.9 National Adult Mortality Patterns.

Figure 8.8 below shows the age pattern of mortality by age calculated the age Coale-Demeny North Region Model Life Tables Based on population by age and sex and total deaths from the 2006 Botswana Demographic Survey. The levels of mortality between males and females show a wide variation with males experiencing high mortality at all ages. Male mortality is generally high for many population groups. Data from the VCT and the ARV program point to the high number of men who do not test for HIV and their inability to access ARV program therefore, resulting in increased male mortality compared with that of females. Gender differentials in mortality at ages above 30 can also be explained by high incidence of tuberculosis among men due increased risk to HIV infection and the Road Safety Annual reports put men at high risks of being involved in road accidents than females. The reports also show that the case fatal is higher among males than females. The high incidence of tuberculosis among men in Botswana is not a new phenomenon; however, the HIV/AIDS epidemic has made this situation worse (National Council Population and Development, 1997).

Figure 8. 1.7: National, Age-specific central death rates (nmx) (Based on the Age-sex distribution of population and deaths)

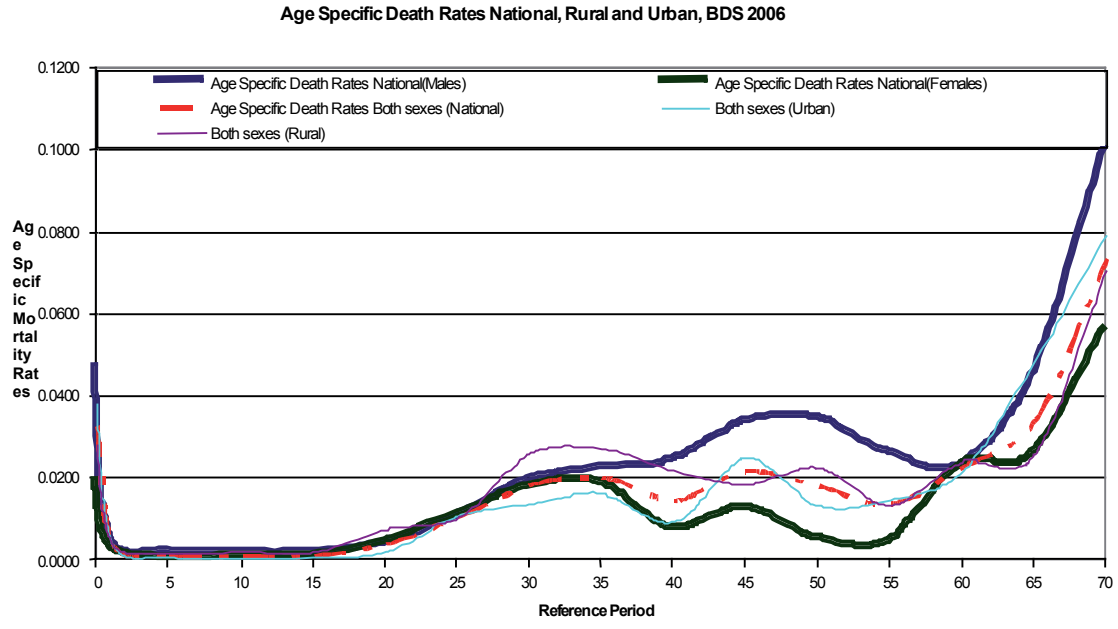
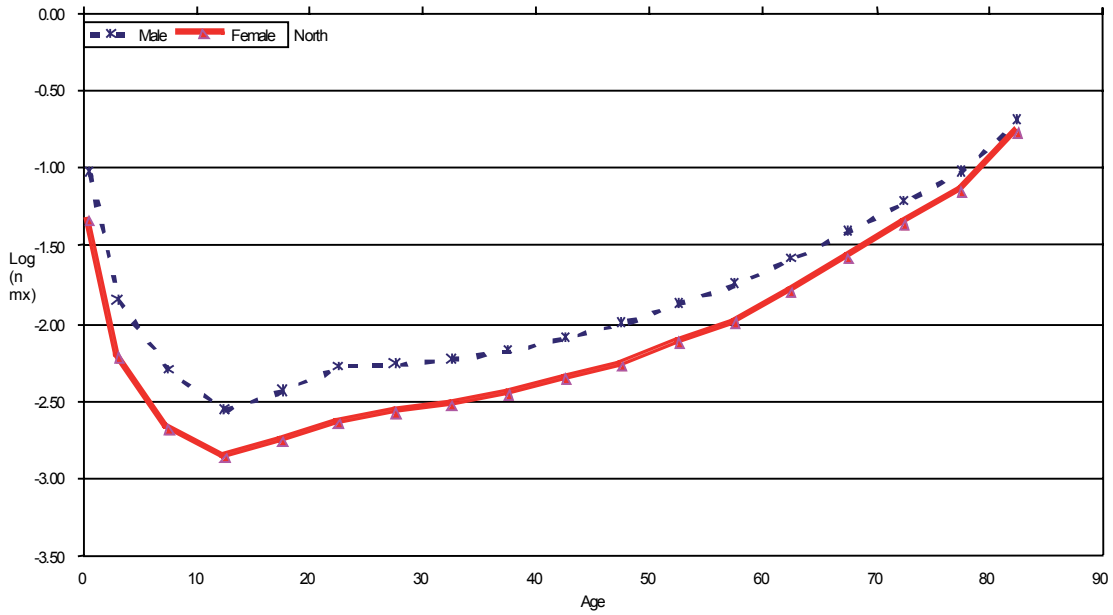


Figure 8. 1.8: National, Age-specific central death rates (nmx) (Based on the North Model Life table)

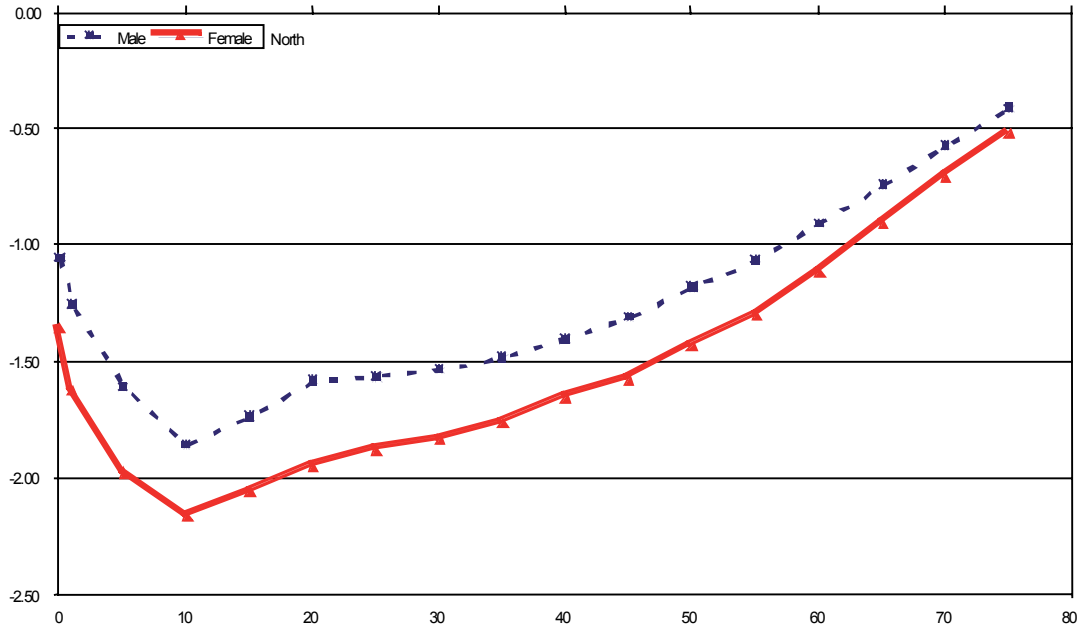


Mortality has increased between 1991 and 2001, life expectancy decreased from around 65 years in1991 to around 56 years in 2001. Figure 8.9, below shows the age pattern of the probability of dying for 2006 survey period. It is apparent from this figure that though the age pattern of mortality is similar, males have comparatively higher probabilities of dying at all ages.

Most of the loss in the average number of years one expects to live at the beginning of the age interval was experienced from birth up to age 40. This can be explained by relatively high infant mortality and adult mortality in child bearing ages.

From age 45 years and older, people were expected to live longer in 2001 compared to 1991 since they were not affected by the increase in adult mortality as a result of HIV/AIDS. Information obtained from BDS 2006 suggests males aged 45 years can expect to live for on average 21.2 years, this compares with 28.3 years for females of the same age (these are guesstimates based on the averages of indices in tables 8.10 and 8.14 for males and tables 8.11 and 8.15 for females).

Figure 8. 1.9: National, Probability of dying (nqx)



8.10 Levels, Trends and Variations in Adulthood Mortality by Residence

The index of mortality which is commonly used is the "expectation of life at birth". This measure is the average number of years that a newly born baby expects to live if the current risks of dying at each age are to remain unchanged. Looked at from a slightly different perspective, life expectancy at birth can be defined as the average age at death in a population or simply the number of years that a person born and living under particular socio-economic and mortality conditions expects to live. It is a useful measure of both mortality and health conditions in a population.

Using information of the number of deaths during the 12 months preceding the 2006 Botswana Demographic Survey, life tables were constructed for rural and urban areas in Botswana. First the number of deaths for the 12 months prior to the survey computed for rural and urban areas, and the number of deaths was divided by the population to obtain the crude death rates. The age-sex specific deaths rates together with the graphs showing the age pattern of mortality are shown in figure 8.10 to 8.13. Tables 8.2 and 8.3 provide summary demographic indicators based on this method of analysis. The population age distribution and life tables for urban and rural are in the appendix (Tables 8.19 to 8.22 and the corresponding life tables are also provided in the appendix in Tables 8.8 to 8.18).

Age Patterns of Mortality by Residence

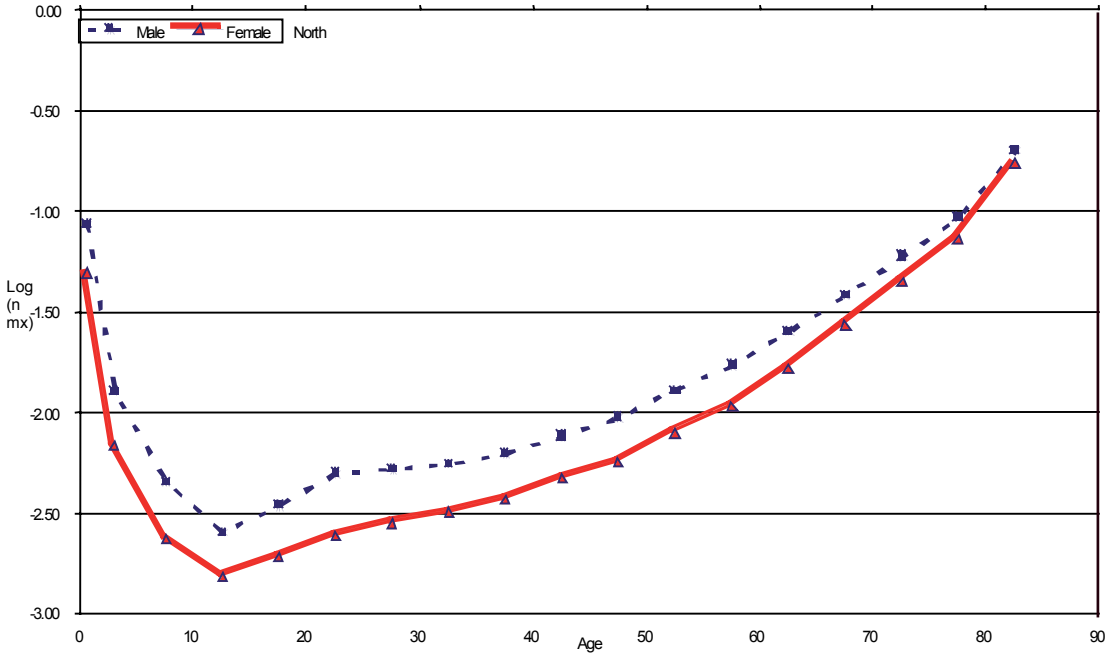
Table 8. 1.2: Summary Demographic Indicators (Urban)

Item	Both sexes	Male	Female
Life expectancy	55.2	-	-
Crude death rate *	9.5	11.1	8.1
Total deaths	9,298	5,139	4,159

* Per 1,000 population.

* Per 1,000 population.

Figure 8. 1.10: Urban, Age-specific central death rates (nmx) (Based on the North Model Life table)



The age pattern of female adult mortality shown in figure 8.10 & 8.11 also shows low mortality during childbearing ages (ages 15 to 45) compared to males in the same age group. This pattern also suggests that HIV/AIDS has contributed to high mortality among the sexually active population; mortality from age 15 to 45 is as high as infant mortality. Females age 50 to 70 enjoys relatively low mortality, this may be explained by the fact that they are less likely to be involved in risky sexual behaviours. Mortality at advanced ages (after age 50 years) is also low relative to infant and childhood mortality.

Figure 8. 1.11: Urban, Probability of dying (nqx)

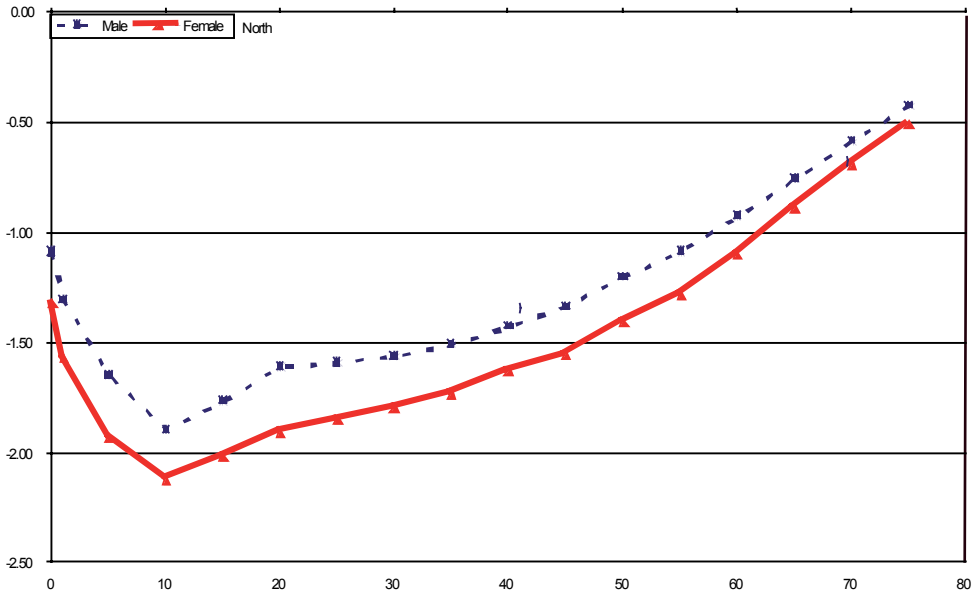


Table 8. 1.3: Summary Demographic Indicators (Rural)

Item	Both sexes M	ale	Female
Life expectancy	52.5 -		-
Crude death rate *	13.4	16.1	10.9
Total deaths 9	,740 5	,696 4	,045
* Per 1,000 population.			

Figure 8.1.12: Rural, Age-specific central death rates (nmx) (Based on the North Model Life table)

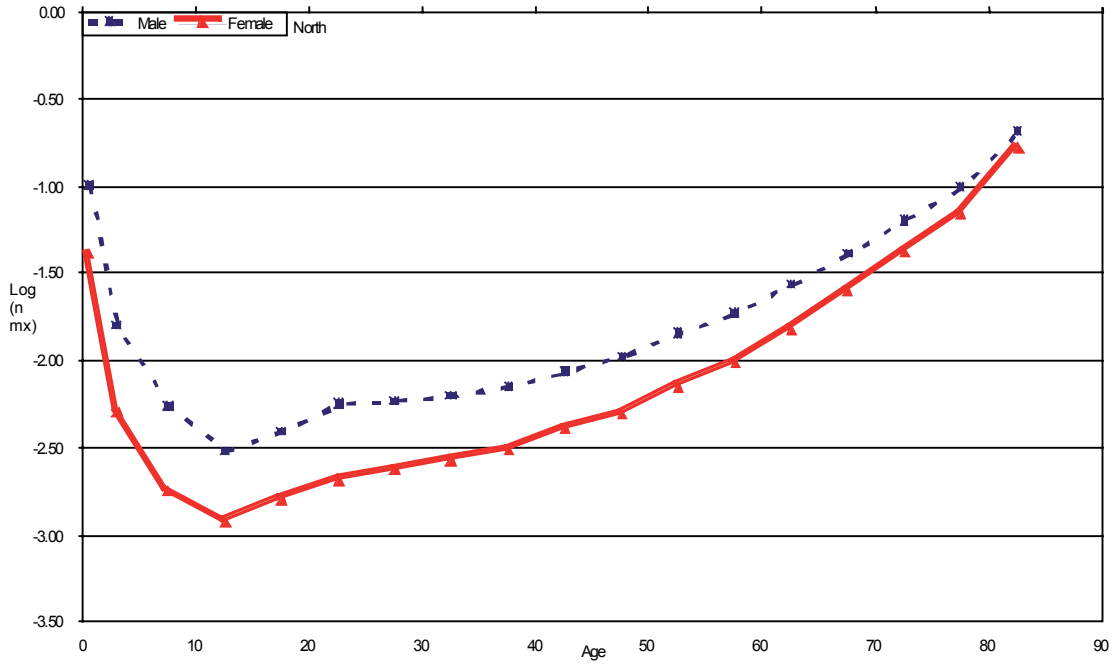
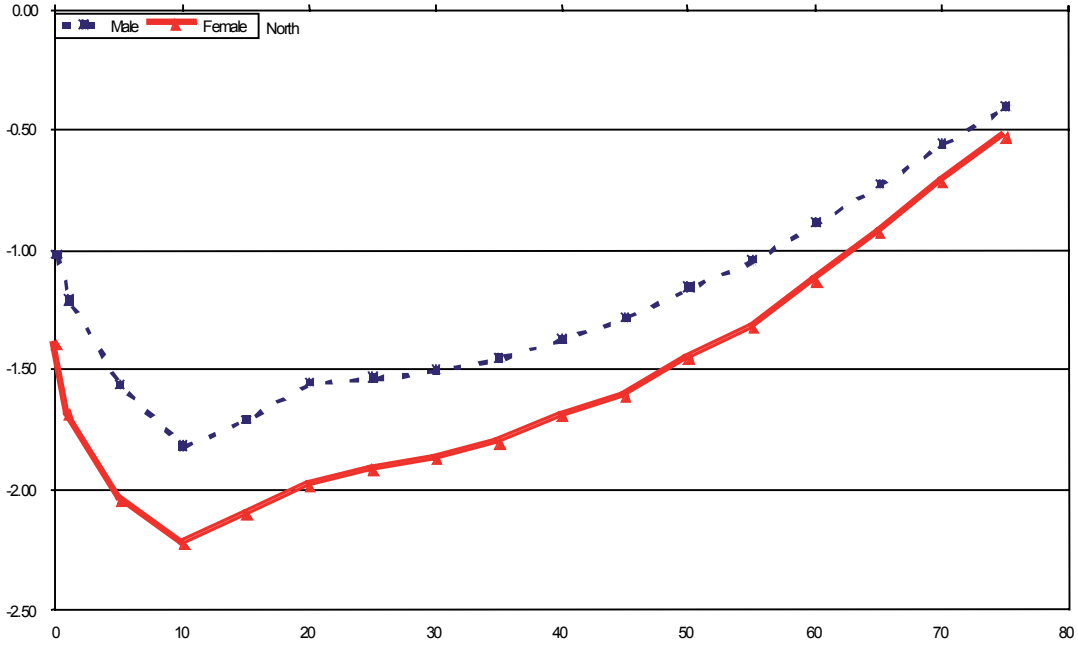


Figure 8. 1.13: Rural, Probability of dying (nqx)



8.11 Adult Mortality Levels by Residence

Table 8.5 below shows life expectancy at birth for rural and urban. Based on information on the age and sex distribution of population and of deaths, the life expectancy at birth for both sexes combined is as high as a 50.1 and 44.7 years in urban and rural areas respectively. Note that these estimates reflect the temporal effect of the diarrheal outbreak in the period 2005-06. From the same table estimates of life expectancy at birth were also obtained using the age-sex structure of the population, CDR and the mortality pattern to arrive at the estimates for urban and rural. The life expectancies derived from this method are higher than from the previous one since they take into account the assumptions embedded in the techniques and therefore tend to smooth out the age and sex distribution of mortality.

Females expect to live longer than their male counterparts, where the life expectancy for males in urban areas was estimated at 54.0 years and that for females at 66.0 years. The estimates for the rural residents show a slightly high life expectancy among females in rural areas than estimates for the urban areas. Moreover, the gap in the life expectancies between males and females in urban and rural areas is wide in rural areas than urban areas. Estimates by sex could not be obtained using the method on age distribution of deaths and population by sex.

It is evident from this that there are inherent difficulties in coming up with an estimate on the life expectancy and other indices using 2006 survey data. For the purposes of coming up with an estimate of what could be thought of as a reasonable estimate, we take an average of the estimates produced by the two approaches. The estimate for the overall life expectancy at birth is therefore 54.4 years. The life expectancy for rural and urban areas would therefore stand at 52.4 and 55.2 years respectively.

Table 8.1.4: Life Expectancy by sex and Residence

Estimates Based on Age and Sex Structure of the Population, CDR and age pattern of mortality assumed by the north model of Coale and Demeny Model life tables			
	Life expectancy at birth		
	Both sexes	**Males**	**Females**
National	60.1	54.0	66.0
Urban	60.2	55.4	64.9
Rural	60.2	52.5	67.3

Estimates Based on Age Distribution of Population and Deaths by sex			
	Life expectancy at birth		
	Both sexes	Males	Females
National	48.6	43.5	54.0
Urban	50.1	N/A	N/A
Rural	44.7	N/A	N/A

The index of mortality used in the estimation of adult mortality in this chapter is the expectation of life at age 15, (e15) and Life expectancy at age 50 (e50).

Table 8.1.5: Life Expectancy at age 15 and 50 years by sex and residence

Estimates Based on Age and sex structure of the Population, CDR and age pattern of mortality assumed by the north model of Coale and Demeny Model life tables						
	Life Expectancy at Age 15			Life Expectancy at age 50		
	Males	Females	Both Sexes	Males	Females	Both sexes
National	49.7	56.8		22.4	26.2	
Urban	50.4	56.2		22.8	25.9	
Rural	49.0	57.5		22.1	26.6	
Estimates Based on Age Distribution of Population and Deaths by sex						
	Life Expectancy at Age 15			Life Expectancy at age 50		
	Males	Females	Both Sexes	Males	Females	Both sexes
National	34.1	42.4	38.2	15.6	23.9	20.1
Urban	N/A	N/A	39.7	N/A	N/A	18.3
Rural	N/A	N/A	34.1	N/A	N/A	20.3

It is also worth noting that there is less variation in e15 by place of residence than in measures of infant and childhood mortality. For instance in table 8.5 variations of e15 among males ranges between 49.8 years and 48.6 years in urban and rural areas respectively. The variations among females are also less pronounced with a high of 57.5 years and low of 56.2.

This variability in the life expectancies is further emphasized in the model life tables presented in the appendix (Tables 8.9 to 8.19).

Data from the previous censuses has shown that life expectancy has been improving over the years; the 2001 census data indicates

that we are now experiencing very high mortality across the districts.

The estimates quoted above suggest that mortality is increasing in Botswana and that it is relatively higher compared to the situation in the 1980's and early 1990's. Majelantle and Bainame (1995) once observed that the differentials in mortality reduction is benefiting females more than males this situation is now been reversed with increases in mortality as a result of the HIV/AIDS epidemic. In fact, while the life-expectancy gap between males and females is narrowing in most developed and some developing countries, in Botswana it seems that the gap between males and females is getting wider.

Table 8.1.6: Levels and Trends in Infant, Childhood and the before age 5 mortality rates, Botswana 1987-2001

National									
	Infant Mortality			Childhood Mortality Rate			Under 5 Mortality Rate		
Reference Date	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
2005	51	58	46	26	29	25	76	85	70
2004	44	49	40	21	22	20	65	70	59
2002	41	40	42	19	16	22	59	55	63
2000	40	43	36	17	18	17	57	60	53
1997	36	39	34	15	15	15	50	53	48
1994	38	38	37	16	14	17	53	52	53
1992	40	43	37	17	18	17	56	59	53

Table 8.1.7: Levels and Trends in Infant, Childhood and the Probability of dying before age 5, URBAN Botswana 1987-2001

Urban									
	Infant Mortality			Childhood Mortality Rate			Under 5 Mortality Rate		
Reference Date	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
2005	42	26	57	19	6	16	60	32	72
2004	45	52	43	22	25	9	66	76	51
2002	35	32	46	14	10	10	49	41	56
2000	35	40	36	13	16	6	48	55	42
1997	33	39	36	12	14	6	45	53	41
1994	35	37	46	14	13	10	48	49	55
1992	35	36	50	14	12	12	49	48	61

Table 8.1.8: Levels and Trends in Infant, Childhood and the Probability of dying before age 5, Rural Botswana 1987-2001

Rural									
	Infant Mortality			Childhood Mortality Rate			Under 5 Mortality Rate		
Reference Date	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
2005	52	75	33	12	43	5	63	115	38
2004	48	45	47	10	20	10	58	64	57
2002	59	52	57	15	25	16	74	76	72
2000	59	48	58	15	22	16	73	69	73
1997	53	39	56	12	15	15	64	53	70
1994	54	40	55	13	16	15	66	56	68
1992	63	50	56	18	24	16	80	73	71

The following Life tables are based on Age Distribution of Population and Deaths by sex

Table 8.1. 9: Life table National, BDS 2006

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)	a(x,n)
0	0.051976	0.0499	100000	4990	96007	0.938827	4861453	48.6	0.2
1	0.006946	0.0273	95010	2594	373407	0.980097	4765447	50.2	1.4
5	0.001748	0.0087	92416	804	460071	0.991947	4392039	47.5	2.5
10	0.001485	0.0074	91612	678	456366	0.991948	3931968	42.9	2.5
15	0.001969	0.0098	90934	891	452692	0.982603	3475602	38.2	2.8
20	0.005769	0.0285	90043	2566	444816	0.953959	3022910	33.6	2.9
25	0.013956	0.0677	87477	5922	424336	0.901624	2578094	29.5	2.8
30	0.027562	0.1293	81555	1054 5	382592	0.857572	2153758	26.4	2.6
35	0.031468	0.1454	71010	10325	328100	0.875835	1771166	24.9	2.4
40	0.022258	0.1054	60685	6396	287361	0.863113	1443066	23.8	2.5
45	0.037232	0.1701	54289	9235	248025	0.846084	1155705	21.3	2.5
50	0.027181	0.1266	45054	5704	209850	0.897153	907680	20.1	2.3
55	0.018393	0.0880	39350	3463	188268	0.868340	697829	17.7	2.6
60	0.041534	0.1892	35887	6790	163480	0.779957	509562	14.2	2.6
65	0.057210	0.2507	29098	7295	127508	0.697191	346081	11.9	2.5
70	0.087140	0.3553	21803	7747	88897	0.646528	218574	10.0	2.4
75	0.085891	0.3512	14056	4937	57475	0.556785	129676	9.2	2.4
80	0.126308	...	9120	9120	72202	...	72202	7.9	7.9

Table 8. 1.10: Life table National Males, BDS 2006

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)	a(x,n)
0	0.07171 6	0.0680	100000	6800	94818	0.91954 0	4351624	43.5	0.2
1	0.00842 7	0.0330	93200	3076	364951	0.97339 0	4256805	45.7	1.4
5	0.00275 9	0.0137	9012 4	1235	447535	0.98793 9	3891854	43.2	2.5
10	0.00209 1	0.0104	88890	924	442137	0.98922 6	3444319	38.7	2.5
15	0.00247 4	0.0123	87965	1082	437374	0.97935 9	3002181	34.1	2.7
20	0.00657 2	0.0324	86883	2815	428346	0.95209 7	2564807	29.5	2.8
25	0.01374 9	0.0667	84068	5607	407827	0.90329 8	2136461	25.4	2.8
30	0.02732 6	0.1283	78461	10067	368389	0.85774 2	1728634	22.0	2.6
35	0.03281 4	0.1516	68394	10369	315983	0.84191 6	1360245	19.9	2.5
40	0.03677 4	0.1686	58026	9783	266031	0.79252 6	1044262	18.0	2.5
45	0.05656 3	0.2472	482 43	11926	210837	0.75607 8	778230	16.1	2.5
50	0.05162 5	0.2266	36317	8229	159409	0.80152 9	567394	15.6	2.3
55	0.03721 7	0.1693	28088	4755	127771	0.84415 1	407985	14.5	2.3
60	0.03411 4	0.1577	23332	3680	107858	0.75727 3	280214	12.0	2.6
65	0.08760 8	0.3641	19653	7156	81678	0.49032 5	172356	8.8	2.7
70	0.19628 0	0.6290	12497	7861	40049	0.47289 8	90678	7.3	2.1
75	0.08348 1	0.3410	4636	1581	18939	0.62593 2	50630	10.9	2.3
80	0.09641 4	...	3055	3055	31691	...	31691	10.4	10.4

Table 8.1.11: Life Table National Females

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)	a(x,n)
0	0.03395 4	0.0330	100000	3300	97192	0.95751 4	5404198	54.0	0.1
1	0.00542 3	0.0214	96700	2069	381565	0.98661 5	5307006	54.9	1.5
5	0.00068 1	0.0034	94631	322	472349	0.99605 1	4925441	52.0	2.5
10	0.00090 2	0.0045	94309	424	470483	0.99466 6	4453092	47.2	2.5
15	0.00144 4	0.0072	93884	676	467974	0.98570 0	3982609	42.4	2.9
20	0.00507 2	0.0251	93209	2340	461 282	0.95552 6	3514635	37.7	3.0
25	0.01416 3	0.0687	90869	6243	440767	0.89997 3	3053353	33.6	2.8
30	0.02779 8	0.1303	84626	11027	396678	0.85599 8	2612587	30.9	2.6
35	0.03036 7	0.1401	73599	10311	339556	0.90635 4	2215909	30.1	2.2
40	0.01089 9	0.0530	63288	3354	307758	0.92107 5	1876353	29.6	2.4
45	0.02211 6	0.1046	59934	6269	283468	0.92273 3	1568596	26.2	2.4
50	0.00906 8	0.0442	53665	2372	261565	0.97097 5	1285128	23.9	2.2
55	0.00452 4	0.0224	51293	1149	253973	0.89665 2	1023563	20.0	2.8
60	0.04668 1	0.2120	50144	10631	227726	0.79239 7	769590	15.3	2.8
65	0.03637 1	0.1661	39513	6563	180449	0.83309 3	541864	13.7	2.4
70	0.03995 7	0.1823	32950	6007	150331	0.73549 5	361415	11.0	2.6
75	0.08738 5	0.3586	26943	9662	110568	0.47619 2	211084	7.8	2.5
80	0.17192 7	...	17281	1728 1	100517	...	100517	5.8	5.8

Table 8.1.12: Life Table Urban both sexes

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)	a(x,n)
0	0.05434 7	0.0521	100000	5210	95865	0.93548 6	5011028	50.1	0.2
1	0.00764 7	0.0300	94790	2844	371878	0.98007 1	4915163	51.9	1.4
5	0.00114 3	0.0057	91946	524	458421	0.99644 4	4543285	49.4	2.5
10	0.00028 0	0.0014	91422	128	456791	0.99732 9	4084864	44.7	2.5
15	0.00098 2	0.0049	91294	447	455571	0.99136 9	3628073	39.7	3.0
20	0.00293 7	0.0146	90847	1326	451639	0.96300 5	3172502	34.9	3.0
25	0.01370 8	0.0666	89521	5962	434930	0.91556 9	2720863	30.4	2.9
30	0.02033 3	0.0969	83558	8097	398209	0.88926 1	2285933	27.4	2.6
35	0.02482 6	0.1165	75462	8791	354112	0.91177 1	1887724	25.0	2.4
40	0.01340 1	0.0649	66670	4327	322869	0.87565 8	1533612	23.0	2.6
45	0.04112 5	0.1865	62343	11627	282722	0.84976 8	1210743	19.4	2.5
50	0.02083 6	0.0987	50716	5006	240248	0.90155 5	928021	18.3	2.3
55	0.02308 8	0.1094	45711	5001	216597	0.85214 1	687773	15.0	2.6
60	0.04431 1	0.2009	40710	8179	184571	0.72798 0	471176	11.6	2.7
65	0.08512 7	0.3516	32531	11438	134364	0.59187 2	286604	8.8	2.5
70	0.11787 1	0.4444	21093	9374	79527	0.61112 5	152240	7.2	2.2
75	0.07670 6	0.3181	11719	3728	48601	0.33161 3	72713	6.2	2.3
80	0.33142 3	...	7991	7991	24113	...	24113	3.0	3.0

Table 8.1.13: Life Table Rural

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)	a(x,n)
0	0.04928 7	0.0474	100000	4740	96171	0.94240 7	4473104	44.7	0.2
1	0.00627 4	0.0247	95260	2353	375033	0.98003 2	4376933	45.9	1.4
5	0.00237 4	0.0118	92907	1096	461795	0.98690 8	4001900	43.1	2.5
10	0.00290 1	0.0144	91811	1322	455749	0.98522 1	3540106	38.6	2.5
15	0.00342 6	0.0170	90489	1538	449013	0.96690 6	3084357	34.1	2.8
20	0.01098 2	0.0536	88950	4768	434154	0.93895 8	2635343	29.6	2.8
25	0.01445 5	0.0700	84183	5893	407652	0.87388 6	2201190	26.1	2.7
30	0.04204 1	0.1913	78290	14977	356241	0.79476 3	1793538	22.9	2.6
35	0.04503 7	0.2014	63313	12751	283127	0.81381 7	1437297	22.7	2.4
40	0.03666 8	0.1671	50562	8449	230414	0.84512 8	1154170	22.8	2.3
45	0.03153 1	0.1458	42113	6140	194729	0.84426 8	923756	21.9	2.4
50	0.03439 7	0.1572	35973	5655	164404	0.88984 0	729027	20.3	2.3
55	0.01446 5	0.0698	30318	2116	146293	0.88183 3	564623	18.6	2.5
60	0.03919 6	0.1793	28202	5057	129006	0.81809 2	418330	14.8	2.6
65	0.03925 6	0.1790	23145	4143	105539	0.76642 9	289324	12.5	2.5
70	0.07071 1	0.3010	19002	5720	80888	0.66639 0	1837 85	9.7	2.5
75	0.09230 7	0.3746	13283	4976	53903	0.47614 8	102897	7.7	2.5
80	0.16954 8	...	8307	8307	48994	...	48994	5.9	5.9

The following Life Tables are based on Age and sex structure of the Population, CDR and age pattern of mortality assumed by the north model of Coale and Demeny Model life tables

Table 8. 1.14: Life table National Males, BDS 2006

National , Male Abridged Life Table										
Age (x)	n	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.09469	0.298	0.08878	100,000	8,878	93,765	0.89198	5,398,185	54.0
1	4	0.01445	1.591	0.05586	91,122	5,090	352,226	0.95246	5,304,420	58.2
5	5	0.00506	2.500	0.02496	86,031	2,148	424,788	0.98044	4,952,193	57.6
10	5	0.00282	2.500	0.01402	83, 884	1,176	416,479	0.98375	4,527,406	54.0
15	5	0.00374	2.500	0.01852	82,708	1,532	409,711	0.97754	4,110,926	49.7
20	5	0.00536	2.500	0.02647	81,176	2,148	400,511	0.97297	3,701,215	45.6
25	5	0.00560	2.500	0.02760	79,028	2,181	389,686	0.97143	3,300,705	41.8
30	5	0.00600	2.500	0.02956	76,847	2,272	378,554	0.96859	2,911,018	37.9
35	5	0.00678	2.500	0.03331	74,575	2,484	366,664	0.96327	2,532,464	34.0
40	5	0.00822	2.500	0.04027	72,091	2,903	353,196	0.95522	2,165,800	30.0
45	5	0.01015	2.500	0.04948	69,188	3,423	337,381	0.94219	1,812,603	26.2
50	5	0.01378	2.500	0.06658	65,764	4,379	317,876	0.92364	1,475,222	22.4
55	5	0.01815	2.500	0.08683	61,386	5,330	293,603	0.89502	1,157,347	18.9
60	5	0.02663	2.500	0.12486	56,056	6,999	262,781	0.84840	863,744	15.4
65	5	0.04008	2.500	0.18216	49,057	8,936	222,943	0.77840	600,963	12.3
70	5	0.06238	2.500	0.26983	40,121	10,826	173,539	0.67940	378,020	9.4
75	5	0.09694	2.500	0.39014	29,295	11,429	117,902	0.42341	204,481	7.0
80+		0.20635	4.846	1.00000	17,866	17,866	86,579		86,579	4.8

Table 8.1. 15: Life Table National Females

National , Female Abridged Life Table										
Age (x)	n	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.04613	0.183	0.04445	100,000	4,445	96,370	0.94638	6,599,358	66.0
1	4	0.00612	1.661	0.02414	95,555	2,307	376,822	0.98011	6,502,988	68.1
5	5	0.00212	2.500	0.01054	93,2 48	983	463,782	0.99129	6,126,166	65.7
10	5	0.00138	2.500	0.00686	92,265	633	459,742	0.99216	5,662,384	61.4
15	5	0.00177	2.500	0.00882	91,632	808	456,139	0.98988	5,202,642	56.8
20	5	0.00230	2.500	0.01144	90,824	1,039	451,5 22	0.98766	4,746,503	52.3
25	5	0.00267	2.500	0.01324	89,785	1,189	445,952	0.98593	4,294,981	47.8
30	5	0.00300	2.500	0.01491	88,596	1,321	439,678	0.98393	3,849,028	43.4
35	5	0.00348	2.500	0.01725	87,275	1,506	432,612	0.9803 3	3,409,350	39.1
40	5	0.00447	2.500	0.02213	85,769	1,898	424,102	0.97571	2,976,739	34.7
45	5	0.00537	2.500	0.02650	83,872	2,222	413,802	0.96812	2,552,636	30.4
50	5	0.00763	2.500	0.03741	81,649	3,055	400,609	0.95630	2,138,8 34	26.2
55	5	0.01030	2.500	0.05022	78,594	3,947	383,104	0.93645	1,738,224	22.1
60	5	0.01614	2.500	0.07759	74,647	5,792	358,757	0.90019	1,355,120	18.2
65	5	0.02642	2.500	0.12391	68,856	8,532	322,948	0.84182	996,363	14.5
70	5	0.04378	2.500	0.19729	60,324	11,901	271,865	0.75491	673,416	11.2
75	5	0.07188	2.500	0.30465	48,423	14,752	205,233	0.48890	401,550	8.3
80	+	0.17151	5.831	1.00000	33,670	33,670	196,318		196,318	5.8

Table 8. 1.16: BDS 2006, Life table Male (Urban)

Urban , Male Abridged Life Table										
Age (x)	**n**	**nMx**	**nax**	**nqx**	**lx**	**ndx**	**nLx**	**5Px**	**Tx**	**ex**
0	1	0.08746	0.279	0.08227	100,000	8,227	94,068	0.90035	5,543,724	55.4
1	4	0.01291	1.611	0.050 10	91,773	4,597	356,108	0.95728	5,449,656	59.4
5	5	0.00458	2.500	0.02263	87,175	1,973	430,944	0.98220	5,093,548	58.4
10	5	0.00259	2.500	0.01285	85,202	1,095	423,275	0.98490	4,662,604	54.7
15	5	0.00351	2.500	0.01737	84,107	1,461	416,884	0.97891	4,239,329	50.4
20	5	0.00504	2.500	0.02486	82,646	2,055	408,094	0.97463	3,822,445	46.3
25	5	0.00525	2.500	0.02590	80,591	2,087	397,739	0.97318	3,414,352	42.4
30	5	0.00563	2.500	0.02776	78,504	2,179	387,072	0.97051	3,016,613	38.4
35	5	0.00635	2.500	0.03127	76,325	2,387	375,657	0.96548	2,629,541	34.5
40	5	0.00772	2.500	0.03787	73,938	2,800	362,690	0.95777	2,253,884	30.5
45	5	0.00958	2.500	0.04676	71,138	3,326	347,374	0.94504	1,891,194	26.6
50	5	0.01313	2.500	0.06357	67,812	4,311	328,281	0.92699	1,543,821	22.8
55	5	0.01734	2.500	0.08309	63,501	5,276	304,314	0.89911	1,215,540	19.1
60	5	0.02560	2.500	0.12031	58,225	7,005	273,610	0.85341	911, 226	15.7
65	5	0.03871	2.500	0.17646	51,219	9,038	233,502	0.78481	637,616	12.4
70	5	0.06036	2.500	0.26223	42,181	11,061	183,254	0.68720	404,114	9.6
75	5	0.09424	2.500	0.38136	31,120	11,868	125,931	0.42982	220,860	7.1
80	+	0.20281	4.931	1.00000	19,252	19,252	94,929		94,929	4.9

Table 8. 1.17: Urban, Female Abridged Life Table

Urban , Female Abridged Life Table										
Age (x)	**n**	**nMx**	**nax**	**nqx**	**lx**	**ndx**	**nLx**	**5Px**	**Tx**	**ex**
0	1	0.04991	0.194	0.04798	100,000	4,798	96,133	0.94175	6,492,363	64.92
1	4	0.00691	1.655	0.02718	95,202	2,588	374,740	0.97760	6,396,231	67.19
5	5	0.00239	2.500	0.01186	92,614	1,098	460,327	0.99026	6,021,490	65.02
10	5	0.00152	2.500	0.00759	91,516	694	455,845	0.99142	5,561,164	60.77
15	5	0.00192	2.500	0.00957	90,822	870	451,935	0.98907	5,105,319	56.21
20	5	0.00248	2.500	0.01230	89,952	1,107	446,994	0.98673	4,653,384	51.73
25	5	0.00287	2.500	0.01424	88,846	1,265	441,064	0.98485	4,206,389	47.34
30	5	0.00324	2.500	0.01608	87,580	1,408	434,381	0.98267	3,765,325	42.99
35	5	0.00375	2.500	0.01860	86,172	1,603	426,853	0.97895	3,330,944	38.65
40	5	0.00477	2.500	0.02355	84,569	1,992	417,8 68	0.97426	2,904,091	34.34
45	5	0.00568	2.500	0.02799	82,578	2,311	407,111	0.96652	2,486,223	30.11
50	5	0.00798	2.500	0.03912	80,267	3,140	393,482	0.95433	2,079,112	25.90
55	5	0.01078	2.500	0.05249	77,126	4,049	375,510	0.93381	1,685,630	21.86
60	5	0.01681	2.500	0.08065	73,078	5,893	350,655	0.89665	1,310,120	17.93
65	5	0.02736	2.500	0.12805	67,184	8,603	314,415	0.83718	959,464	14.28
70	5	0.04511	2.500	0.20271	58,582	11,875	263,221	0.74927	645,049	11.01
75	5	0.07364	2.500	0.31095	46,707	14,524	197,224	0.48347	381,828	8.18
80	+	0.17434	5.736	1.00000	32,183	32,183	184,604		184,604	5.74

Table 8. 1.18: Rural, Male Abridged Life Table

Rural, Male Abridged Life Table										
Age (x)	**n**	**nMx**	**nax**	**nqx**	**lx**	**ndx**	**nLx**	**5Px**	**Tx**	**ex**
0	1	0.10216	0.317	0.09550	100,000	9,550	93,478	0.88341	5,252,809	52.5
1	4	0.01605	1.571	0.06178	90,450	5,588	348,229	0.94747	5,159,331	57.0
5	5	0.00555	2.500	0.02737	84,862	2,323	418,505	0.97862	4,811,102	56.7
10	5	0.00307	2.500	0.01522	82,540	1,256	409,558	0.98256	4,392,598	53.2
15	5	0.00398	2.500	0.01970	81,283	1,601	402,414	0.97613	3,983,040	49.0
20	5	0.00570	2.500	0.02812	79,682	2,241	392,808	0.97127	3,580,626	44.9
25	5	0.00596	2.500	0.02936	77,441	2,274	381,521	0.96963	3,187,819	41.2
30	5	0.00638	2.500	0.03142	75,167	2,361	369,934	0.96661	2,806,297	37.3
35	5	0.00721	2.500	0.03543	72,806	2,579	357,582	0.96098	2,436,364	33.5
40	5	0.00873	2.500	0.04274	70,227	3,001	343,631	0.95259	2,078,781	29.6
45	5	0.01074	2.500	0.05228	67,226	3,515	327,341	0.93925	1,735,150	25.8
50	5	0.01444	2.500	0.06969	63,711	4,440	307 ,454	0.92019	1,407,809	22.1
55	5	0.01900	2.500	0.09068	59,271	5,375	282,916	0.89081	1,100,355	18.6
60	5	0.02770	2.500	0.12953	53,896	6,981	252,026	0.84325	817,439	15.2
65	5	0.04150	2.500	0.18802	46,914	8,821	212,521	0.7718 3	565,413	12.1
70	5	0.06447	2.500	0.27762	38,094	10,576	164,030	0.67141	352,893	9.3
75	5	0.09973	2.500	0.39914	27,518	10,984	110,132	0.41687	188,863	6.9
80	+	0.21002	4.762	1.00000	16,535	16,535	78,731		78,731	4.8

Table 8.1. 19: Life Table Rural (Female)

Rural, Female Abridged Life Table										
Age (x)	**n**	**nMx**	**nax**	**nqx**	**lx**	**ndx**	**nLx**	**5Px**	**Tx**	**ex**
0	1	0.04155	0.170	0.04016	100,000	4,016	96,668	0.95204	6,732,698	67.3
1	4	0.00518	1.668	0.02046	95,984	1,964	379,354	0.98314	6,636,030	69.1
5	5	0.00180	2.500	0.00895	94,020	841	467,995	0.99253	6,256,676	66.5
10	5	0.00120	2.500	0.00598	93,178	558	464,497	0.99306	5,788,681	62.1
15	5	0.00159	2.500	0.00790	92,62 1	732	461,274	0.99086	5,324,184	57.5
20	5	0.00209	2.500	0.01039	91,889	955	457,059	0.98879	4,862,909	52.9
25	5	0.00242	2.500	0.01203	90,935	1,094	451,937	0.98725	4,405,850	48.5
30	5	0.00272	2.500	0.01348	89,840	1,211	446, 173	0.98545	3,953,913	44.0
35	5	0.00315	2.500	0.01562	88,629	1,384	439,683	0.98201	3,507,740	39.6
40	5	0.00412	2.500	0.02039	87,244	1,779	431,774	0.97749	3,068,057	35.2
45	5	0.00500	2.500	0.02468	85,465	2,109	422,053	0.970 06	2,636,283	30.8
50	5	0.00719	2.500	0.03533	83,356	2,945	409,418	0.95872	2,214,230	26.6
55	5	0.00972	2.500	0.04745	80,411	3,816	392,517	0.93967	1,804,812	22.4
60	5	0.01534	2.500	0.07385	76,596	5,656	368,838	0.90452	1,412, 295	18.4
65	5	0.02527	2.500	0.11884	70,939	8,431	333,621	0.84753	1,043,457	14.7
70	5	0.04214	2.500	0.19063	62,509	11,916	282,755	0.76184	709,836	11.4
75	5	0.06973	2.500	0.29690	50,593	15,021	215,413	0.49562	427,081	8.4
80	+	0.16806	5.950	1.00000	35,572	35,572	211,669		211,669	6.0

Table 8.1.20: Distribution of Population and Deaths by Age and Sex, (National) Botswana 2006

Age group	Male	Female	Total	Male	Female	Total	Age Specific Death Rates (Males)	Age Specific Death Rates (Females)	Age Specific Death Rates (National)
0	23029	24675	47703	921	479	1401	0.0400	0.0194	0.0294
1 - 4	80724	77414	158137	416	259	676	0.0052	0.0033	0.0043
5 - 9	98434	93364	191799	180	42	221	0.0018	0.0004	0.0012
10 - 14	102587	104708	207295	143	62	205	0.0014	0.0006	0.0010
15 - 19	87159	87921	175079	143	85	228	0.0016	0.0010	0.0013
20 - 24	88232	99742	187974	381	334	714	0.0043	0.0033	0.0038
25 - 29	76999	84969	161968	685	778	1463	0.0089	0.0092	0.0090
30 - 34	63022	62864	125886	1078	1092	2170	0.0171	0.0174	0.0172
35 - 39	42069	49432	91501	850	924	1774	0.0202	0.0187	0.0194
40 - 44	36344	43798	80141	817	310	1127	0.0225	0.0071	0.0141
45 - 49	30826	36307	67133	1016	506	1522	0.0330	0.0139	0.0227
50 - 54	23987	29169	53156	725	172	897	0.0302	0.0059	0.0169
55 - 59	16902	20929	37831	382	63	444	0.0226	0.0030	0.0117
60 - 64	12051	16632	28683	253	470	724	0.0210	0.0283	0.0252
65 - 69	11076	14841	25917	538	329	866	0.0485	0.0221	0.0334
70 - 74	8210	12988	21198	689	316	1004	0.0839	0.0243	0.0474
75 - 79	7322	10095	17417	333	483	816	0.0455	0.0478	0.0468
80+	7749	14666	22415	1222	1386	2608	0.1576	0.0945	0.1163
Age unknown	525	60	585	60	131	191	0.1143		
Total	**817245**	**884574**	**1701819**	**10830**	**8220**	**19050**	**0.0133**		

Table 8.1.21: Distribution of Population and Deaths by Age group and Sex, (Urban) Botswana 2006

Age group	Male	Female	Total	Male	Female	Total	Age Specific Death Rates (Males)	Age Specific Death Rates (Females)	Age Specific Death Rates (Urban)
0	12589	12964	25552	537	245	782	0.0427	0.0189	0.0306
1 - 4	40607	39520	80127	163	212	375	0.0040	0.0054	0.0047
5 - 9	50264	48932	99196	34	42	76	0.0007	0.0009	0.0008
10 - 14	53448	57474	110923	20	0	20	0.0004	0.0000	0.0002
15 - 19	49782	55738	105520	70	0	70	0.0014	0.0000	0.0007
20 - 24	55386	65672	121057	111	125	236	0.0020	0.0019	0.0019
25 - 29	51581	57818	109399	490	482	972	0.0095	0.0083	0.0089
30 - 34	40940	41764	82704	552	516	1069	0.0135	0.0124	0.0129
35 - 39	27225	33091	60316	493	444	937	0.0181	0.0134	0.0155
40 - 44	22843	25510	48353	312	106	419	0.0137	0.0042	0.0087
45 - 49	18737	21269	40006	612	383	995	0.0327	0.0180	0.0249
50 - 54	13200	14617	27817	286	80	366	0.0217	0.0055	0.0132
55 - 59	8310	9093	17403	191	63	254	0.0230	0.0069	0.0146
60 - 64	5451	7756	13207	61	293	354	0.0112	0.0377	0.0268
65 - 69	4238	6524	10762	323	182	505	0.0762	0.0278	0.0469
70 - 74	2356	5666	8023	237	238	475	0.1008	0.0420	0.0593
75 - 79	2938	4280	7218	62	244	306	0.0211	0.0570	0.0424
80+	3066	5751	8817	565	527	1092	0.1843	0.0916	0.1238
Age unknown	295	41	336	.	.	.			
Total	**463258**	**513480**	**976738**	**5121**	**4179**	**9301**			

Table 8.1.22: Distribution of Population and Deaths by Age group and Sex, (Rural) Botswana 2006

Age group	Male	Female	Total	Male	Female	Total	Age Specific Death Rates (Males)	Age Specific Death Rates (Females)	Age Specific Death Rates (Rural)
0	10440	11711	22151	384	234	618	0.0368	0.0200	0.0279
1 - 4	40117	37894	78010	253	48	301	0.0063	0.0013	0.0039
5 - 9	48170	44432	92602	146	0	146	0.0030	0.0000	0.0016
10 - 14	49139	47233	96372	122	62	185	0.0025	0.0013	0.0019
15 - 19	37376	32183	69559	73	85	158	0.0020	0.0026	0.0023
20 - 24	32847	34070	66917	270	209	479	0.0082	0.0061	0.0072
25 - 29	25418	27151	52569	195	296	491	0.0077	0.0109	0.0093
30 - 34	22082	21100	43182	526	576	1101	0.0238	0.0273	0.0255
35 - 39	14844	16341	31185	358	480	837	0.0241	0.0294	0.0269
40 - 44	13501	18287	31788	505	203	708	0.0374	0.0111	0.0223
45 - 49	12089	15039	27127	404	124	527	0.0334	0.0082	0.0194
50 - 54	10787	14552	25339	439	92	531	0.0407	0.0063	0.0210
55 - 59	8592	11836	20428	190	0	190	0.0221	0.0000	0.0093
60 - 64	6599	8876	15475	192	178	370	0.0291	0.0200	0.0239
65 - 69	6837	8317	15155	215	147	362	0.0314	0.0177	0.0239
70 - 74	5854	7322	13175	451	78	529	0.0771	0.0106	0.0401
75 - 79	4384	5816	10199	271	239	509	0.0618	0.0410	0.0499
80+	4683	8914	13598	657	860	1516	0.1402	0.0964	0.1115
Age unknown	230	20	249	60	131	191			
Total	**353988**	**371094**	**725081**	**5709**	**4041**	**9749**			

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Appendix

SURVEY METHODOLOGY

1. Objectives

The 2006 Botswana Demographic Survey (2006 BDS) was designed to provide estimates of demographic indicators at the national, urban and rural areas, and at districts levels.

2. Target Population

The target population for 2006 Botswana Demographic Survey includes:

i) All members of the household and visitors who spent the night with them.
ii) For parental survival segment, the population below 18 years of age
iii) Fertility and child survival segment targeted females 12 years and above

3. Scope and Coverage

Only private dwellings were within the scope of the survey. Institutional dwellings (prisons, hospitals, army barracks, hotels, etc), and completely industrial area were not within the scope of the survey.

The non-citizen tourists who were in Botswana on holidays and not working here were also not included in the survey. Foreign tourists may, of course, be here as visitors to a selected household for the survey. In such cases they were treated as visitors, their names were recorded and the relevant questions were asked about them only at household level.

The coverage was nation-wide using administrative sub-districts that are usually used by the Central Statistical Office.

4. Sampling Frame

In general the 2001 Population and Housing Census, undertaken in August, is the Sampling Frame on which sample selection for the Survey Programmes are based. The census result gives information on population, number of household at Locality, Enumeration Area (EA), village and district/town levels. Also given for each EA is information on ecological zones in rural areas.

The Sampling frame was defined and constituted by all Enumeration Areas (EAs) found in three geographical regions viz. (i) Cities & Towns (ii) Urban Villages , and (iii) Rural Districts as defined by the 2001 Population and Housing Census.

This survey followed a two-stage design, hence two frames were required; one for each stage.

The frame for the first stage consisted of 4,143 EAs being the total number of Enumeration Areas (EAs) delineated during the 2001 Population and Housing Census This comprised of the list of all Enumeration Areas (EAs) together with the number of households in the EAs. In the census the EAs were framed of manageable size (in terms of dwellings/households within).

The sampling frame for the second stage was produced only in the selected EAs. The field teams listed all private habitable dwellings/ households in each EA prior to enumeration. From the listed dwellings/households, occupied dwellings/households were identified and marked as such. Thus the number of occupied households in the selected EA served as sampling frame for that EA.

5. Stratification

When national level estimates are the main focus a type of stratification that is simple to implement and highly efficient is implicit stratification. It is a form of geographic stratification, which when used together with systematic probability proportional to size; pps sampling automatically distributes the sample proportionately into each of the nation's administrative subdivisions, as well as the urban and rural sectors.

Creation of strata is dictated by two principal criteria. These criteria say that there is a need to:
i. provide estimates for each major region of the country.
ii. increase precision

These are villages each with a 2001 Census population of 5,000 or more and at least 75 percent of its workforce engaged in non-agricultural economic activities.

Thus, stratification variables included cities/towns and administrative districts.

Apart from national and rural estimates, the Government, which is the main user of CSO data, requires accurate estimates for all regions for planning and monitoring of development projects. Stratification was therefore undertaken such that all districts and major urban centres become their own strata. With regard to increase precision consideration was also given to group EAs according to ecological zones in rural districts and according to income categories in cities/towns.

Geographical stratification along ecological zones and income categories was expected to improve the accuracy of survey data in view that homogeneity of the variables was relatively high (implicit stratification).

There are five major rural ecological zones, namely:

-Village,
-Lands
-Cattle Post
-Freehold Farms
-Mixture of Land and Cattle Post

During the delineation of the maps, each EA was associated with unique ecological zone and thus, grouping the EAs into respective zones was not a problem. To facilitate the selection according to the stratification variables, the EAs were listed in some order, for example starting with cattle post, then farms etc. in case of rural areas.

6. Sample Size and Allocation of Sample (Households) to Strata

The size of the sample is perhaps the most important parameter of the sample design, because it affects the precision, the cost and duration of the survey more than any other factor. With the other statistical determinants (margin of error, design effect, household size), the overall sample size for BDS has also taken consideration of the numbers of PSUs (EAs) and SSUs (households). A total of 11,760 households were included in the sample.

Remarks: Two general rules of thumb govern the choice on numbers of PSUs (EAs) and SSUs (households): (i) the more PSUs, it is better, as both geographic representation, or spread, and overall reliability will be improved; and (ii) the smaller the number of SSUs, the more reliable estimates will be.

For BDS the sample (households) was allocated into strata proportionally to the total number of household as per 2001 Census (see Table 1)

Table1: Distribution of Households and EAs

Str.No.	District Code	DistrictName	Households 2001 Census	First Allocation		Final Allocation	
				Households	EAs	Households	EAs
		1	2	3	4=3/20	4A	5=4A*20
		CITIES/TOWNS					
1	01	Gaborone	58476	1681	84	84	1680
2	02	Francistown	23124	665	33	33	660
3	03	Lobatse	8523	245	12	12	240
4	04	Selibe Phikwe	15258	439	22	22	440
5	05	Orapa	2578	74	4	4	80
6	06	Jwaneng	4681	135	7	7	140
7	07	Sowa	979	28	1	4	80
	Total	**Cities/Towns**	**113619**	**3267**	**163**	**166**	**3320**
		Ur.VILLAGES					
8	10	Southern	12278	353	18	18	360
8	20	South East	9843	283	14	14	280
8	30	Kweneng	30758	884	44	44	880
8	40	Kgatleng	7869	226	11	11	220
8	50	Central	43965	1264	63	63	1260
8	70	Ngamiland	13458	387	19	19	380
8	80	Ghanzi	2679	77	4	4	80
8	90	Kgalagadi	1671	48	2	4	80
	Total	**Ur. Villages**	**122521**	**3523**	**176**	**177**	**3540**
		RURAL					
9	10	Ngwaketse	12185	350	18	18	360
10	11	Borolong	10348	298	15	15	300
11	12	Ngwaketse West	2391	69	3	4	80
12	20	South East	4937	142	7	7	140
13	30	Kweneng East	14358	413	21	21	420
14	31	Kweneng West	7462	215	11	11	220
15	40	Kgatleng	9185	264	13	13	260
16	50	Serowe/Palapye	17327	498	25	25	500
17	51	Mahalapye	13580	390	20	20	400
18	52	Bobonong	9248	266	13	13	260
19	53	Central Boteti	6746	194	10	10	200
20	54	Tutume	19421	558	28	28	560

Note
Col 3= Households in sample are distributed proportional to households in population
Col 4= Number of Households in Col 3 divided by 20 (the number of households selected per EA)
Col 4A= As per the nature of the survey it is to have at least 4 EAs in each district
Col 5= Final households in the sample (considering final number of EAs in the sample)

****Urban Villages:** These are villages each with a 2001 Census population of 5,000 or more and at least 75 percent of its workforce

engaged in non-agricultural economic activities. In total there are now 27 urban villages.

Stratum 8 (Urban Villages) is a derived stratum of EAs of Urban Villages of Rural Districts (Strata 9-27).

Remark: Complete rural district results will need the estimation of any urban small town or urban village component to add to the rural component.

7. Sample Design

A stratified two-stage probability sample design was utilized for the selection of the sample.

The first stage was the selection of EAs as Primary Sampling Units (PSUs) selected with probability proportional to measures of size (PPS), where measures of size (MOS) are the number of households in the EA as defined by the 2001 Population and Housing Census. In all 588 EAs were selected with probability proportional to size.

At the second stage of sampling, the households were systematically selected from fresh list of occupied households prepared at the beginning of the survey's fieldwork (i.e. listing of households for the selected EAs). A total of 11, 760 households were drawn systematically.

(a) First Stage: Sampling of EAs

The procedure for selecting the EAs in each stratum consists of:

(i) Calculating the sampling interval for the stratum:

$I = \sum Mi / n$

Where;

$\sum Mi$ is the size of the stratum (total number of households in the stratum according to 2001 census) and 'n' is the number of EAs to be selected in the stratum.

(ii) Calculating the cumulated size of each EA.

(iii) Calculating the sampling numbers R, R+I, R+2I,…,R+(n-1)I, where R is the random number (sampling number) between 1 and I.

(iv) Comparing each sampling number with the cumulated size.

The EA to be selected was the first whose cumulated size was greater or equal to the sampling number.

(b) Second Stage: Sampling of Households

Upon completion of households listing, the household lists are to be carefully checked. Household numbers would be assigned to each occupied household in the selected EA, Vacant and non-residential structures and structures under construction would not be considered. The total number of households in the selected EA would be the last household number assigned in the EA.

The listing operation is used mainly to update the measures of size at the EA level for second stage sampling.

The criterion for the number of households allocated in the EA was fixed because of administrative convenience and spread of sample over strata.

The Systematic selection of households consists of:

(i) Calculating the sampling interval for the stratum:

$I = M / b$

Where;

M is the total number of households listed in the stratum and 'b' is the number of households to be selected in the stratum.

(ii) Calculating the sampling numbers R, R+I, R+2I,…, R+(b-1)I, where R is the random number between 1 and I.

8. Publicity for Public Awareness

Several methods were used to make Batswana aware of the survey viz.:

i. Communication of information about the Survey to Regional and District Leaders was made.

ii. The Government Statistician was interviewed regarding BDS in Radio Botswana morning Programme of Masa a Sele.

iii. Some selected local newspapers were used to run adverts in. These were the Daily news, the Voice, the Guardian, the Ngami Times and Mmegi

iv. Some small items, which were given to the field work teams for publicity purposes were: T-shirts, caps, bags and motorcar bumper stickers.

9. Questionnaires

The questionnaire is the primary recording documents of any survey. The 2007 BDS consisted of only one questionnaire, the Household Questionnaire. In the development of the questionnaire, along with the professionals, the other members like users were also invited. The final version of the questionnaire was produced on the basis of the experiences gained from the pre test of the survey conducted using the draft questionnaire.

The household questionnaire is a standardized questionnaire of the CSO's Household Survey Programme except with a little modification as per the need of the designated survey. The challenge is to develop the types of questions that lead to achieving the survey objectives.

The Household questionnaire was divided into various sets of questions with the major ones as;

vii. Socio-Demographic Characteristics
viii. Parental Survivor and Fostering
ix. Fertility and child survival
x. Mortality
xi. Education and Training
xii. Migration

10. The Instruction Manuals

One other survey instrument is the instructions manual that includes the Supervisor's Manual, enumerators and the Editors and Coders manual. These were developed together with the questionnaire and finalised after the pre-test. All the three manuals are a guide to the survey personnel and are used hand in hand with the questionnaire to clarify what the aim of each question is. The role of the supervisor was stipulated in the supervisor's manual.

11. Pre-Test

The Botswana Demographic Survey household questionnaire was pre-tested in areas in and around Gaborone from 14-16 April 2006. Households were selected at random form EAs belonging to different strata according to the stratification in the sample design.

12. Training of Field Staff

- A team of eight officers trained the field staff for the BDS during the three weeks of July 2006.
- The first week was training for the supervisors only and being joined by enumerators in the second to the last week.
- The group of trainees consisted of thirty two (32) supervisors and sixty-nine (69) enumerators. At the end of training twenty two (22) supervisors were selected for field work while from enumerators sixty (60) were selected among which sixteen (16) were designated for coding and editing duties.
- During the training, as a selection criterion, the trainees were subjected to practical interviews involving real households followed by a theoretical test. Translation of the questions into Setswana was practiced during the training because most of the interviews were conducted in local language, Setswana.

13. Field Teams

- There was 66 field staff, comprising 22 supervisors and 44 enumerators.
- Nineteen supervisors were on temporary contract whereas three were permanent Central Statistics Office staff.
- The teams comprised mainly of two enumerators and a supervisor.
- Each team had at least 1 vehicle with a driver.
- Each of the 22 teams was assigned at least 26 EAs during the course of the survey.
- Six officers who were responsible for the quality control field visits supported the teams, together with the head of surveys and of demography units.
- The survey data collection was conducted from 1st August to 30th November 2006.

14. Listing of households in the selected EAs

Listing of the households in the EAs forms the sampling frame for the second stage of sampling of households and consequently affects the second stage sampling weight. During each round, each of the 22 teams listed all households in habitable permanent and private dwellings in their assigned EAs within a period of two days. Temporary dwellings such as tents, military barracks and school/institutional hostels were excluded. During the listing households were identified as either 'Occupied' or 'Unoccupied'. From the list of occupied households the enumeration teams used Systematic Sampling procedure to select households. Precautions were observed that the household listing in the EA should be complete and no omission or duplication of listing of EAs is done.

15. Quality Control

The quality control team during their field inspections identified some problems relating to recording and interpretation of questions. They advised the teams accordingly. Since most of the coding and editing exercise was done alongside the data collection, it was easy to contact the teams while they were still out in the field and make proper editing and coding of the items.

16. Data Collection

On arrival at the area at which a selected EA is located, the survey team introduced themselves to the Chief or elders of the village or area before they could start the enumeration. The next step was listing the total households in the selected EAs by the team and then the supervisor made the selection of occupied households and handed over the list of selected households to respective enumerators. The enumerators approached the selected households and informed the purpose of their visit to the Head of the household. Enumerators were trained to explain the main objective of the survey to the respondents and encourage them for their full participation. Once the respondent was convinced for participation, enumerator recorded all the relevant information for those members who spent last night in the household. In some cases it was not possible to administer the questionnaire at the first visit, then call back technique was applied to the maximum of three visits and the final result was recorded in the result box. One household questionnaire was administered for one selected household.

17. Calculation of Sampling Weights

Being a multistage design, it follows naturally that the sample selected at each stage represents (or is assumed to) the respective population. The fundamental assumption was that units selected at each stage were similar to those not selected, in respect of characteristics of interest. In the treatment of unit for the non-response the assumption was that the responders were similar to non-responders though that should not be always taken for granted.

The weights of the sample are equal to the inverse of the probability of selection. Therefore the sampling probabilities at first stage of selection of EAs including probabilities of selecting the households were used to calculate the weights.

There are three components to the weighting:

(i) From EA to Stratum Level

First stage weights account for the varying probability of EA selection. That is they are proportional to the inverse of the size measure.

First stage weight for i-th EA in h-th stratum is

$$W_{1hi} = \frac{\sum_{i} M_{hi}}{n_h M_{hi}}$$

Where,

W_{1hi} = First stage weight for i-th EA in h-th stratum.

n_h = The number of EAs selected in hth stratum.

M_{hi} = The size (households according to 2001 Census frame) of the i-th EA in h-th stratum

$\sum_i M_{hi}$ = The total size of the hth stratum (2001 Census frame).

(ii) From Household Level to EA Level

This is a simple weight obtained by dividing the total occupied households in the EA by the number of selected households in that EA.

Second stage weight for i-th EA in h-th stratum is

$$W_{2hi} = \frac{M^{o}_{hi}}{m_{hi}}$$

Where,

W_{2hi} = Second stage weight for i-th EA in h-th stratum.

M^{o}_{hi} = Total number of listed households in i-th EA in h-th stratum.

m_{hi} = The number of occupied households selected for the i-th EA in h-th stratum.

(iii) A Non-Response Adjustment

For the Botswana Demographic Survey no substitution was allowed for non-response and household questionnaire had to be returned for all households, responding or non-responding. The response codes were:

Response Result Code	Final Visit Result
1	Completed
2	Present but not available for interviews
3	Postponed
4	Refused
5	Partly completed
6	Other: Dwelling Vacant/ Dwelling out of scope

Only non-contact and refusals were taken as non-response. The other sample loss was effectively taken as zero i.e. no one lived in these households. The non-response rate was made at the EA level. The adjustment was equal to the presumed total households in the EA (codes 1+2+4+5) divided by the presumed valid response in that EA (codes1+5). In effect non-contacts and refusals were given the characteristics of average valid respondents in the EA.

The non-response adjustment for the i-th EA in h-th stratum

$$Rhi = 1 + \frac{m_{2hi} + m_{4hi}}{m_{1hi} + m_{5hi}}$$

Where m_{jhi} is the number of occupied households falling under j-th (j = 1,2,4 and 5) result code in i-th EA of h-th stratum.

Thus, the **final weight** for the i-th EA in h-th stratum is

$$W_{hi} = W_{1hi}. W_{2hi}. R_{hi}$$

18. Data Processing

Before data entry was carried out, the questionnaires were edited to check if all the relevant questions have been responded to and coded according to the codes designed for the study. Editing and coding started in September with 13 Coders and finished in December 2006. Data entry was carried out under the supervision of one programmer/supervisor. Consistency checks on the data set as per the Computer edit Specifications designed by the subject matter specialists were performed.