



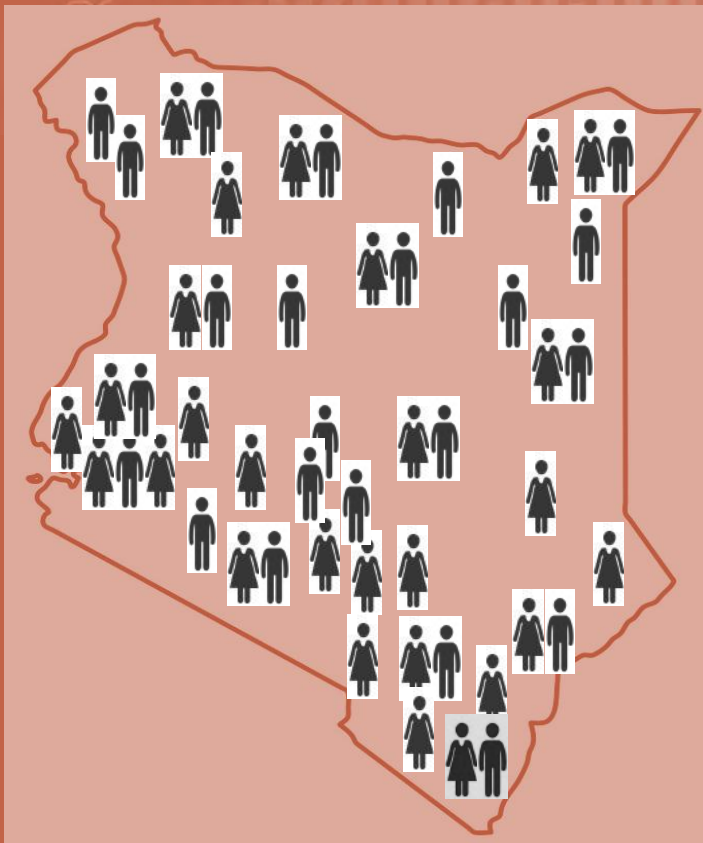
Republic of Kenya



2019 Kenya Population and Housing Census

Analytical Report on Population Dynamics

Volume VIII



July, 2022



Kenya National Bureau of Statistics
The National Treasury and Planning





2019 Kenya Population and Housing Census

“Counting Our People for Sustainable Development
and Devolution of Services”

Analytical Report on Population Dynamics

Volume VIII



July, 2022

Table of Contents

| | |
|---|------|
| Table of Contents..... | i |
| List of Tables..... | iii |
| List of Figures..... | v |
| Abbreviations..... | vi |
| Foreword..... | vii |
| Acknowledgement..... | viii |
| Key indicators at a Glance..... | ix |
| Executive Summary..... | x |
| Chapter 1: Introduction..... | 1 |
| 1.1. Background Information..... | 1 |
| 1.2. Objectives of the 2019 Census..... | 1 |
| 1.3. Overview of Population Dynamics..... | 2 |
| 1.4. Relevance of Population Dynamics..... | 2 |
| 1.5. Methodology..... | 4 |
| 1.6. Data Quality..... | 5 |
| 1.7. Summary of Data Quality Issues..... | 11 |
| 1.8. Definition of Terms and Key Concepts..... | 11 |
| Chapter 2: Population Size, Growth, Structure and Distribution..... | 14 |
| 2.1. Introduction..... | 14 |
| 2.2. Population Size and Growth..... | 14 |
| 2.3. Age-Sex Structure..... | 19 |
| 2.4. Children, Working Age and Elderly Population..... | 19 |
| 2.5. Population Pyramid..... | 21 |
| 2.6. Population Ratios..... | 22 |
| 2.7. Population Distribution and Density..... | 26 |
| 2.8. Urbanization..... | 28 |
| Chapter 3: Nuptiality..... | 33 |
| 3.1. Introduction..... | 33 |
| 3.2. Marital Status by Age and Sex..... | 33 |
| 3.3. Marital Status by Age, Sex and Place of Residence..... | 34 |
| 3.4. Trends in Timing of First Marriages..... | 35 |
| Chapter 4: Fertility..... | 38 |
| 4.1. Introduction..... | 38 |
| 4.2. Trends in Current Fertility..... | 38 |
| 4.3. Age Specific Fertility Rates, 2019..... | 39 |
| 4.4. Total Fertility Rates by County..... | 40 |
| 4.5. Lifetime Fertility..... | 41 |

| | | |
|--|---|----|
| 4.6. | Trends in Average Parities | 42 |
| 4.7. | Childlessness | 45 |
| Chapter 5: Mortality and Health | | 47 |
| 5.1. | Introduction | 47 |
| 5.2. | Reported Estimates of Mortality | 47 |
| 5.3. | Childhood Mortality | 48 |
| 5.4. | Adult Mortality | 52 |
| 5.5. | Overall Mortality | 53 |
| 5.6. | Maternal Mortality | 55 |
| Chapter 6: Migration | | 57 |
| 6.1. | Introduction | 57 |
| 6.2. | Internal Migration | 57 |
| 6.3. | Recent Migrants by Age and Sex | 60 |
| 6.4. | Distribution of Current Internal Migrant Population by Place of Residence, Reason for Migration and Age | 62 |
| 6.5. | Distribution of recent migrants by main urban centres | 62 |
| 6.6. | International Migration | 63 |
| Chapter 7: Conclusions and Recommendations | | 66 |
| 7.1. | Introduction | 66 |
| 7.2. | Conclusions | 66 |
| 7.3. | Recommendations | 68 |
| References | | 70 |
| Appendices | | 73 |

List of Tables

| | |
|--|----|
| Table 1. 1: Summary of Census Counts in Kenya, 1897-2019 | 1 |
| Table 1. 2: Trends in Enumerated Population by age group, 1979-2019..... | 6 |
| Table 1. 3: Age specific growth rates, Kenya, 1979-2019..... | 7 |
| Table 1. 4: Sex ratios at birth by County..... | 9 |
| Table 1. 5: Highest and lowest Sex ratios of the population age 60 and above, 2009..... | 10 |
| Table 1. 6: Highest and lowest Sex ratios of the population age 60 and above, 2019..... | 10 |
| Table 1. 7: Adjusted age specific birth rates, 2019..... | 11 |
| Table 2. 1: Trends in Population Size and Growth, 1969-2019* | 14 |
| Table 2. 2: Natural Growth Rate, 2009 and 2019..... | 16 |
| Table 2. 3: Trends in Distribution of Population Size and Inter-censal Growth Rate by County, 1999 – 2019..... | 18 |
| Table 2. 4: Trends in Percentage Distribution of Population by Age Groups 1969-2019 | 19 |
| Table 3. 1: Percentage Distribution of Population by Marital Status, Age and Sex, 2019..... | 33 |
| Table 3. 2: Percentage Distribution of Rural Population by Marital Status, Age and Sex, 2019..... | 34 |
| Table 3. 3: Percentage Distribution of Urban Population by Marital Status, Age and Sex, 2019 | 35 |
| Table 3. 4: Trends in Timing of Marriages for Age Group 15-19 by Sex, 1989-2019 | 35 |
| Table 3. 5: Five Counties with the Highest and Lowest Male-Female Age Differences in SMAM..... | 37 |
| Table 4. 1: Age Specific Fertility Rates by Place of Residence, 2019 | 40 |
| Table 4. 2: Distribution of Counties by level of Total Fertility Rates, 2019..... | 40 |
| Table 4. 3: Trends in Percentage Distribution of Women of Reproductive Age by Parity, 1989 – 2019..... | 42 |
| Table 4. 4: Trends in Average Parities by Age, 1969-2019..... | 43 |
| Table 4. 5: Average Parities for Females 12-19 Years by Place of Residence and County, 2019..... | 44 |
| Table 4. 6: Proportion of Childlessness Among Women Age 45-49 by County..... | 46 |
| Table 5. 1: Percent Distribution of Reported Deaths in Household by Age and Sex..... | 47 |
| Table 5. 2: Percent Distribution of Reported Childhood Deaths by Age, Sex and Place of Residence in the Last 12 Months Prior to Census | 48 |
| Table 5. 3: Distribution of deaths in the last 12 months by Age and County, 2019 | 49 |
| Table 5. 4: Early Childhood Mortality Rates..... | 50 |
| Table 5. 5: Childhood Mortality Rates..... | 51 |
| Table 5. 6: Trends in Age Specific Mortality Rates for Women and Men Age 15 - 49..... | 52 |
| Table 5. 7: Life Expectancy at Age 0, Age 20, Age 60 and Age 80 (in Years)..... | 54 |
| Table 5. 8: Distribution of the Reported Number of Women and Women Dead due to Pregnancy Related Causes in the 1 Year Preceding the Census, 2019 | 55 |
| Table 6. 1: Top 13 Net Recent In-migration Counties | 58 |
| Table 6. 2: Top 13 Net Recent Out-migration Counties..... | 59 |
| Table 6. 3: Proportion of recent migrants' reasons for migration by sex and age, Kenya 2019 | 61 |
| Table 6. 4: Proportion of Recent Migrants' Reasons for Migration by Place of Residence, Sex and Age..... | 62 |
| Table 6. 5: Distribution of Recent Migrants by Sex and Main Urban Centres, 2019..... | 63 |
| Table 6. 6: Top ten countries of origin of Foreign-Born migrants..... | 64 |
| Appendix 1: 2019 KPHC Questionnaires..... | 73 |
| Appendix 2: Proportion of Married Persons, Age 15-19 and Singulate Mean Age at Marriage by Sex, Place of Residence and County, 2019..... | 79 |
| Appendix 3: Age Specific Fertility Rates by County and Place of Residence, 2019..... | 80 |
| Appendix 4: Recent migrants by County of residence 1 year ago and current residence | 81 |
| Appendix 4: Recent migrants by County of residence 1 year ago and current residence, cont'd..... | 82 |
| Appendix 4: Recent migrants by County of residence 1 year ago and current residence, cont'd..... | 83 |

| | |
|--|----|
| Appendix 4: Recent migrants by County of residence 1 year ago and current residence, cont'd..... | 84 |
| Appendix 5: Trends of Recent in Migration, Outmigration and Net migration by Sex, County and Region..... | 85 |
| Appendix 6: Contributors to the 2019 Kenya Population and Housing Census Monographs..... | 86 |

List of Figures

| | |
|--|----|
| Figure 2.1 Trends in Children Population (0-14 years), 1969-2019..... | 20 |
| Figure 2.2 Trends in Working Age Population (15-64 years), 1969-2019..... | 20 |
| Figure 2.3 Trends in Population Aged 60 and Above, 1969-2019..... | 21 |
| Figure 2.4 Trends in proportions of selected special age groups, 1969-2019..... | 21 |
| Figure 2.5 Population Pyramid Kenya, 2019..... | 22 |
| Fig 3.1: Singulate Mean Age at Marriage by Sex, 1979 - 2019..... | 36 |
| Figure 4.1: Trend in Total Fertility Rate..... | 39 |
| Figure 4.2: Proportion of Childless Women Age 45-49 by Place of Residence, 2019..... | 45 |
| Figure 5. 1: Probability of Dying by Age and Sex..... | 53 |
| Figure 5. 2: Maternal Mortality by County, 2019..... | 56 |
| Figure 6. 2: Counties with top Net Recent Out-migration rates..... | 59 |
| Figure 6. 3: Reasons of Migration Nationally and by Sex..... | 61 |
| Figure 6. 4: Top Ten Countries of Previous Residence in August 2018..... | 64 |
| Figure 6. 5: Persons Ever Emigrated by Top Ten Countries/Regions of Current Residence..... | 65 |

Abbreviations

| | |
|--------|--|
| ASAL | Arid and Semi-Arid Land |
| ASFR | Age Specific Fertility Rate |
| ASMR | Age Specific Mortality Rates |
| CEB | Children Ever Born |
| CSPro | Census and Survey Processing system |
| DHS | Demographic and Health Survey |
| EA | Enumeration Area |
| GPS | Geographical Positioning System |
| ICT | Information, Communication and Technology |
| KDHS | Kenya Demographic and Health Surveys |
| KNBS | Kenya National Bureau of Statistics |
| KPHC | Kenya Population and Housing Census |
| MTP | Medium Term Plan |
| P/F | Period Fertility |
| SDGs | Sustainable Development Goals |
| SIDA | Swedish International Development Agency |
| SMAM | Singulate Mean Age at Marriage |
| SPSS | Statistical Package for Social Sciences |
| SRB | Sex Ratio at Birth |
| TFR | Total Fertility Rate |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNECA | United Nations Economic Commission for Africa |
| UNFPA | United Nations Population Fund |
| UNICEF | United Nations Children’s Fund |
| UNSD | United Nations Statistics Division |
| US | United States |
| USAID | United States Agency for International Development |
| WHO | World Health Organization |

Foreword

The 2019 Kenya Population and Housing Census (KPHC) was conducted from the night of 24th/25th to 31st August 2019 and followed the United Nations principles and recommendations for conducting the 2020 round of censuses. The theme of the Census was “Counting Our People for Sustainable Development and Devolution of Services”. This resonated very well with Kenya’s development agenda -Vision 2030 and the Big Four, as well as other regional and international development initiatives such as the Sustainable Development Goals (SDGs) and the African Union Agenda 2063. The main objective was to provide the Government and other stakeholders with essential information for evaluating policies and easing planning and budgeting processes.

The first set of the census reports (basic volumes I-IV) were released in a record 6 months after enumeration. The second set of the census reports covers the thematic areas of: Fertility and Nuptiality; Mortality; Migration; Education and Training; Youth and Adolescents; Information and Communication Technology; Housing Conditions, Amenities and Household Assets; Gender Dimensions; Older and Vulnerable Population; Urbanization; Disability; Household and Family Dynamics; Labour Force Dynamics; Agriculture; Population Dynamics and Population Projections.

This monograph presents information on the mechanisms of how and why populations change in size and structure over time, and how the demographic processes that are determined mainly by age-sex distribution, fertility, mortality, and migration influence the future size of the labour market, unemployment, job creation, poverty and environmental degradation. From the data, early childbearing and marriages are still prevalent among adolescent girls in Kenya, at 53 births per 1000 teenagers. Early childbearing is higher in rural, at 58 births per 1000 teenagers compared to urban areas, at 38 births per 1000 teenagers. However, timing of marriage for both men and women has been increasing over the years, an indication of delayed entry into marriage.

The information in this monograph provides valuable programmatic evidence to policymakers for use in the formulation of policies and plans explicitly intended to achieve development targets. The report not only adds knowledge but also serves as a foundation for assessment, reporting and eventually monitoring achievement of SDGs by 2030, Vision 2030, formulation of MTP IV, County Integrated Development Plans, and other sector-specific plans.

On behalf of the Government, I wish to thank the staff, management, and Board of Directors of the Kenya National Bureau of Statistics as well as the authors for their contribution towards the preparation of this report. I further wish to extend special thanks to our development partners, especially UNFPA, UNICEF, UN-Women, WHO and UNDP under the coordination of UN Resident Coordinators’ Office and all the other stakeholders who were involved in the process for their technical and financial support.



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Acknowledgement

The 2019 Kenya Population and Housing Census (KPHC) was implemented under the provisions of the Constitution of Kenya, 2010 and the Statistics Act, 2006. The census was the sixth to be conducted in Kenya since independence and the first that was fully digitized, where the latest technology was embraced. This monograph is among the set of 16 such reports, addressing various topical areas regarding the demographic, social, and economic profiles of the Kenyan population.

The 2019 KPHC implementation process was accomplished through a concerted effort of various government ministries, departments, agencies, International and local organizations, and individuals who assisted during preparation, collection, compilation, processing, analyzing and publishing the results. Kenya National Bureau of Statistics (KNBS), on behalf of the Government, takes this opportunity to sincerely thank all those who participated in the preparation of this report.

The Bureau is indebted to all the organs of government, the private sector, and the public for the overwhelming support and participation in the successfully implemented the 2019 Census. Special gratitude goes to United Nations Population Fund (UNFPA); United Nations Entity for Gender Equality and the Empowerment of Women (UN Women); United Nations Children's Fund (UNICEF); United Nations Economic Commission for Africa (UNECA); World Health Organization (WHO); United Nations Development Programme (UNDP) led by UN Resident Coordinators' Office (UNRCO); African Development Bank (AfDB); Statistics Sweden; Office of National Statistics, United Kingdom (ONS-UK) and Italian Agency for Development Cooperation (AICS) for their immense support. I also recognize the census personnel (coordinators, content and ICT supervisors, enumerators, village elders and security) for the role they played in the overall success of the 2019 KPHC.



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Key indicators at a Glance

| Indicators | 2019 |
|--|------------------------------|
| Enumerated Population | 47,557,273 |
| Proportion Under Age 15 (Children) | 39 |
| Proportion age 15-24 (%) (Youth) | 20.5 |
| Proportion age 25-34 (%) | 15.6 |
| Proportion age 60 and above (%) (elderly) | 5.7 |
| Singulate Mean Age at Marriage (years) | 27.3 (Males); 23.1 (Females) |
| Percent ever married in age group 15-19 | 4.2 (Males); 10.8 (Females) |
| Total Fertility Rate (TFR) | 3.4 |
| Crude Birth rate(CBR) (per 1000 population) | 27.9 |
| Crude Death rate (CDR) (per 1000 population) | 10.5 |
| Rate of natural increase per annum. (%) | 1.7 |

Executive Summary

Demographic information is the backbone of all socio-economic planning in any country. The collection, analysis and dissemination of accurate demographic information enables policy makers plan for the future development of a country. Censuses are the prime sources for determining the components of population change particularly at the sub-national levels. This report presents the analysis and the results of the population dynamics of Kenya using the 2019 Kenya Population and Housing Census. The analysis and results are presented in 7 chapters.

Chapter 1 presents the general introduction providing the census background, objectives, general methodology of data collection and analysis, the data quality and definition of key terms. Information on age and sex is important in the analysis of any demographic data therefore all modern censuses collect information pertaining to the age and sex of the individuals. However, data often contain errors because some people do not know their actual age and others do not report their age accurately. It is critical to evaluate the reported age and sex composition. Various techniques have been developed for checking such inconsistencies. These include those that checks age and sex ratios, among others. From the analysis, there was improved age reporting but wide differentials by place of residence and county. There was better reporting of age in rural areas compared to urban areas according to the UN accuracy index. Some ASAL counties have the lowest accuracy on age reporting. In these counties, male adults age 60 and above were over-reported. Analysis of demographic indicators require that the denominator need to be strongly smoothed to correct the data errors especially due to digit preference and age misreporting.

Chapter 2 presents demographic parameters such as population size and distribution, density, dependency ratios and urbanization. In the 2019 KPHC, a total population of 47.6 million was enumerated of which 23.6 million were males, 24.0 million were females and 1,519 were intersex. Population growth rate declined slightly from 2.7 per cent per annum in 2009 to 2.3 per cent per annum in 2019. The proportion of children over the total population was 48.0 per cent, whereas that of the youth (15-34 years) and working population (15-64 years) were about 36.0 per cent and 57.0 per cent, respectively. Moreover, the proportion of the elderly was about 6.0 per cent.

The total dependency ratio for the country showed that there are about 75 dependents (0-14 and 65+ years) for every 100 working adults (15-64 years). Specifically, there are about 68 children (0-14 years) for every 100-working population (15-64 years) and about 7 persons aged 65 and above for every 100-working population (15-64 years).

Population distribution is generally uneven. Nairobi County continues to have the largest share (9.2 %) of the population followed by Kiambu (5.1%) and Nakuru (4.5%) counties. The number of urban centres has increased from 17 in 1948 to 139 in 1989 and 372 in 2019. Similarly, the population of Kenyans living in the urban centres has increased from 285,000 in 1948 to 14.8 million in 2019.

Chapter 3 presents the nuptiality patterns. Nuptiality is referred to as the frequency, characteristics, and dissolution of marriage in a population. Marriage is an important factor in population change over time

as it affects fertility, by setting the context for reproductive activities such as entry into sexual activities and childbearing. The timing and duration of marriage have an effect on population growth rate, fertility, mortality and migration. Age at first marriage marks the onset of regular exposure to the risk of childbearing. The analysis of timing of first marriages is done by examining the proportion of population married at ages 15-19 and Singulate Mean Age at Marriage (SMAM). The proportion of population married at age 15-19 provides the level of very young marriages whereas SMAM measures the mean age at first marriage for those who marry before age 50. The results indicate that women age 15-19 marry earlier in life compared to men. SMAM for both men and women have been increasing over the years, implying delayed entry into marriage.

Chapter 4 presents information on fertility patterns. The Total Fertility Rate has dropped by about one birth in the last 10 years from 4.8 births in 2009 to 3.4 births in 2019. TFR has continued to remain higher in rural areas, at 3.6 births than in urban areas, at 2.7 births. Further, the results show that early childbearing among teenagers age 15-19, is still common in Kenya, at 53 births per 1000 teenagers. Early childbearing is higher in rural, at 58 births per 1000 teenagers compared to urban areas, at 38 births per 1000 teenagers. The lower childbearing in urban areas could be associated with factors like; increased female education, increased urbanization, increased contraceptive use and the rise in age at first marriage. Regarding lifetime fertility, the proportion of teenage girls age 15-19 with no child has been increasing since 1989, an indication that the young females are postponing entry into motherhood.

Chapter 5 describes the mortality patterns based on the 2019 KPHC. Infant mortality rate is 36 deaths per 1,000 live births while under-five mortality rate is 52 deaths per 1,000 live births. The life expectancy at birth for males and females are 60.6 years and 66.5 years, respectively, which is a great improvement for the 10-year period. Maternal mortality ratio indicator shows that there are 355 maternal deaths in every 100,000 live births.

Chapter 6 presents information on migration. Young adults, age 15-34 dominate migration in Kenya. Six for every ten of migrants are of age 20-39 with age 25-29 accounting for the highest proportion. Men in Kenya are two times more likely to migrate for economic reasons compared to women who mainly migrate for marriage and family related issues.

Male migrants in rural and urban areas cited economic reasons as the main reason for migration. Women mainly moved for economic reasons and marriage in urban and rural areas, respectively. Majority of recent migrants move for economic reasons, followed by marriage and family related issues, settlement and education.

The counties of Kajiado, Kiambu, Mombasa, Nairobi City and Lamu have the highest net in-migration while Vihiga, Kisii, Kitui, Kakamega, and Busia counties have the highest net recent out-migration. Nairobi City and Mombasa counties were the most popular urban centres of destination for recent migrants, followed by Ruiru, Nakuru County and Eldoret.

Foreign born persons (immigrants) mainly originated from Uganda, Somalia, Tanzania, South Sudan and India. Emigrants from Kenya are mainly hosted in Gulf Cooperation Council (G.C.C) countries followed by countries in the Americas.

Somalia, South Sudan and Congo DRC accounted for about three in five of persons reported to have come into the country as refugees.

Chapter 7 provides conclusions and recommendations. Total Fertility Rate has consistently declined since 1999. TFR has declined by about one birth from 4.8 births per woman in 2009 to 3.4 births per woman in 2019. Fertility has declined faster in rural than in urban areas. Further, the proportion of teenage girls, age 15-19 with no children has been increasing since 1989, an indication that the young females are postponing entry into motherhood. Therefore, efforts must be made to reduce the high fertility in the Arid and Semi-Arid parts of the country.

The data further shows that mortality rates have been declining across all regions. However, the rates are still high compared to the set SDG targets of 25 deaths per 1,000 live births. In addition, differentials in the childhood mortality rates by sex across the counties still exists with males dying more compared to the females. The improvement in the life expectancies for sexes shows a higher chance of survival from birth and also in old ages. There is need therefore, to focus interventions to reduce the high childhood and maternal mortality in areas where infant mortality is high. These areas have equally high maternal mortality rates.

Chapter 1: Introduction

1.1. Background Information

A population census is a total process of collecting, compiling, evaluating, analysing, and publishing or otherwise disseminating demographic, economic, and social data pertaining, at a specified time, to all persons in a country or a well-delimited part of a country. It is vital for effective national development planning because it provides detailed bench-mark data on all population characteristics.

The first known population census in Kenya was conducted in 1897 and was a headcount. This was followed by the 1948 census that focused on non-natives. A complete census that enumerated 8.6 million persons was conducted in 1962 and was used to set up political and administrative structures. The first post-independence census was undertaken in 1969 and enumerated 10.9 million persons. Since then, the country has conducted decennial population and housing censuses on a *de facto* basis with the midnight of 24th/25th August as the reference point. The censuses have been implemented in accordance with the United Nations (UN) Principles and Recommendations for conducting population and housing censuses. Table 1.1 presents trends in census counts since 1897.

Table 1.1: Summary of Census Counts in Kenya, 1897-2019

| Year | Population (millions) |
|------|-----------------------|
| 1897 | 2.5 |
| 1948 | 5.4 |
| 1962 | 8.6 |
| 1969 | 10.9 |
| 1979 | 15.3 |
| 1989 | 21.4 |
| 1999 | 28.7 |
| 2009 | 37.7 |
| 2019 | 47.6 |

The 2019 Kenya Population and Housing Census was conducted under the provisions of the Constitution of Kenya, 2010 (Fourth Schedule Part 1 Item 11), the Statistics (Amendment) Act, 2019 and the Statistics (Census of Population) Order, 2018 - Legal Notice No. 205 and the Cabinet Memorandum of May 2017 on the implementation of the 2019 population and housing census process. The theme for the census was *“Counting Our People for Sustainable Development and Devolution of Services”*

1.2. Objectives of the 2019 Census

The main objective of the 2019 KPHC was to collect information on the size, composition, distribution, and socio-economic characteristics of the population. The specific objectives were to ascertain:

- Population size, composition, and spatial distribution;
- Levels of fertility, mortality and migration;
- Educational attainment;
- Household composition;

- Rate and pattern of urbanization;
- Size and deployment of labour force;
- Distribution of persons with disability;
- Housing conditions and availability of household amenities; and
- Agricultural indicators to inform the creation of an agriculture sampling frame.

This information will be used in planning, budgeting and programming for important services; future policy formulation, resource allocation; creation of administrative and political units; monitoring and evaluation of programmes and projects; research; development of a master household sampling frame; development of geo-spatial database; and benchmark for agricultural censuses/surveys.

1.3. Overview of Population Dynamics

Population dynamics is the mechanisms of how and why populations change in size and structure over time (UN, 2001/03). The most important factors in population dynamics include rates of reproduction (fertility), death (mortality) and migration (movement of persons in and out of the country or an area). It is represented symbolically by a "balancing equation" of;

$$P_2 = P_1 + B - D + I - E$$

where P1 and P2 are the population totals at times 1 and 2, B and D are the births and deaths which occurred between times 1 and 2; I, is the immigrants who moved into, and E are the emigrants who moved out of the country or area concerned between times 1 and 2.

Population Censuses are the main sources of information on population size while data on births and deaths is compiled from civil registration records. Information on immigrants and emigrants is derived from the administrative records maintained as people enter or leave the country. In practice, data from both the civil registration and migration records are usually incomplete in a number of developing countries. They therefore, rely largely on population censuses which are mostly supplemented by sample surveys to determine the components of population change. This monograph provides a review of the components of population change from the 2019 KPHC. This provides a representation of the current situation and forecast for future prospects.

1.4. Relevance of Population Dynamics

Information on changes in fertility, mortality and migration trends among the population is critical in socio-economic planning. Accurate and timely collection, analysis and dissemination of demographic data enables sound planning that meets the demands of the population and improves their well-being. The demographic processes that are determined mainly by age-sex distribution, fertility, mortality and migration influences the future size of the labour market, unemployment, job creation, poverty and environmental degradation among others. (UN, 2001/03).

Fertility has both positive and negative effects on the wealth creation of any country. The levels of fertility determine the future size of the population, its age and sex composition. Continued high levels of fertility lead

to faster population growth, which in turn results in increased socio-economic demands, while declining fertility may reduce future demand for socio-economic services. For example, sustained fertility decline decreases the proportion and number of persons of school going age in the population thus, may result in reduction of the cost of education provision and also lead into closure of some learning institutions in the long run. The level of fertility and teenage fertility in a population are among the most commonly used indicators of reproductive health. This information can be used as baseline information for monitoring the effectiveness of reproductive health programs. Moreover, declining fertility promotes socio economic development, and the population has a high disposable income. This helps spur the economic growth by enacting policies to improve health, education, and the overall standards of living of the population (Nancy M. Birdsall, Charles C. Griffins, 1988).

Nuptiality indirectly impacts planning relating to population growth. It is one of the direct determinants of fertility. Policies designed to have an effect on fertility levels are usually formulated within the framework of the direct determinants of fertility. Marital patterns may also have implications for social welfare support at the level of the household. Information on marital patterns together with other socio-economic variables such as those contained in the Census can be used in assessing the need for such support (UN, 2001/03).

Mortality is the number of deaths in a certain group of people in a certain period of time or the death rate within the population. It is also a demographic study of death in human populations. The level of mortality is one of the indicators of the well-being and health status of a population. It is also an indicator of the level of human development hence its inclusion in the construction of human development indices. The multidimensional approach to poverty recognizes that the level of mortality is an indicator of poverty in a population (UN, 2001/03)

Migration is the process of moving from one country, place, or locality to another with a purpose of staying. It has two broad components namely, international and internal migration. Migration is one of the components of population growth that affects the size and composition of the population at the national and sub-national levels, though its effects at national level is less important compared with fertility and mortality. At sub-national level, it is an important determinant of population growth.

Net migration partly determines the size and distribution of the labour market. Across the counties, some areas in the country are characterized by inflows of people from neighbouring areas for socioeconomic reasons. The inflows can bring with it problems of unemployment in the receiving areas or counties. Appropriate policies are required to mitigate the volume of movement in and out, to curb any growth in the labour force since migration has great socioeconomic consequences for the country, community and individuals. The Census migration information can provide a baseline for gauging and monitoring rural-urban migration and inform environmental policies aimed at preventing undesirable consequences of migration. The consequences of migration include increased demand for housing and education as well as health, sanitation, water, electricity, safety, and security services. It may also aggravate demand for social services and good infrastructure and encroachment of natural environment (UN, 2001/03).

Important to note is that a change in fertility, mortality, health status and migration leads to change in population size, growth rate, distribution, and age structure. This further leads to change in economic growth

rate, size of economy and poverty incidence. This shows that population dynamics provide insights into the magnitude of future demands in various sectors.

1.5. Methodology

1.5.1. Use of Technology

Kenya adopted the use of mobile technology to collect data during the 2019 Census as recommended by the UN for the 2020 round of censuses. This was the first census in Kenya's history to use mobile technology in the capture and transmission of data for both cartographic mapping and enumeration. During mapping, the Geographical Positioning System (GPS) coordinates for homesteads, households and other points of interests within the locality were collected using the mobile devices with an accuracy of plus or minus 5 meters. The enumeration area (EA) maps were developed using Arc GIS Software on a background of aerial photographs and satellite imageries that were not more than six months old from the date of the field cartographic data collection. The EA maps were then uploaded into the tablets assembled by two local universities to facilitate the 2019 Census enumeration exercise.

1.5.2. Recruitment and Training

Recruitment of census personnel who included supervisors (both content and ICT) and enumerators was undertaken by the County and Sub-County Census Committees through a competitive process. The training of these personnel was conducted in a cascaded manner from the training of trainers to the training of enumerators. The training for various cadres was conducted for seven days for each cadre. These trainings were sequentially conducted between 14th July and 20th August 2019.

1.5.3. Enumeration

The census enumeration was preceded by Enumeration Area (EA) boundary identification and pre-enumeration listing of households in each EA for two days prior to the census night. The pre-enumeration listing exercise helped in gauging the expected workload during the seven days of enumeration and also in monitoring the level of coverage as enumeration progressed.

The actual enumeration took place from the night of 24th/25th August 2019 and ended on 31st August 2019. A mop-up exercise was conducted on 1st and 2nd September 2019. Special populations were strictly enumerated on the night of 24th/25th August 2019. The 2019 Census adopted the de facto approach where all persons within the boundaries of Kenya were enumerated depending on where they spent (or were found on) the census night. The canvasser method of enumeration, where information for each individual or household is collected and recorded by a trained census official designated to perform the tasks in the assigned area, was used.

1.5.4. Data Transmission and Storage

Data collected by enumerators using mobile devices (tablets) were subsequently transmitted to a central server. The data was encrypted prior to transmission and backed up in off-site locations.

1.5.5. Data Processing

Editing of the census data was guided by the United Nations Handbook on Population and Housing Census Editing. The data were processed using CPro, Stata and Statistical Package for Social Sciences (SPSS) softwares. In addition, validation checks were done to ensure that all EAs, aligned to administrative boundaries, were accounted for in the dataset. Outputs were generated based on administrative and geo-political units.

1.5.6. Quality Assurance

Quality assurance was integrated in all phases of the census process. Comprehensive guidelines were developed and shared with census personnel. Field supervision followed a three-tier structure to ensure adequate support, real-time response to emerging issues, and feedback during data collection. In addition, enumeration reporting schedules and control forms were used to facilitate monitoring of activities. Field monitoring teams oversaw technical, logistical, and administrative aspects of enumeration in each region. Further, independent observers, drawn from the international community and national statistics offices across Africa, monitored and observed the 2019 census enumeration process.

1.6. Data Quality

Evaluation of data is one of the steps in the census process for quality assurance. Evaluation techniques are often necessary to determine whether the data collection was correctly done and whether the data are of acceptable quality. A census, being a massive data collection exercise involving thousands of field interviewers, errors may creep in at any stage of data collection and processing.

An evaluation of census data is desirable to assess the quality of the data. Evaluative studies probe into the qualitative and the quantitative aspects of the data. Errors fall into two broad headings: coverage and content errors. Coverage errors arise due to omissions or duplications of persons or housing units in the census enumeration. Content errors arise from incorrect reporting or recording of the characteristics of persons, households, and housing units enumerated in the census. According to the United Nations, good census practice requires careful consideration and an evaluation of the completeness and accuracy of census results.

1.6.1. Coverage errors

Coverage errors are one of the most important types of error since they affect not only the accuracy of the counts of the various census universes but also the accuracy of all of the census data describing the characteristics of these universes.

Coverage errors may occur in various forms, namely: omitting a unit that should have been included; including a unit more than once; or including a unit that should not have been included. In spite of the fact that massive efforts are made in providing good training and up-to-date cartographic maps to the field staff, as well as introducing checks and controls throughout the fieldwork, such errors still occur. Consequently, any census data should be always checked for any inconsistencies as a result of such errors. Various techniques have been developed for checking for such inconsistencies.

There are two types of coverage errors. Population under-coverage refers to the error of excluding a household or someone who should have been enumerated. Population over-coverage refers to the error of either enumerating a household or someone more than once or including a household or someone who should not have been enumerated. The latter error is considered negligible. Under-coverage is more common than over-coverage.

1.6.2. Content errors

These types of errors occur when an attribute of an enumerated individual is misreported or not reported at all. One common content error occurs in the reporting of the age of an individual which is one of the basic but vital information provided by a census of a population.

Population data in developing countries are often subject to age misreporting. Irregularities in the age distribution may be a result of a respondent's incorrect age declaration or the interviewer who estimates the age of a respondent who does not know his or her age. It is, therefore, important to evaluate the accuracy of the age distribution and correct for deficiencies wherever necessary.

1.6.3. Comparison of 2019 Census and Previous Censuses

This section compares the enumerated population at the 2019 census with the past censuses in terms of absolute size as well as intercensal growth rates. The method is referred to as an external consistency check.

Table 1.2 presents population distribution by age in absolute numbers since 1969. The number of persons enumerated during the 2019 Population and Housing Census was 47,564,299 representing an increase of 23.2 per cent from the 2009 census.

Table 1.2: Trends in Enumerated Population by age group, 1979-2019

| Age | 1979 | 1989 | 1999 | 2009 | 2019 |
|--------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0-4 | 2,843,406 | 3,801,066 | 4,353,530 | 5,939,306 | 5,993,267 |
| 5-9 | 2,491,840 | 3,470,201 | 3,952,376 | 5,597,716 | 6,202,643 |
| 10-14 | 2,074,771 | 2,990,730 | 4,009,455 | 5,034,855 | 6,346,072 |
| 15-19 | 1,741,845 | 2,379,439 | 3,417,064 | 4,169,543 | 5,285,857 |
| 20-24 | 1,327,404 | 1,903,130 | 2,852,320 | 3,775,103 | 4,447,674 |
| 25-29 | 1,055,712 | 1,629,771 | 2,351,866 | 3,201,226 | 3,854,555 |
| 30-34 | 818,076 | 1,159,526 | 1,705,604 | 2,519,506 | 3,570,719 |
| 35-39 | 615,594 | 918,923 | 1,435,730 | 2,008,632 | 2,650,116 |
| 40-44 | 535,182 | 732,126 | 1,045,913 | 1,476,169 | 2,259,231 |
| 45-49 | 440,879 | 574,416 | 848,224 | 1,272,745 | 1,786,256 |
| 50-54 | 373,930 | 476,495 | 692,376 | 956,206 | 1,308,610 |
| 55-59 | 275,311 | 360,190 | 464,877 | 711,953 | 1,118,094 |
| 60-64 | 217,228 | 318,451 | 413,292 | 593,778 | 870,022 |
| 65-69 | 183,127 | 230,712 | 304,123 | 390,763 | 658,178 |
| 70-74 | 128,908 | 174,221 | 256,720 | 339,301 | 514,539 |
| 75+ | 174,363 | 303,467 | 347,916 | 602,209 | 697,776 |
| Age NS | 29,485 | 20,772 | 34,483 | 21,086 | 690 |
| Total | 15,327,061 | 21,443,636 | 28,485,869 | 38,610,097 | 47,564,299 |

Table 1.3 shows trends in intercensal growth rates. The rate of growth declined from 3.4 per cent in the 1979-89 intercensal periods to about 2.8 per cent in the 1989-99. The rate of growth took an upsurge during 1999-2009 period, which was against the expectation that the rate would decline faster given the observed declines in both birth and death rates from the various surveys conducted in the intercensal period. Between 2009-2019 intercensal period, the growth rate declined to 2.1 per cent.

On inspection of the age-specific growth rates in the 2009-2019 intercensal period has the indication of slight undercount for age groups 0-4 and 5-9. This observation is similar to the period 1989-1999.

Table 1.3: Age specific growth rates, Kenya, 1979-2019

| Age | 1979-1989 | 1989-1999 | 1999-2009 | 2009-2019 |
|-------------------------------------|------------------|------------------|------------------|------------------|
| 0-4 | 0.029 | 0.014 | 0.031 | 0.001 |
| 5-9 | 0.033 | 0.013 | 0.035 | 0.010 |
| 10-14 | 0.037 | 0.029 | 0.023 | 0.023 |
| 15-19 | 0.031 | 0.036 | 0.020 | 0.024 |
| 20-24 | 0.036 | 0.040 | 0.028 | 0.016 |
| 25-29 | 0.043 | 0.037 | 0.031 | 0.019 |
| 30-34 | 0.035 | 0.039 | 0.039 | 0.035 |
| 35-39 | 0.040 | 0.045 | 0.034 | 0.028 |
| 40-44 | 0.031 | 0.036 | 0.034 | 0.043 |
| 45-49 | 0.026 | 0.039 | 0.041 | 0.034 |
| 50-54 | 0.024 | 0.037 | 0.032 | 0.031 |
| 55-59 | 0.027 | 0.026 | 0.043 | 0.045 |
| 60-64 | 0.038 | 0.026 | 0.036 | 0.038 |
| 65-69 | 0.023 | 0.028 | 0.025 | 0.052 |
| 70-74 | 0.030 | 0.039 | 0.028 | 0.042 |
| 75+ | 0.055 | 0.014 | 0.055 | 0.015 |
| Overall growth rate (% p.a.) | 3.36 | 2.84 | 3.04 | 2.09 |

1.6.4. Age-Sex Structure

The age-sex data is a structure of a population's demographic history. Persons of the same age structure constitute a cohort born in the same year and have been exposed to similar historical events and conditions.

1.6.5. Age- Sex Ratio

Although all modern censuses collect information on the age and sex of the population, the data often contain errors because some people do not know their true age and others do not report their age accurately. The distribution of a population by age and sex is one of the most basic types of information needed for future planning. Given the importance of the age-sex structure concerning social and economic characteristics, it is imperative that the information on the population by age and sex be as accurate as possible. For this reason, it becomes critical to evaluate the reported age and sex composition.

1.6.6. Sex Ratio at Birth

Sex Ratio at Birth (SRB) is an analytical tool and is calculated by dividing the male population in a given age group by the female population in the same age group, multiplied by 100. The larger the abrupt departure of this ratio from values close to 100, the larger the possibility of errors in the data. All populations have more male than female births at birth, and so the sex ratio at the early ages is expected to be slightly over 100. However, since mortality is usually higher for males than females, the sex ratio is reduced continuously up to the oldest ages. Sex Ratio at infancy below 100 denote under-coverage while those above 100 would imply double counting.

In a systematic study of several countries using Demographic and Health Surveys (DHS), Chao et al 2019¹ show that, SRB range from 103.1 [102.7; 103.6] in sub-Saharan Africa to 106.3 [105.5; 107.2] in southeastern Asia, 106.3 [105.4; 107.2] in eastern Asia, and 106.7 [105.8; 107.7] in Oceania. The UN assumes 105 for all countries in their estimation. Thus, there is a regularity in male bias at birth. Over decades, SRB has consistently been between 102 males per 100 females to 108 males per 100 females for several decades. In Kenya, all the post-colonial censuses (1969-2009), show that at the national level, SRB has been constant at 104 males per 100 females.

Table 1.4 shows the sex ratios at birth for all the counties based on births 12 months before the national census. Thirty-seven counties out of 47 have their SRBs consistent with past historical norms (SRB between 102 and 107). There appears to be a possible over-reporting of male births in Isiolo, Tana River, Wajir, Turkana and Samburu. The counties SRBs are close to those observed in Southeast Asian countries with well-known sex-selective abortion. Under-reporting of male births may have occurred in Vihiga County.

¹ Chao Fengqing Patrick Gerlandb, Alex R. Cookc, and Leontine Alkema 2019. Systematic assessment of the sex ratio at birth for all countries and estimation of national imbalances and regional reference levels

Table 1. 4: Sex ratios at birth by County

| County | Sex ratio at birth |
|--------------------|---------------------------|
| 1 Vihiga | 99.7 |
| 2 Kakamega | 100.8 |
| 3 Busia | 100.9 |
| 4 Bungoma | 101.4 |
| 5 Tharaka-Nithi | 101.6 |
| 6 Nyamira | 102.1 |
| 7 Trans-Nzoia | 102.2 |
| 8 Uasin Gishu | 102.4 |
| 9 Nyeri | 102.5 |
| 10 Kiambu | 102.5 |
| 11 Meru | 102.6 |
| 12 Nandi | 102.6 |
| 13 Nairobi City | 102.6 |
| 14 Kirinyaga | 102.7 |
| 15 Embu | 102.8 |
| 16 Elgeyo-Marakwet | 102.8 |
| 17 Kisii | 102.8 |
| 18 Taita-Taveta | 102.9 |
| 19 Siaya | 103.0 |
| 20 Kitui | 103.1 |
| 21 Murang'a | 103.1 |
| 22 Kisumu | 103.1 |
| 23 Machakos | 103.3 |
| 24 Nyandarua | 103.5 |
| 25 Makueni | 103.6 |
| 26 Mombasa | 103.8 |
| 27 Kilifi | 103.8 |
| 28 Migori | 103.9 |
| 29 West Pokot | 104.0 |
| 30 Nakuru | 104.0 |
| 31 Homabay | 104.1 |
| 32 Kwale | 104.3 |
| 33 Kajiado | 104.3 |
| 34 Kericho | 104.3 |
| 35 Laikipia | 104.5 |
| 36 Bomet | 104.5 |
| 37 Mandera | 105.0 |
| 38 Narok | 105.9 |
| 39 Lamu | 106.3 |
| 40 Baringo | 106.6 |
| 41 Garissa | 107.0 |
| 42 Marsabit | 107.0 |
| 43 Isiolo | 108.0 |
| 44 Tana River | 108.8 |
| 45 Wajir | 109.0 |
| 46 Turkana | 109.0 |
| 47 Samburu | 109.0 |

Tables 1.5 and 1.6 show sex ratios at older ages (age 60 and above). Worldwide women live longer than men and so that at ages beyond 60 particularly in developing countries like Kenya with higher adult mortality, sex ratios should be below 100 unless there is selective out-migration of women at those ages. In Wajir, Mandera, and Garissa, there was an indication that population of men above age 60 were over-reported. The sex ratio for ages above 60 years for Mandera, Wajir Garissa has not changed, an indication of a possible over-count of population at these ages.

Table 1.5: Highest and lowest Sex ratios of the population age 60 and above, 2009

| | Rank | County | 60-64 | County | 65-69 | County | 70-74 | County | 75+ |
|---------|------|---------|-------|-----------|-------|---------|-------|-----------|-------|
| Highest | 1 | Mandera | 242.5 | Mandera | 215.5 | Mandera | 194.7 | Mandera | 138.6 |
| | 2 | Wajir | 210.0 | Wajir | 183.2 | Wajir | 164.6 | Wajir | 118.4 |
| | 3 | Garissa | 153.4 | Garissa | 157.2 | Garissa | 135.3 | Garissa | 110.4 |
| | 4 | Nairobi | 148.9 | Nairobi | 129.9 | Nyamira | 118.2 | Nyamira | 108.4 |
| | 5 | Kiambu | 123.5 | Tanariver | 125.2 | Turkana | 118.2 | Turkana | 108.4 |
| Lowest | 1 | Kitui | 73.7 | Nyandarua | 69.4 | Homabay | 75.2 | Murang'a | 61.3 |
| | 2 | Busia | 80.3 | Homabay | 72.7 | Kisumu | 75.2 | Kirinyaga | 64.1 |
| | 3 | Homabay | 81.6 | Kisumu | 72.7 | Busia | 79.3 | Siaya | 65.5 |
| | 4 | Kisumu | 81.6 | Machakos | 75.3 | Siaya | 79.3 | Nyeri | 66.3 |
| | 5 | Kilifi | 82.7 | Siaya | 77.0 | Kisii | 79.4 | Machakos | 66.7 |

Table 1.6: Highest and lowest Sex ratios of the population age 60 and above, 2019

| | Rank | County | 60-64 | County | 65-69 | County | 70-74 | County | 75+ |
|---------|------|---------|-------|---------|-------|----------|-------|----------|-------|
| Highest | 1 | Wajir | 185.4 | Wajir | 170.9 | Wajir | 150.2 | Wajir | 147.1 |
| | 2 | Garissa | 148.7 | Mandera | 148.5 | Garissa | 134.2 | Mandera | 140.4 |
| | 3 | Mandera | 146.4 | Garissa | 137.8 | Mandera | 125.5 | Garissa | 119.6 |
| | 4 | Nairobi | 130.5 | Nairobi | 121.2 | Marsabit | 110.4 | Marsabit | 109.0 |
| | 5 | Isiolo | 124.5 | Isiolo | 115.4 | Nairobi | 110.1 | Lamu | 97.5 |
| Lowest | 5 | Busia | 78.2 | Turkana | 78.3 | Embu | 73.3 | Embu | 60.1 |
| | 4 | Migori | 77.8 | Busia | 74.7 | Kilifi | 72.7 | Nyeri | 58.7 |
| | 3 | Homabay | 72.2 | Migori | 72.1 | Homabay | 70.7 | Machakos | 58.2 |
| | 2 | Siaya | 66.0 | Homabay | 70.8 | Siaya | 67.4 | Murang'a | 56.4 |
| | 1 | Kilifi | 65.5 | Siaya | 66.2 | Kitui | 65.6 | Siaya | 55.8 |

1.6.7. Completeness of birth recording

This analysis was done using the Brass P/F ratio approach. The P/F ratio technique evaluates the consistency between information on lifetime fertility and current fertility. P/F ratio for the combined age group 20–29 years is used as an adjustment factor to compensate for the completeness of recent birth recording. A trend of rapidly increasing P/F ratios with age probably reflects strong effects of declining fertility. Where fertility is falling over time, average parity, which is based on women's lifetime experiences, will exceed cumulated current fertility, assuming complete recording of recent births. Consequently, the P/F ratios will be greater than one. They will also tend to increase with age since lifetime fertility among younger women has occurred more recently and will differ little from cumulated current fertility of constant fertility over an extended period. The results for the application of P/F ratios for the 2009 and 2019 census are presented in Table 1.7. The adjusted number of births would be 1,356,533 against the reported 1,241,546. It therefore, suggests that overall, births may have been under-reported by approximately 8.5 percent and compares with the earlier detection using sex ratio and birth and age-specific growth rates.

Table 1.7: Adjusted age specific birth rates, 2019

| Age group | Female Population | | Final Fertility | | P/F Ratios (2009-2019) | Adjusted Births (2) | Adjusted 2019 birth rate |
|--------------|-------------------|-------------------|-----------------|---------------------------|----------------------------|---------------------|--------------------------|
| | Initial 2009 | Final 2019 | ASFR | Intercensal Annual Births | | | |
| 15-19 | 2,049,578 | 2,585,125 | 0.06 | 134,667 | 1.034 | 141,333 | 0.055 |
| 20-24 | 2,023,751 | 2,316,271 | 0.187 | 402,350 | 1.083 | 422,267 | 0.182 |
| 25-29 | 1,674,971 | 1,999,654 | 0.189 | 344,260 | 1.06 | 361,301 | 0.181 |
| 30-34 | 1,265,034 | 1,859,889 | 0.154 | 234,527 | 1.039 | 246,136 | 0.132 |
| 35-39 | 1,006,133 | 1,293,038 | 0.108 | 121,845 | 0.961 | 127,877 | 0.099 |
| 40-44 | 735,166 | 1,095,662 | 0.05 | 43,828 | 0.948 | 45,998 | 0.042 |
| 45-49 | 639,498 | 865,089 | 0.016 | 11,075 | 0.875 | 11,623 | 0.013 |
| Total | 9,394,131 | 12,014,728 | 3.82 | 1,292,550 | | 1,356,533 | 3.5 |

1.7. Summary of Data Quality Issues

The summary of data quality issues noted from the 2019 KPHC were;

- That there was a possible under-coverage of births in the last 12 months before the census, by as much as 8.5 per cent. In Marsabit, there was a suspected over-reporting of male births as opposed to females, giving a high sex ratio at birth similar to countries where sex-selective abortions occur. In Mandera, there was a possible under-reporting of female births.
- That deaths in the age range 5 and 65 that occur in the households before the census was under-reported and this was more severe for females. Male coverage was just about 61 per cent while female coverage was about 39 per cent if data is considered from age 5 to 65. When the age range was narrowed from 30 to 60, coverage for males was slightly lower at 59 per cent while the female remained the same (final coverage).
- That there was improved age reporting but wide differentials by place of residence and county. There was better reporting of age in rural areas compared to urban areas according to the UN accuracy index. Garissa, Wajir, Mandera, Isiolo, and Marsabit have the lowest accuracy on age reporting. In these counties, male adults age 60 and above were over-reported. Analysis of demographic indicators require that the denominator need to be strongly smoothed to correct the data errors especially due to digit preference and age misreporting.

1.8. Definition of Terms and Key Concepts

Economic activity status: Is the relationship of a person to economic activity, based on a reference period defined in data sources on activity. In the broader sense we distinguish economically active and inactive population.

Emigrant: Is an international migrant, departing to another country by crossing an international boundary

Household: Is a person or a group of persons who reside in the same homestead or compound but not necessarily in the same dwelling unit. They have the same cooking arrangement and are answerable to the same household head. For purpose of 2019 KPHC, households were categorized into conventional and non-conventional. Conventional were the ordinary households while non-conventional households referred to people live together but cannot be said to belong to “ordinary” households. Examples were students in boarding schools and colleges, hospital in-patients, people in police cells, guests in hotels, or prison inmates, outdoor sleepers, nuns, brothers in a monastery and other religious organizations with some institution-like living arrangements.

Household Head: Is the most responsible member of a household who makes key decisions of the household on a day-to-day basis and whose authority is recognized by all members of the household. It could be the father, mother or a child, or any other responsible member within the household

Immigrant: Is an international migrant entering an area from a place outside the country. Immigrants’ cross-national borders during their migration from the perspective of the country in which they enter.

Internal Migration: Refers to migration across regional administrative boundaries within a country. Internal migration can be categorized by type (in-migration and out-migration) and directional flow (rural-urban, rural-rural, urban-rural, and urban-urban)

International migration: Is the process by which one changes his place of usual residence by crossing international boundaries into another country.

Lifetime Migration: Is migration that occurs between birth and the time of the census or survey. Thus, a lifetime migrant is one whose current County of residence is different from his or her county/country of birth, regardless of intervening migration.

Migration: Is the change of place of usual residence for a time period of three months or more of an individual or group of persons from an administrative area into another. A migrant is a person who moves from one political area to another.

Net-Migration: Is the balance between in-migration and out-migration. According to direction of the balance, it may be characterized as net in-migration or net out-migration. Thus, net flow in or out is indicated by a plus (+) or minus (-) sign.

Out-migrant: Is a person who departs from a migration-defining area by crossing its boundary to a point outside it, but within the same country.

Refugee: Is a person who has been forced to leave his or her home and seek refuge elsewhere. Under the United Nations Convention Relating to the Status of Refugees of 1951, a refugee is more narrowly defined (in Article 1A) as a person who "owing to a well- founded fear of being persecuted for reasons of race, religion, nationality, membership to a particular social group, or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is unwilling to avail himself of the protection of that country". The concept of a refugee was expanded by the Convention’s 1967 Protocol and by regional

conventions in Africa and Latin America, to include persons who had fled war or other violence in their home country.

Sex: Refers to condition or character of being female or male

Recent Migration: Is movement in the recent past of persons enumerated during the census, relative to their previous place of residence a year prior to census. A recent migrant is one whose current area of residence is different from his or her previous place of residence, one year ago. Note that if the person was still living in the county, then he/she was not considered as a migrant.

Usual Residence: the place at which the person has lived continuously for most of the last 12 months (that is, for at least six months and one day) or for at least the last 12 months, not including temporary absences for holidays or work assignments, or intends to live for at least six months.

Parity: Is the number of live births a woman has had in the past. Woman's parity can change with time. However, it cannot decrease but can either remain the same or increase with time.

Fertility: Is the actual number of live births a woman has had by the end of her reproductive life span (15-49 years).

Current Fertility: Refers to births that occurred to a woman in the 12 months before the census date.

Lifetime Fertility: Refers to the total number of children ever born alive during the entire reproductive period of the woman.

Age-Specific Fertility Rate: Refers to the annual number of births to women of a specified age or age group per 1,000 women in that age group.

Total Fertility Rate (TFR): Is the average number of children a woman would have assuming that current age-specific birth rates remain constant throughout her childbearing years which are considered to be ages 15 to 49. Total Fertility Rates are for the 36-month period prior to the census.

Nuptiality: Refers to the frequency of marriages between persons of opposite sexes which involve rights and obligations fixed by law or custom.

Singulate Mean Age at Marriage: Refers to the average number of years lived in the single state by those who ever marry before age 50.

Small urban centres: These are centres with a population of less than 10,000 people

Medium-size urban centres: These are centres with a population of more than 10,000 but less than 100,000 people.

Chapter 2: Population Size, Growth, Structure and Distribution

2.1. Introduction

There are several demographic parameters that influence population growth or decline. These include population size, population density, age structure, birth rates, sex ratio, among others (Tarsi & Tuff, 2012). Number of individuals within a population is the most fundamental demographic parameter with significant implications in population dynamics (Lebreton et al., 1992). Population size is basically the number of individuals present in a subjectively designated geographic range (Lebreton et al., 1992; Tarsi & Tuff, 2012).

The pattern of where people live describe population distribution, which is usually uneven, some areas are sparsely populated and others densely populated. Population density is a more complete description of a population size which is essentially the size of a population in relation to the amount of space the population occupies; calculated as the number of individuals per unit area (Tarsi & Tuff, 2012).

Age and sex distributions are fundamental characteristics of population. Population pyramids are graphical distributions commonly used to describe these two attributes of a population, sometimes also known as age-sex pyramid or age-sex structure (John, 2001; Tarsi & Tuff, 2012). Individuals are sorted into age-specific cohorts then they are profiled by sex and size. This helps in determining the reproductive potential of the population so as to estimate future and current growth (Lebreton et al., 1992).

The 2019 KPHC questionnaire on column P00 listed all persons who spent the night of August 24th/25th in the household and collected information on age and sex of each person. This chapter describes the size and distribution of persons enumerated on the census night.

2.2. Population Size and Growth

In the 2019 KPHC, a total population of 47,557,273 was enumerated of which 23,544,460 were males, 24,011,294 were females and 1,519 were intersex. Table 2.1 shows some of the indicators of population size and growth since 1969. The 2019 population size was slightly over four-fold compared to 1969, and it is projected to increase by nearly 1 million annually. Further, it is estimated that the 2019 population will take about 30 years to double in size. The annual growth rate has declined from 3.4 percent in 1969 census to 2.3 percent in 2019 census.

Table 2.1: Trends in Population Size and Growth, 1969-2019*

| Census Year | 1969 | 1979 | 1989 | 1999 | 2009 | 2019 |
|------------------------------------|------|---------|---------|---------|---------|---------|
| Population(millions) | 10.9 | 15.3 | 21.5 | 28.7 | 37.7 | 47.6 |
| Annual growth rate (% p.a.) | 3.4 | 3.4 | 3.4 | 2.9 | 2.7 | 2.3 |
| Doubling time ¹ (Years) | 20.7 | 20.6 | 20.9 | 23.8 | 25.7 | 30.0 |
| Absolute increase per annum (,000) | .. | 438,438 | 612,172 | 723,784 | 903,625 | 983,242 |
| Size relative to 1948 (1969=100) | 100 | 140 | 197 | 263 | 346 | 437 |

+Revised

..Data Missing

¹ Doubling Time-Time it takes a population to double in size

Table 2.2 shows the natural growth rate by county in 2009 and 2019. The rate of natural increase is a measure of how quickly a population is growing or declining (Samuel et al., 2001). Notably, immigration or emigration are not factored in the calculation of the natural growth rate, which is solely determined by differences between crude birth and death rates (Samuel et al., 2001).

In both 2009 and 2019, population growth was experienced nationally and in all counties. At national level, the rate of natural increase in 2019 was lower (1.7%) compared with 2009 (2.8%). In urban areas, the rate was higher (2.4%) compared to rural areas (1.7%) in 2019. Additionally, all counties have a lower natural growth rate in 2019 compared to 2009, although the differences vary across the counties.

In 2009, analysis by county show that Kajiado had the highest natural growth rate of 6 percent followed by Nyamira at 5 percent. Whereas in 2019, counties with the highest natural growth rates were Mandera and Turkana at 4.0 percent each, followed by Wajir (3.3%) and Marsabit (3.1%).

Table 2.2: Natural Growth Rate, 2009 and 2019

| County | 2009 | | | 2019 | | |
|-----------------|-------------|-------------|-----------------|-------------|-------------|-----------------|
| | Crude Birth | Crude Death | Rate of Natural | Crude Birth | Crude Death | Rate of Natural |
| | Rate | Rate | Increase | Rate | Rate | Increase |
| Kenya | 38.4 | 10.4 | 2.8 | 27.9 | 10.5 | 1.7 |
| Rural | .. | .. | .. | 26.8 | 10.0 | 1.7 |
| Urban | .. | .. | .. | 30.5 | 6.5 | 2.4 |
| County | | | | | | |
| Mombasa | 37.1 | 8.9 | 2.8 | 29.3 | 9.7 | 2.0 |
| Kwale | 47.5 | 10.1 | 3.7 | 32.3 | 8.2 | 2.4 |
| Kilifi | 47.0 | 9.3 | 3.8 | 29.0 | 10.2 | 1.9 |
| Tana River | 42.2 | 11.0 | 3.1 | 35.0 | 12.9 | 2.2 |
| Lamu | 33.0 | 11.5 | 2.2 | 28.0 | 7.0 | 2.1 |
| Taita Taveta | 33.0 | 15.2 | 1.8 | 25.2 | 13.6 | 1.2 |
| Garissa | 51.7 | 7.8 | 4.4 | 31.5 | 6.5 | 2.5 |
| Wajir | 52.2 | 9.3 | 4.3 | 44.2 | 11.6 | 3.3 |
| Mandera | 54.9 | 14.3 | 4.1 | 49.4 | 9.1 | 4.0 |
| Marsabit | 45.4 | 7.3 | 3.8 | 44.3 | 12.9 | 3.1 |
| Isiolo | 42.1 | 6.6 | 3.6 | 27.9 | 10.6 | 1.7 |
| Meru | 35.3 | 7.7 | 2.8 | 23.1 | 8.2 | 1.5 |
| Tharaka-Nithi | 33.1 | 9.6 | 2.4 | 21.6 | 10.6 | 1.1 |
| Embu | 32.8 | 8.3 | 2.5 | 22.3 | 7.5 | 1.5 |
| Kitui | 42.8 | 10.2 | 3.3 | 22.7 | 7.4 | 1.5 |
| Machakos | 45.1 | 12.0 | 3.3 | 22.1 | 7.4 | 1.5 |
| Makueni | 36.2 | 11.9 | 2.4 | 19.8 | 5.5 | 1.4 |
| Nyandarua | 35.8 | 9.9 | 2.6 | 23.7 | 11.6 | 1.2 |
| Nyeri | 36.8 | 12.6 | 2.4 | 20.8 | 10.2 | 1.1 |
| Kirinyaga | 26.8 | 9.4 | 1.7 | 21.0 | 10.0 | 1.1 |
| Murang'a | 23.5 | 11.9 | 1.2 | 21.9 | 10.8 | 1.1 |
| Kiambu | 38.7 | 8.0 | 3.1 | 27.0 | 8.8 | 1.8 |
| Turkana | 51.2 | 10.9 | 4.0 | 45.7 | 6.2 | 4.0 |
| West Pokot | 44.0 | 10.2 | 3.4 | 36.5 | 12.0 | 2.5 |
| Samburu | 47.8 | 8.5 | 3.9 | 33.1 | 11.2 | 2.2 |
| Trans Nzoia | 44.0 | 9.7 | 3.4 | 27.2 | 8.9 | 1.8 |
| Uasin Gishu | 42.4 | 10.8 | 3.2 | 26.5 | 11.5 | 1.5 |
| Elgeyo Marakwet | 43.8 | 10.2 | 3.4 | 26.9 | 8.1 | 1.9 |
| Nandi | 43.0 | 11.5 | 3.2 | 24.7 | 12.8 | 1.2 |
| Baringo | 45.9 | 10.7 | 3.5 | 27.4 | 6.9 | 2.1 |
| Laikipia | 36.3 | 11.9 | 2.4 | 28.0 | 11.6 | 1.6 |
| Nakuru | 40.2 | 11.8 | 2.8 | 28.1 | 9.5 | 1.9 |
| Narok | 51.3 | 6.9 | 4.4 | 32.9 | 14.1 | 1.9 |
| Kajiado | 63.2 | 7.5 | 5.6 | 30.5 | 8.1 | 2.2 |
| Kericho | 54.3 | 10.3 | 4.4 | 25.1 | 13.0 | 1.2 |
| Bomet | 46.2 | 9.4 | 3.7 | 26.2 | 12.9 | 1.3 |
| Kakamega | 44.8 | 11.7 | 3.3 | 25.0 | 13.9 | 1.1 |
| Vihiga | 36.9 | 16.8 | 2.0 | 22.8 | 9.4 | 1.3 |
| Bungoma | 46.8 | 10.2 | 3.7 | 26.4 | 10.2 | 1.6 |
| Busia | 47.2 | 12.6 | 3.5 | 26.8 | 9.2 | 1.8 |
| Siaya | 46.3 | 19.1 | 2.7 | 26.6 | 15.5 | 1.1 |
| Kisumu | 45.1 | 13.7 | 3.1 | 27.5 | 7.0 | 2.1 |
| Homa Bay | 53.7 | 12.7 | 4.1 | 28.3 | 8.7 | 2.0 |
| Migori | 51.5 | 13.0 | 3.9 | 30.8 | 12.3 | 1.9 |
| Kisii | 44.4 | 9.8 | 3.5 | 23.5 | 9.8 | 1.4 |
| Nyamira | 56.5 | 9.7 | 4.7 | 21.7 | 7.6 | 1.4 |
| Nairobi | 36.0 | 6.3 | 3.0 | 29.0 | 9.2 | 2.0 |

..Data Missing

Table 2.3 shows the distribution of the population and inter-censal growth rate from 1999 to 2019 by County. Counties with high inter-censal growth rates for the 2009-2019 period of over 5.0 percent per annum were: Garissa (8.1), Wajir (6.7) and Isiolo (6.3). The increase in Garissa and Wajir counties could be attributed to an increase in birth rates in the last ten years. Counties that recorded low growth rates of below 1.0 percent per annum during the same period were: Kakamega (0.9,) Nyeri (0.9), Turkana (0.8), Tharaka-Nithi (0.7), Nyandarua (0.7), Vihiga (0.4) and Nyamira (0.1). The reduced growth rates in Kakamega, Nyeri, Tharaka Nithi, Vihiga and Nyamira counties could be attributed to the decrease in birth rates and out-migration which were experienced in the 2009-2019 period.

Table 2.3: Trends in Distribution of Population Size and Inter-censal Growth Rate by County, 1999 – 2019

| County | Population | | | % Change in Population | | Annual Intercensal Growth Rate | |
|-----------------|------------|-----------|-----------|------------------------|-----------|--------------------------------|-----------|
| | 1999 | 2009 | 2019 | 1999-2009 | 2009-2019 | 1999-2009 | 2009-2019 |
| | Mombasa | 643,060 | 938,500 | 1,208,112 | 45.9 | 28.7 | 3.8 |
| Kwale | 490,973 | 649,588 | 866,709 | 32.3 | 33.4 | 2.8 | 2.9 |
| Kilifi | 815,994 | 1,108,770 | 1,453,599 | 35.9 | 31.1 | 3.1 | 2.7 |
| Tana River | 178,609 | 240,008 | 315,874 | 34.4 | 31.6 | 3 | 2.7 |
| Lamu | 71,215 | 101,483 | 143,891 | 42.5 | 41.8 | 3.5 | 3.5 |
| Taita–Taveta | 241,942 | 284,516 | 340,623 | 17.6 | 19.7 | 1.6 | 1.8 |
| Garissa | 262,694 | 375,968 | 841,235 | 43.1 | 123.8 | 3.6 | 8.1 |
| Wajir | 309,268 | 399,432 | 781,228 | 29.2 | 95.6 | 2.6 | 6.7 |
| Mandera | 246,063 | 618,966 | 867,319 | 151.5 | 40.1 | 9.2 | 3.4 |
| Marsabit | 172,481 | 291,075 | 459,598 | 68.8 | 57.9 | 5.2 | 4.6 |
| Isiolo | 98,971 | 143,211 | 267,966 | 44.7 | 87.1 | 3.7 | 6.3 |
| Meru | 1,096,325 | 1,355,359 | 1,545,468 | 23.6 | 14 | 2.1 | 1.3 |
| Tharaka-Nithi | 303,932 | 365,142 | 393,109 | 20.1 | 7.7 | 1.8 | 0.7 |
| Embu | 443,409 | 515,959 | 608,553 | 16.4 | 17.9 | 1.5 | 1.7 |
| Kitui | 810,779 | 1,012,236 | 1,136,079 | 24.8 | 12.2 | 2.2 | 1.2 |
| Machakos | 895,816 | 1,097,816 | 1,421,760 | 22.5 | 29.5 | 2 | 2.6 |
| Makueni | 766,111 | 884,258 | 987,550 | 15.4 | 11.7 | 1.4 | 1.1 |
| Nyandarua | 468,458 | 596,053 | 638,233 | 27.2 | 7.1 | 2.4 | 0.7 |
| Nyeri | 647,887 | 693,354 | 759,125 | 7 | 9.5 | 0.7 | 0.9 |
| Kirinyaga | 454,090 | 527,880 | 610,379 | 16.3 | 15.6 | 1.5 | 1.5 |
| Murang'a | 907,446 | 942,101 | 1,056,576 | 3.8 | 12.2 | 0.4 | 1.1 |
| Kiambu | 1,204,009 | 1,622,363 | 2,417,288 | 34.7 | 49 | 3 | 4 |
| Turkana | 389,319 | 854,991 | 926,484 | 119.6 | 8.4 | 7.9 | 0.8 |
| West Pokot | 305,583 | 512,572 | 621,135 | 67.7 | 21.2 | 5.2 | 1.9 |
| Samburu | 135,565 | 223,897 | 310,316 | 65.2 | 38.6 | 5 | 3.3 |
| Trans-Nzoia | 568,498 | 818,539 | 990,289 | 44 | 21 | 3.6 | 1.9 |
| Uasin Gishu | 613,386 | 893,609 | 1,163,061 | 45.7 | 30.2 | 3.8 | 2.6 |
| Elgeyo-Marakwet | 282,793 | 369,902 | 454,433 | 30.8 | 22.9 | 2.7 | 2.1 |
| Nandi | 568,998 | 752,665 | 885,651 | 32.3 | 17.7 | 2.8 | 1.6 |
| Baringo | 400,571 | 555,441 | 666,730 | 38.7 | 20 | 3.3 | 1.8 |
| Laikipia | 316,791 | 398,992 | 518,532 | 25.9 | 30 | 2.3 | 2.6 |
| Nakuru | 1,176,233 | 1,602,636 | 2,161,935 | 36.3 | 34.9 | 3.1 | 3 |
| Narok | 529,711 | 850,292 | 1,157,748 | 60.5 | 36.2 | 4.7 | 3.1 |
| Kajiado | 395,905 | 686,992 | 1,117,580 | 73.5 | 62.7 | 5.5 | 4.9 |
| Kericho | 461,651 | 757,948 | 901,609 | 64.2 | 19 | 5 | 1.7 |
| Bomet | 689,512 | 723,813 | 875,630 | 5 | 21 | 0.5 | 1.9 |
| Kakamega | 1,289,233 | 1,698,576 | 1,867,283 | 31.8 | 9.9 | 2.8 | 0.9 |
| Vihiga | 496,588 | 567,387 | 589,940 | 14.3 | 4 | 1.3 | 0.4 |
| Bungoma | 1,005,094 | 1,374,477 | 1,670,449 | 36.8 | 21.5 | 3.1 | 2 |
| Busia | 548,163 | 743,592 | 893,621 | 35.7 | 20.2 | 3 | 1.8 |
| Siaya | 712,305 | 841,746 | 992,948 | 18.2 | 18 | 1.7 | 1.7 |
| Kisumu | 788,539 | 968,451 | 1,155,369 | 22.8 | 19.3 | 2.1 | 1.8 |
| Homa Bay | 745,040 | 963,441 | 1,131,897 | 29.3 | 17.5 | 2.6 | 1.6 |
| Migori | 656,935 | 916,665 | 1,116,297 | 39.5 | 21.8 | 3.3 | 2 |
| Kisii | 943,202 | 1,151,898 | 1,266,759 | 22.1 | 10 | 2 | 1 |
| Nyamira | 495,620 | 598,029 | 605,554 | 20.7 | 1.3 | 1.9 | 0.1 |
| Nairobi City | 2,082,191 | 3,134,261 | 4,395,749 | 50.5 | 40.2 | 4.1 | 3.4 |

2.3. Age-Sex Structure

The age and sex structure of a population is derived from the number of individuals of each sex in each age category, in a particular population (John, 2001). Knowledge of age structure is essential for analysis of the key determinants of population change – fertility, mortality, and migration. Table 2.4 shows the trends in percentage distribution of the population by age groups since 1969. Figure 2.4 shows the trends in proportions of selected special age groups since 1969.

Kenya's population has always been dominated by children; however, the proportion of children age 0-14 years has gradually declined from about 48 per cent in 1969 to 39 per cent in 2019. The proportion of youthful population (15-34 years) has been increasing over time from about 30 per cent in 1969 to about 36 per cent in 2019. Similarly, in the recent past, persons in age 25-34 have been gradually increasing from about 12 per cent in 1969 to nearly 16 per cent in 2019. Notably, the proportion of the working population (15-64 years) has been steadily increasing from about 48 per cent in 1969 to about 57 per cent in 2019. Moreover, there was an increase in the proportion of the elderly to about 6 per cent, which had remained constant at about 5.0 percent from 1969 to 2009. The slight increase in the proportion of elderly could be attributed to advancement in the quality in terms of improved medical care, improved diet and nutrition, as well as the general wellbeing (Maina, 2017).

Table 2. 4: Trends in Percentage Distribution of Population by Age Groups 1969-2019

| Census Year | 1969 | | 1979 | | 1989 | | 1999 | | 2009 | | 2019 | |
|--------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Group | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 0-4 | 2,104,482 | 19.2 | 2,843,406 | 18.5 | 3,801,079 | 17.7 | 4,534,902 | 15.8 | 5,939,306 | 15.4 | 5,991,128 | 12.6 |
| 5-9 | 1,809,958 | 16.5 | 2,491,840 | 16.3 | 3,470,208 | 16.2 | 3,963,136 | 13.8 | 5,597,716 | 14.5 | 6,200,719 | 13.0 |
| 10-14 | 1,378,515 | 12.6 | 2,074,771 | 13.5 | 2,990,744 | 13.9 | 4,038,635 | 14.1 | 5,034,855 | 13 | 6,345,864 | 13.3 |
| 15-19 | 1,104,999 | 10.1 | 1,741,845 | 11.4 | 2,379,466 | 11.1 | 3,403,178 | 11.9 | 4,169,543 | 10.8 | 5,286,535 | 11.1 |
| 20-24 | 878,111 | 8 | 1,327,404 | 8.7 | 1,903,300 | 8.9 | 2,832,918 | 9.9 | 3,775,103 | 9.8 | 4,448,037 | 9.4 |
| 25-29 | 760,839 | 7 | 1,055,712 | 6.9 | 1,629,914 | 7.6 | 2,259,503 | 7.9 | 3,201,226 | 8.3 | 3,853,955 | 8.1 |
| 30-34 | 580,189 | 5.3 | 818,076 | 5.3 | 1,159,612 | 5.4 | 1,685,922 | 5.9 | 2,519,506 | 6.5 | 3,570,133 | 7.5 |
| 35-39 | 516,955 | 4.7 | 615,594 | 4.0 | 918,984 | 4.3 | 1,419,012 | 4.9 | 2,008,632 | 5.2 | 2,649,679 | 5.6 |
| 40-44 | 395,872 | 3.6 | 535,182 | 3.5 | 732,167 | 3.4 | 1,033,491 | 3.6 | 1,476,169 | 3.8 | 2,258,861 | 4.7 |
| 45-49 | 336,360 | 3.1 | 440,879 | 2.9 | 574,441 | 2.7 | 838,828 | 2.9 | 1,272,745 | 3.3 | 1,785,957 | 3.8 |
| 50-54 | 271,528 | 2.5 | 373,930 | 2.4 | 476,514 | 2.2 | 684,806 | 2.4 | 956,206 | 2.5 | 1,308,371 | 2.8 |
| 55-59 | 216,904 | 2 | 275,311 | 1.8 | 360,196 | 1.7 | 460,016 | 1.6 | 711,953 | 1.8 | 1,117,878 | 2.4 |
| 60-64 | 196,974 | 1.8 | 217,228 | 1.4 | 318,457 | 1.5 | 409,228 | 1.4 | 593,778 | 1.5 | 869,837 | 1.8 |
| 65+ | 391,009 | 3.6 | 486,398 | 3.2 | 708,409 | 3.3 | 932,582 | 3.3 | 1,332,273 | 3.5 | 1,870,203 | 3.9 |
| Not Stated | - | | 29,485 | 0.2 | 25,283 | 0.1 | 190,443 | 0.7 | 21,086 | 0.1 | 116 | 0.0 |
| Total | 10,944,664 | 100 | 15,329,040 | 100 | 21,450,763 | 100 | 28,688,599 | 100 | 38,610,097 | 100 | 47,557,273 | 100 |

2.4. Children, Working Age and Elderly Population

Figure 2.1 shows the trends in the children population age 0-14 since 1969. The absolute size of children age 0-14 population has increased over the years, whereas, the proportion of children out of the total population has been declining (from 48.3% to 39.0% in 2019). Further, the growth rate of children (0-14 years) has been declining over time from 3.4 per cent per annum between 1969 and 1979, to 1.1 per cent per annum between 2009 and 2019. This could be attributed to the reduction in the birth rates which has been experienced over time in the country.

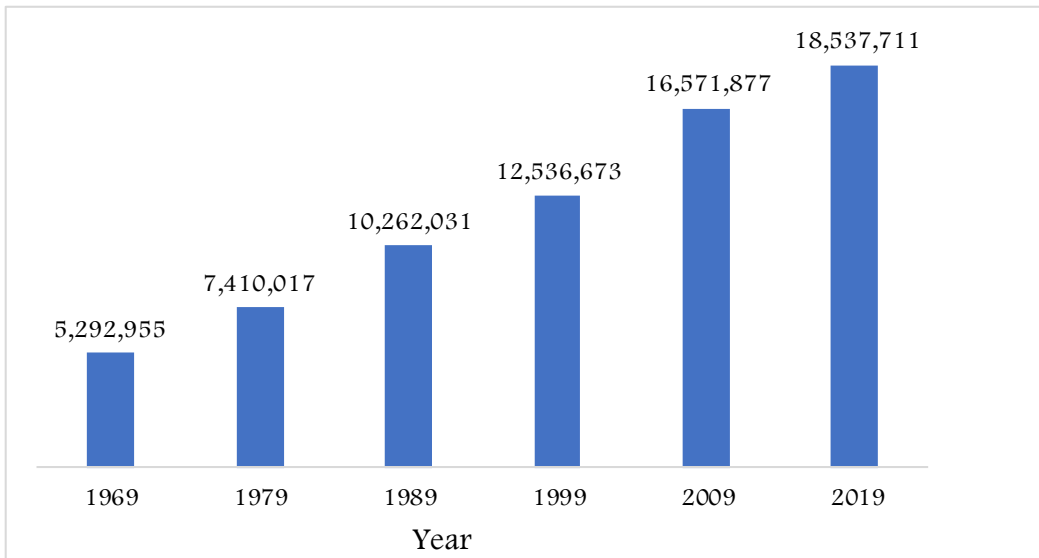


Figure 2.1 Trends in Children Population (0-14 years), 1969-2019

Figure 2.2 shows the trends in the working age population (15-64 years) since 1969 to 2019. The proportion of the working age population out of the total population has been increasing over time (48.1% in 1969 to 57.1% in 2019), so is the absolute size. However, the growth rate of the working population has declined from 3.4 per cent per annum between 1969 and 1979 to 2.7 between 2009 and 2019 attributed to the decline in birth rates.

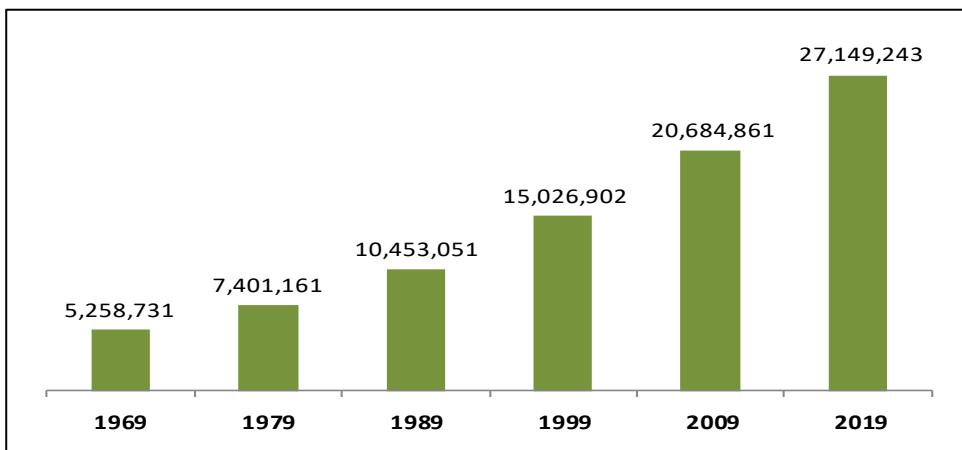


Figure 2.2 Trends in Working Age Population (15-64 years), 1969-2019

Trends in the population aged 60 years and above since 1969 is shown in figure 2.3. Although the proportion of the elderly population (age 60 years and above) to the total population has generally been low over time, the absolute size has increased from slightly above half a million in 1969 to about 2.7 million in 2019. The growth rate of the elderly population between 1969 and 1979 was 1.8 per cent per annum, about two times lower, compared with 3.5 per cent per annum between 2009 and 2019. The increase in growth rate could possibly be as a result of improvement in quality of life, which is also reflected in the increased life expectancy (Maina, 2017).

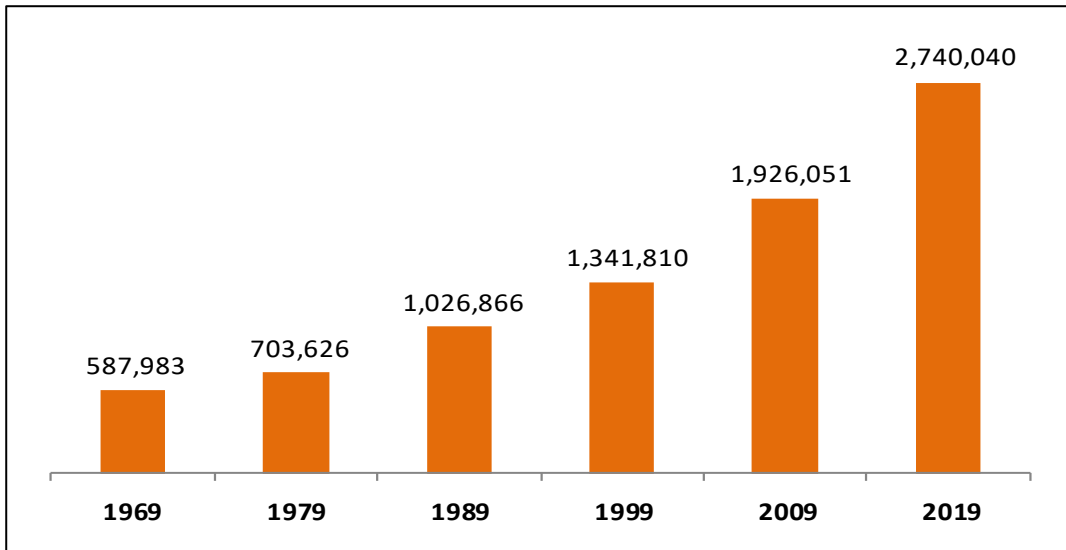


Figure 2.3 Trends in Population Aged 60 and Above, 1969-2019

Figure 2.4 presents the trends in proportions of selected special age groups from 1969 to 2019. The proportion for all selected age groups have increased over time apart from children age 0-14 years (from 48.3 % in 1969 to 39% in 2019). The percentage point increase was highest among the working population, 9 per cent points (from 48.1% in 1969 to 57.1 % in 2019), and lowest in the elderly population, 0.4 per cent points, from 5.4 per cent to 5.8 per cent during the same duration.

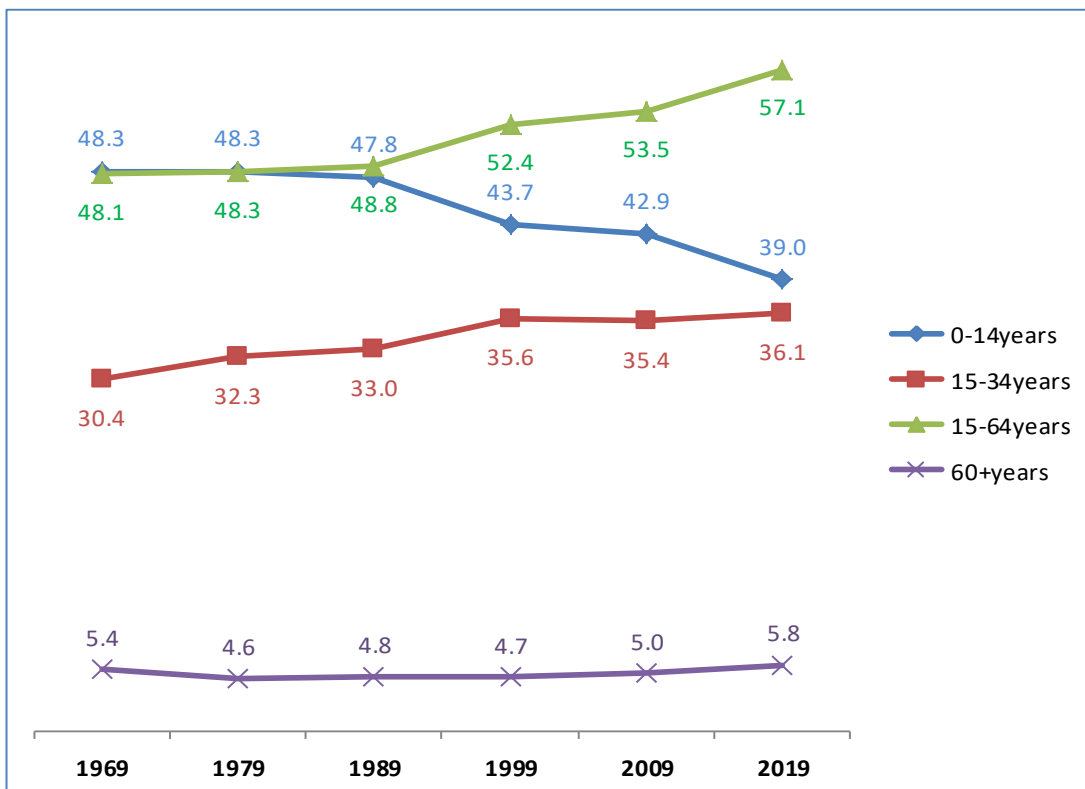


Figure 2.4 Trends in proportions of selected special age groups, 1969-2019.

2.5. Population Pyramid

Population pyramids are graphic representation of the age-sex structure of a population. Figure 2.5 shows the population pyramid for Kenya in 2019. The pyramid remains narrow towards the top replicating a triangular shape with a broader base. This shows a population that is youthful with a much smaller proportion of older

persons at the top of the pyramid, indicative of high fertility rates and mortality rates, although these rates are decreasing gradually over time (Boucher, 2016).

Notably the population pyramid has not changed much since 1969. The pyramid typically shows a high number of young dependents from its broad base with the sides of the pyramid decreasing as fewer people reach old age. Each age cohort is smaller in size than the one below it. However, as much as the base is still broad, the side of the pyramid at the bottom is reducing reflecting the general decrease over the years in proportions of children age 0-14 years.

Efforts needs to be enhanced to advance the population structure from a youthful population to a more mature age structure so as to accelerate economic growth through the demographic dividend. This can be achieved by a shift from high to low fertility and mortality rates. Therefore, the share of the working age population increases which increases the labour supply, human capital and savings, consequently resulting to an increased economic growth (Luoma, 2016).

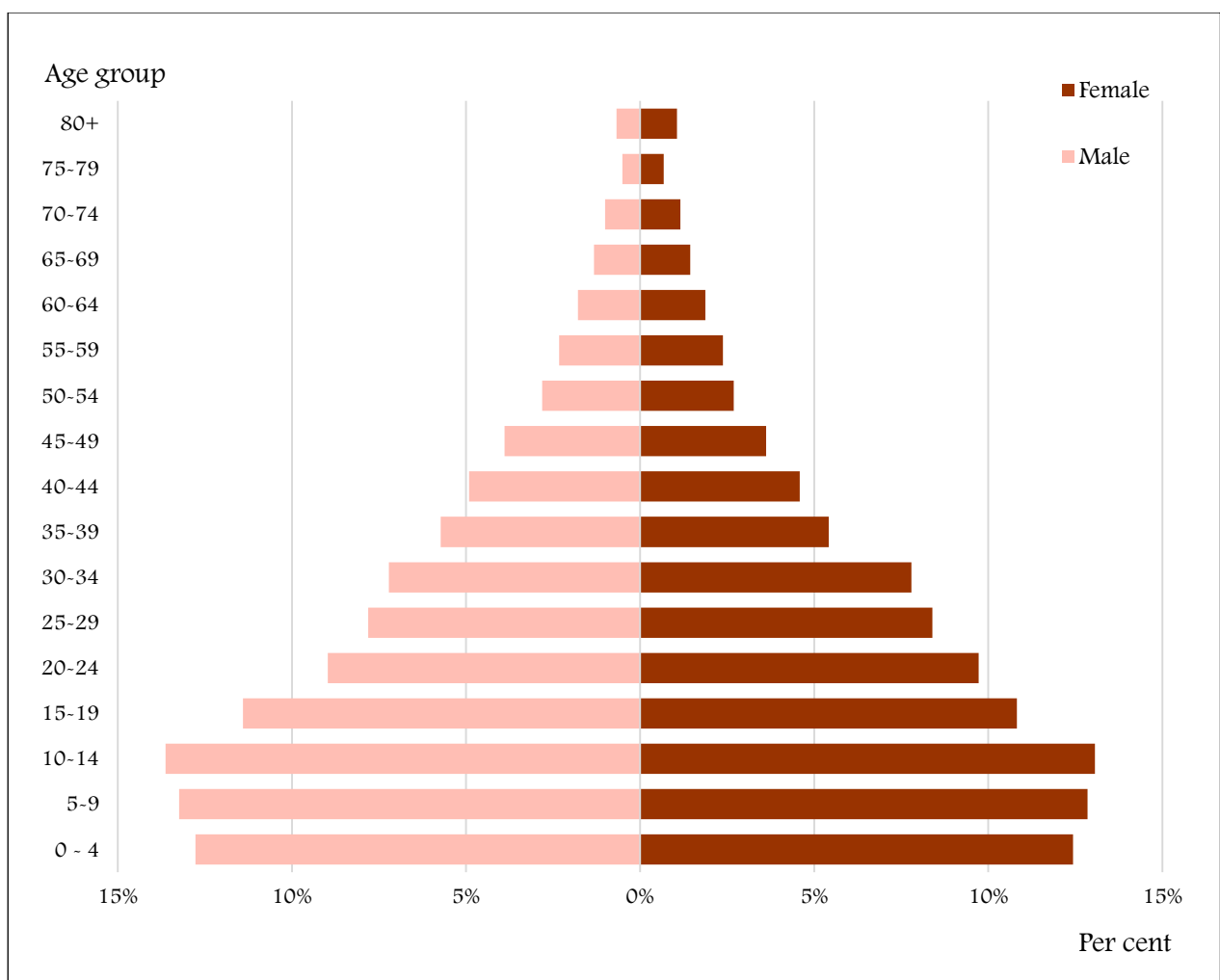


Figure 2.5 Population Pyramid Kenya, 2019

2.6. Population Ratios

The ratios captured in this report include sex ratio, total dependency ratio, child dependency, age dependency, and parent support ratios. Table 2.5 shows total dependency ratio, child dependency, age dependency, and parent support ratios by county.

2.6.1. Total Dependency Ratio

The total dependency ratio is also referred to as dependency ratio. It is used to measure the burden caused by non-working population (0-14 and 65+) on a nation's working age population (15-64 years); in other words, the pressure on the productive population by the non-productive population (United Nations Population Division, 2019). The higher the total dependency ratio, the greater the burden to the working population; a low dependency ratio means that there are enough people who are working to support the dependent population (Amadeo, 2020). Increasing fertility and allowing immigration especially for young working population are a few strategies to lower the dependency ratio, although job reductions in the future could impact the effectiveness of these strategies (Amadeo, 2020).

The total dependency ratio nationally stood at 75.2 per cent. It means that there are about 75 dependents for every 100 working adults. The ratio is higher in rural areas (87 per cent) compared to urban areas (53.7 per cent). In rural areas there are about 9 dependents for every 10 working adults whereas in urban areas, there are about 5 dependents for every 10 working adults. Counties with high total dependency ratio of over 100 are Mandera (128.7%), West-Pokot (117.2%), Samburu (108.2%), Wajir (107.1%), Tana River (106.1%) and Narok (105.5%). In these counties, the pressure and the burden on the productive population is high. The reverse applies for counties with low total dependency ratio which are Nairobi City, Mombasa, Kiambu and Kirinyaga with 46.4, 52.5, 52.6 and 54.5 per cent, respectively.

2.6.2. Child Dependency Ratio

The child dependency ratio is the number of children aged 0-14 years relative to the working age population (15-64 years) (Bryant, Faruqee, Velculescu & Arbatli, 2004). Child dependency ratio at national level is at 68.3 per cent. This means that there were nearly 68 children for every 100 working adults. The child dependency ratio was higher in rural areas (77.9%) compared to urban areas (50.8%); about 78 children for every 100 working adults in rural areas and 51 children for every 100 working adults in urban areas. Counties with high child dependency ratio are Mandera (125.4%), West Pokot (111.0%), Wajir (104.1%), Samburu (101.9%), Narok (100.5%) and Tana River (99.7%). On the other hand, counties with low child dependency ratio were Mombasa, Nyeri, Kiambu, Nairobi City and Kirinyaga at 49.7, 47.4, 47.2, 44.5 and 44.5 per cent respectively. These ratios could be attributed by low fertility rates in these counties.

2.6.3. Old Age Dependency

The proportion of the population who were 60 and above has some implications on the socio-economic status of a country. Two indicators are useful for describing the extent to which older persons in a population depend on the working population. These indicators are: potential support ratio and parent support ratio.

2.6.4. Potential Support/Age Dependency Ratio

Potential support ratio is the alternative way of expressing old age dependency. It is stated as the number of persons in the working age 15-64 per person aged 65 and above (United Nations Population Division, 2019). Nationally, there are about 7 persons aged 65 and above per 100 person aged 15-64 years. In other words, there are nearly 7 elderly persons per 100 working adults. The aged dependency ratio was about three times higher in rural areas compared to urban areas. The ratio varied from a low of 1.9 in Nairobi

City to a high of 14.3 in Murang'a County. A high potential support ratio indicates high dependency burden on the working population and vice versa.

2.6.5. Parent Support Dependency Ratio

Parent support ratio is the number of persons aged 85 and above to number of persons aged 50-64 expressed per 100 persons (United Nations Population Division, 2019). This measure is commonly used to assess the demands on families to provide support to the oldest members of the society. Basically, parent support ratio is only a rough indicator of changes expected in the family support system. In Kenya there were about 6 persons aged 85 and above per 100 persons aged 50- 64. The parent support dependency ratio was about three times higher in rural areas compared to urban areas. Kitui (11.6) and Makueni (11.2) counties had the highest parent support ratio, whereas, Nairobi City (1.5) and Mombasa (1.8) had the lowest ratio.

Table 2.5: Total, Child, Aged and Parent Support Dependency Ratios by County, 2019

| County | Total Dependency Ratio | Child Dependency Ratio | Age Dependency Ratio | Parent Support Dependency Ratio |
|------------------|---------------------------------------|---------------------------------------|-------------------------------------|--|
| KENYA | 75.2 | 68.3 | 6.9 | 6.4 |
| Rural | 87 | 77.9 | 9.1 | 7.7 |
| Urban | 53.7 | 50.8 | 2.8 | 2.8 |
| Mombasa | 52.5 | 49.7 | 2.9 | 1.8 |
| Kwale | 94.2 | 86.8 | 7.4 | 5.4 |
| Kilifi | 85.4 | 78.3 | 7.1 | 5.4 |
| Tana River | 106.1 | 99.7 | 6.4 | 4.9 |
| Lamu | 75.0 | 68.0 | 6.9 | 4.2 |
| Taita- Taveta | 66.1 | 56.5 | 9.6 | 6.5 |
| Garissa | 89.6 | 86.4 | 3.2 | 3.6 |
| Wajir | 107.1 | 104.1 | 3.1 | 3.2 |
| Mandera | 128.7 | 125.4 | 3.3 | 4.6 |
| Marsabit | 99.8 | 93.7 | 6.0 | 6.9 |
| Isiolo | 92.5 | 86.7 | 5.8 | 6.5 |
| Meru | 68.2 | 58.8 | 9.4 | 8.2 |
| Tharaka- Nithi | 68.3 | 56.4 | 12.0 | 9.9 |
| Embu | 60.4 | 50.2 | 10.2 | 9.1 |
| Kitui | 83.2 | 71.6 | 11.6 | 11.6 |
| Machakos | 61.8 | 52.8 | 9.0 | 9.0 |
| Makueni | 71.2 | 59.7 | 11.6 | 11.2 |
| Nyandarua | 70.4 | 60.8 | 9.6 | 6.6 |
| Nyeri | 60.2 | 47.4 | 12.8 | 8.1 |
| Kirinyaga | 54.5 | 44.5 | 10.0 | 8.0 |
| Murang'a | 69.2 | 54.8 | 14.3 | 9.9 |
| Kiambu | 52.6 | 47.2 | 5.4 | 5.4 |
| Turkana | 91.1 | 86.3 | 4.8 | 4.3 |
| West Pokot | 117.2 | 111.0 | 6.2 | 5.4 |
| Samburu | 108.2 | 101.9 | 6.2 | 6.8 |
| Trans Nzoia | 85.4 | 79.0 | 6.4 | 5.4 |
| Uasin Gishu | 65.9 | 61.0 | 4.9 | 5.6 |
| Elgeyo- Marakwet | 86.2 | 78.3 | 7.9 | 7.6 |
| Nandi | 76.6 | 69.4 | 7.2 | 7.6 |
| Baringo | 93.3 | 85.9 | 7.5 | 7.0 |
| Laikipia | 73.9 | 65.4 | 8.5 | 5.9 |
| Nakuru | 69.8 | 64.0 | 5.8 | 5.3 |
| Narok | 105.5 | 100.5 | 5.0 | 5.6 |
| Kajiado | 68.7 | 65.1 | 3.6 | 4.0 |
| Kericho | 75.5 | 69.0 | 6.4 | 6.7 |
| Bomet | 82.8 | 76.1 | 6.6 | 8.4 |
| Kakamega | 87.7 | 79.1 | 8.6 | 5.6 |
| Vihiga | 87.1 | 73.1 | 14.0 | 8.6 |
| Bungoma | 91.8 | 84.9 | 6.9 | 5.7 |
| Busia | 87.8 | 79.8 | 8.1 | 6.5 |
| Siaya | 89.9 | 78.5 | 11.4 | 7.9 |
| Kisumu | 75.7 | 68.9 | 6.8 | 5.2 |
| Homabay | 95.6 | 87.1 | 8.5 | 6.9 |
| Migori | 96.7 | 90.4 | 6.4 | 6.2 |
| Kisii | 81.3 | 73.1 | 8.2 | 6.4 |
| Nyamira | 78.9 | 69.9 | 9.0 | 6.3 |
| Nairobi City | 46.4 | 44.5 | 1.9 | 1.5 |

2.7. Population Distribution and Density

Population distribution describes how people are spread across a specific area, basically, this shows where people live; population density on the other hand, is expressed as number of persons per square kilometers (Tarsi & Tuff,2012).

Table 2.6 shows the population distribution and density by County from 1999 to 2019. Population distribution is generally uneven. Nairobi City continues to have the largest share of the population followed by Kiambu, Nakuru, Kakamega and Bungoma counties. Lamu county, followed by Isiolo, Samburu, Tana River, Taita Taveta, Tharaka–Nithi, Elgeyo-Marakwet and Marsabit counties had the smallest share of the total population in 2019. There were marginal differences in the share of the total population across all counties in 2019 compared to 1999.

In 2019, Nairobi City had the highest population density of 6,245, followed by Mombasa and Vihiga counties at 5,494 and 1,046 respectively. The other densely populated counties are Kisii (957), Kiambu (952), Nyamira (675), Kakamega (619), Kisumu (554), Bungoma (552) and Busia (526). Marsabit (6), Tana River (8) and Isiolo (11), are the least populated counties.

A range of both human and natural factors affect the population distribution which is uneven. Natural resources, climatic conditions, political stability, cultural propensity, job opportunities and agriculture potential play a role in population density (Tarsi & Tuff,2012). The densely populated counties of Nairobi City, Mombasa, Kiambu and Kisumu could be attributed to employment opportunities, availability of social amenities, well developed physical infrastructure, among others. On the other hand, Kakamega, Vihiga, Kisii, Nyamira and Busia counties and their environs have reliable rainfall with fertile soils. The sparsely populated counties like Marsabit, Tana River and Isiolo, are those in Arid and Semi-Arid areas with unreliable rainfall and are prone to insecurity (KNBS, 2009).

Table 2.6: Population Distribution and Density by County, 1999-2019

| County | Land | | Total Population | | | % share of total population | | | Population Density | | |
|-----------------|--------------------------|------------------------------|------------------|-----------|-----------|-----------------------------|------|------|--------------------|-------|-------|
| | Area(Area in square km)- | Land Area(Area in square km) | 1999 | 2009 | 2019 | 1999 | 2009 | 2019 | 1999 | 2009 | 2019 |
| | 1999 and 2009 | 2019 | | | | | | | | | |
| Mombasa | 218.9 | 219.9 | 643,060 | 938,500 | 1,208,112 | 2.3 | 2.5 | 2.5 | 2,938 | 4,287 | 5,494 |
| Kwale | 8,270.2 | 8,253.7 | 490,973 | 649,588 | 866,709 | 1.7 | 1.7 | 1.8 | 59 | 79 | 105 |
| Kilifi | 12,609.7 | 12,553.3 | 815,994 | 1,108,770 | 1,453,599 | 2.9 | 2.9 | 3.1 | 65 | 88 | 116 |
| Tana River | 38,436.9 | 37,903.6 | 178,609 | 240,008 | 315,874 | 0.6 | 0.6 | 0.7 | 5 | 6 | 8 |
| Lamu | 6,273.1 | 6,283.0 | 71,215 | 101,483 | 143,891 | 0.3 | 0.3 | 0.3 | 11 | 16 | 23 |
| Taita–Taveta | 17,084.0 | 17,152.0 | 241,942 | 284,516 | 340,623 | 0.9 | 0.8 | 0.7 | 14 | 17 | 20 |
| Garissa | 44,175.0 | 44,753.2 | 262,694 | 375,968 | 841,235 | 0.9 | 1.0 | 1.8 | 6 | 9 | 19 |
| Wajir | 56,585.8 | 56,773.8 | 309,268 | 399,432 | 781,228 | 1.1 | 1.1 | 1.6 | 5 | 7 | 14 |
| Mandera | 25,991.5 | 25,942.2 | 246,063 | 618,966 | 867,319 | 0.9 | 1.6 | 1.8 | 9 | 24 | 33 |
| Marsabit | 70,961.2 | 70,944.3 | 172,481 | 291,075 | 459,598 | 0.6 | 0.8 | 1.0 | 2 | 4 | 6 |
| Isiolo | 25,336.1 | 25,349.2 | 98,971 | 143,211 | 267,966 | 0.4 | 0.4 | 0.6 | 4 | 6 | 11 |
| Meru | 6,936.2 | 7,013.9 | 1,096,325 | 1,355,359 | 1,545,468 | 3.9 | 3.6 | 3.2 | 158 | 195 | 220 |
| Tharaka-Nithi | 2,638.8 | 2,564.4 | 303,932 | 365,142 | 393,109 | 1.1 | 1.0 | 0.8 | 115 | 138 | 153 |
| Embu | 2,818.0 | 2,820.7 | 443,409 | 515,959 | 608,553 | 1.6 | 1.4 | 1.3 | 157 | 183 | 216 |
| Kitui | 30,496.5 | 30,429.6 | 810,779 | 1,012,236 | 1,136,079 | 2.9 | 2.7 | 2.4 | 27 | 33 | 37 |
| Machakos | 6,208.2 | 6,037.3 | 895,816 | 1,097,816 | 1,421,760 | 3.2 | 2.9 | 3.0 | 144 | 177 | 235 |
| Makueni | 8,008.8 | 8,176.7 | 766,111 | 884,258 | 987,550 | 2.7 | 2.3 | 2.1 | 96 | 110 | 121 |
| Nyandarua | 3,245.3 | 3,285.8 | 468,458 | 596,053 | 638,233 | 1.7 | 1.6 | 1.3 | 144 | 184 | 194 |
| Nyeri | 3,337.1 | 3,325.0 | 647,887 | 693,354 | 759,125 | 2.3 | 1.8 | 1.6 | 194 | 208 | 228 |
| Kirinyaga | 1,479.1 | 1,478.3 | 454,090 | 527,880 | 610,379 | 1.6 | 1.4 | 1.3 | 307 | 357 | 413 |
| Murang'a | 2,558.8 | 2,522.8 | 907,446 | 942,101 | 1,056,576 | 3.2 | 2.5 | 2.2 | 355 | 368 | 419 |
| Kiambu | 2,543.4 | 2,538.7 | 1,204,009 | 1,622,363 | 2,417,288 | 4.3 | 4.3 | 5.1 | 473 | 638 | 952 |
| Turkana | 68,680.3 | 68,233.1 | 389,319 | 854,991 | 926,484 | 1.4 | 2.3 | 1.9 | 6 | 12 | 14 |
| West Pokot | 9,169.4 | 9,123.3 | 305,583 | 512,572 | 621,135 | 1.1 | 1.4 | 1.3 | 33 | 56 | 68 |
| Samburu | 21,022.2 | 21,089.7 | 135,565 | 223,897 | 310,316 | 0.5 | 0.6 | 0.7 | 6 | 11 | 15 |
| Trans-Nzoia | 2,495.5 | 2,495.2 | 568,498 | 818,539 | 990,289 | 2.0 | 2.2 | 2.1 | 228 | 328 | 397 |
| Uasin Gishu | 3,345.2 | 3,398.6 | 613,386 | 893,609 | 1,163,061 | 2.2 | 2.4 | 2.4 | 183 | 267 | 342 |
| Elgeyo-Marakwet | 3,029.8 | 3,032.1 | 282,793 | 369,902 | 454,433 | 1.0 | 1.0 | 1.0 | 93 | 122 | 150 |
| Nandi | 2,884.2 | 2,849.4 | 568,998 | 752,665 | 885,651 | 2.0 | 2.0 | 1.9 | 197 | 261 | 311 |
| Baringo | 11,015.3 | 10,984.6 | 400,571 | 555,441 | 666,730 | 1.4 | 1.5 | 1.4 | 36 | 50 | 61 |
| Laikipia | 9,461.9 | 9,507.6 | 316,791 | 398,992 | 518,532 | 1.1 | 1.1 | 1.1 | 33 | 42 | 55 |
| Nakuru | 7,495.1 | 7,504.9 | 1,176,233 | 1,602,636 | 2,161,935 | 4.2 | 4.2 | 4.5 | 157 | 214 | 288 |
| Narok | 17,933.1 | 17,931.7 | 529,711 | 850,292 | 1,157,748 | 1.9 | 2.3 | 2.4 | 30 | 47 | 65 |
| Kajiado | 21,901.0 | 21,871.2 | 395,905 | 686,992 | 1,117,580 | 1.4 | 1.8 | 2.3 | 18 | 31 | 51 |
| Kericho | 2,479.0 | 2,436.1 | 461,651 | 590,371 | 901,609 | 1.6 | 1.6 | 1.9 | 186 | 238 | 370 |
| Bomet | 2,471.3 | 2,507.1 | 689,512 | 891,390 | 875,630 | 2.5 | 2.4 | 1.8 | 279 | 361 | 349 |
| Kakamega | 3,051.2 | 3,016.6 | 1,289,233 | 1,698,576 | 1,867,283 | 4.6 | 4.5 | 3.9 | 423 | 557 | 619 |
| Vihiga | 530.9 | 563.8 | 496,588 | 567,387 | 589,940 | 1.8 | 1.5 | 1.2 | 935 | 1,069 | 1,046 |
| Bungoma | 35,828.0 | 3,023.9 | 1,005,094 | 1,374,477 | 1,670,449 | 3.6 | 3.6 | 3.5 | 28 | 38 | 552 |
| Busia | 1,134.4 | 1,699.8 | 548,163 | 743,592 | 893,621 | 1.9 | 2.0 | 1.9 | 483 | 655 | 526 |
| Siaya | 2,530.4 | 2,529.7 | 712,305 | 841,746 | 992,948 | 2.5 | 2.2 | 2.1 | 281 | 333 | 393 |
| Kisumu | 2,085.9 | 2,085.4 | 788,539 | 968,451 | 1,155,369 | 2.8 | 2.6 | 2.4 | 378 | 464 | 554 |
| Homa Bay | 3,183.3 | 3,152.5 | 745,040 | 963,441 | 1,131,897 | 2.6 | 2.6 | 2.4 | 234 | 303 | 359 |
| Migori | 2,596.4 | 2,613.5 | 656,935 | 916,665 | 1,116,297 | 2.3 | 2.4 | 2.3 | 253 | 353 | 427 |
| Kisii | 1,317.5 | 1,323.3 | 943,202 | 1,151,898 | 1,266,759 | 3.4 | 3.1 | 2.7 | 716 | 874 | 957 |
| Nyamira | 899.3 | 897.3 | 495,620 | 598,029 | 605,554 | 1.8 | 1.6 | 1.3 | 551 | 665 | 675 |
| Nairobi City | 695.1 | 703.9 | 2,082,191 | 3,134,261 | 4,395,749 | 7.4 | 8.3 | 9.2 | 2,996 | 4,509 | 6,245 |

2.8. Urbanization

Population dynamics, the forces behind the growth and movement of populations, play a central part in the urbanization process. The urban phenomenon in developing countries is intimately linked in many complex ways with high fertility and rapid population growth. Estimating the level of urbanization in any country is difficult and there is no internationally accepted standard for identifying urban areas. The United Nations argues that “given the variety of situations in the countries of the world, it is not possible or desirable to adopt uniform criteria to distinguish urban areas from rural areas. There are three different perspectives which are often utilized to contextualize the definition: politico-administrative context; human settlements perspective and statistical perspective. Each of these perspectives has different spatial units of analysis. A common denominator of the three mentioned urban perceptions is that none of them explicitly accounts for population density. A fourth designation of “urban” based on population density is thus examined in this report and contrasted with the three above-mentioned urban perspectives.

2.8.1. Urban Population by County

Table 2.7 shows the urban population of the 47 counties in Kenya as well as the proportion of urban population to the county population. Demographic, social, economic, and political variables have impacted greatly on the urbanization process in Kenya, resulting in varied county urbanization levels. The entire population of Nairobi City and Mombasa counties are urban. They are followed by Kiambu (70.6% urban) and Kajiado (55.7% urban) counties. Kisumu is ranked as the eighth urbanized county despite being one of the cities in the country. On the other hand, Kitui, Elgeyo-Marakwet and Bomet are the least urbanized counties with less than 5 percent urban population, respectively as shown in Table 2.7.

Table 2.7 Urban Population by County, 2019

| County | Total Population | Urban Population | % of Urban Population | % of total urban population | County | Total Population | Urban Population | % of Urban Population | % of total urban population |
|--------------|-------------------|-------------------|-----------------------|-----------------------------|-----------------|------------------|------------------|-----------------------|-----------------------------|
| KENYA | 47,557,273 | 14,835,425 | 31.2 | 100.0 | Migori | 1,116,297 | 167,530 | 15 | 1.1 |
| Mombasa | 1,208,112 | 1,208,112 | 100.0 | 8.1 | Kwale | 866,709 | 126,414 | 14.6 | 0.9 |
| Nairobi City | 4,395,749 | 4,395,749 | 100.0 | 29.6 | Busia | 893,621 | 113,731 | 12.7 | 0.8 |
| Kiambu | 2,417,288 | 1,705,921 | 70.6 | 11.5 | Embu | 608,553 | 75,919 | 12.5 | 0.5 |
| Kajiado | 1,117,580 | 622,533 | 55.7 | 4.2 | Kisii | 1,266,759 | 151,395 | 12 | 1.0 |
| Nakuru | 2,161,935 | 1,046,938 | 48.4 | 7.1 | Bungoma | 1,670,449 | 190,096 | 11.4 | 1.3 |
| Isiolo | 267,966 | 125,645 | 46.9 | 0.8 | Baringo | 666,730 | 75,288 | 11.3 | 0.5 |
| Uasin Gishu | 1,163,061 | 510,146 | 43.9 | 3.4 | Murang'a | 1,056,576 | 118,436 | 11.2 | 0.8 |
| Kisumu | 1,155,369 | 440,788 | 38.2 | 3.0 | Kericho | 901,609 | 93,506 | 10.4 | 0.6 |
| Mandera | 867,319 | 270,444 | 31.2 | 1.8 | Nyandarua | 638,233 | 66,533 | 10.4 | 0.4 |
| Machakos | 1,421,760 | 413,953 | 29.1 | 2.8 | Homabay | 1,131,897 | 113,069 | 10 | 0.8 |
| Taita-Taveta | 340,623 | 93,764 | 27.5 | 0.6 | Kakamega | 1,867,283 | 185,318 | 9.9 | 1.2 |
| Lamu | 143,891 | 39,489 | 27.4 | 0.3 | Vihiga | 589,940 | 58,376 | 9.9 | 0.4 |
| Kilifi | 1,453,599 | 393,804 | 27.1 | 2.7 | Meru | 1,545,468 | 138,887 | 9 | 0.9 |
| Garissa | 841,235 | 210,850 | 25.1 | 1.4 | Narok | 1,157,748 | 100,327 | 8.7 | 0.7 |
| Tana River | 315,874 | 78,000 | 24.7 | 0.5 | Siaya | 992,948 | 85,371 | 8.6 | 0.6 |
| Laikipia | 518,532 | 127,355 | 24.6 | 0.9 | Nyamira | 605,554 | 50,131 | 8.3 | 0.3 |
| Marsabit | 459,598 | 107,239 | 23.3 | 0.7 | Tharaka-Nithi | 393,109 | 32,739 | 8.3 | 0.2 |
| Wajir | 781,228 | 177,148 | 22.7 | 1.2 | Makueni | 987,550 | 77,067 | 7.8 | 0.5 |
| Kirinyaga | 610,379 | 136,218 | 22.3 | 0.9 | Nandi | 885,651 | 59,479 | 6.7 | 0.4 |
| Nyeri | 759,125 | 150,739 | 19.9 | 1.0 | West Pokot | 621,135 | 31,839 | 5.1 | 0.2 |
| Trans Nzoia | 990,289 | 178,711 | 18 | 1.2 | Kitui | 1,136,079 | 54,017 | 4.8 | 0.4 |
| Samburu | 310,316 | 47,131 | 15.2 | 0.3 | Elgeyo-Marakwet | 454,433 | 20,573 | 4.5 | 0.1 |
| Turkana | 926,484 | 140,741 | 15.2 | 0.9 | Bomet | 875,630 | 27,966 | 3.2 | 0.2 |

2.8.2. Trends in urbanization

The trends of urbanization in Kenya between 1948 and 2019 are shown in Table 2.8. The number of urban centres has increased from 17 in 1948 to 139 in 1989 and 372 in 2019. As the number of urban centres increased, the population of Kenyans living in the urban centres also increased from 285,000 in 1948 to 3.9 million in 1989 and 14.8 million in 2019. The proportion of Kenyans living in urban centres is still relatively low even though the percentage of urban population to the total population has gradually increased from 5.3 percent in 1948 to 31.3 percent in 2009. However, because of excluding the peri-urban areas in 2019, the proportion decreased marginally to 31.2 per cent.

In all the population and housing censuses, the urban population has been disproportionately concentrated in Nairobi City and Mombasa county. The growth of urban centres both in numbers and population accelerated immediately after independence, when Africans were allowed to migrate to towns without any legal and administrative restrictions. This explains the high urban growth rates in 1969, 1979 and 1989, largely a consequence of rural-urban migration. As the population become more urbanized, the urban growth rate has declined from a peak of 7.7 percent in 1979 to 2.1 percent in 2019. However, in 2009 the urban growth rate rose to a high of 8.3 percent due to rural-urban migration.

Table 2.8 Urbanization Trends in Kenya, 1948-2019

| Year | Total population (Million) | No. of urban centres | Urban population (Million) | Percentage of urban to total population | Intercensal growth rate (percent) |
|-------|----------------------------|----------------------|----------------------------|---|-----------------------------------|
| 1948 | 5.4 | 17 | 0.3 | 5.3 | - |
| 1962 | 8.6 | 34 | 0.7 | 8.7 | 6.3 |
| 1969 | 11.0 | 47 | 1.1 | 9.8 | 7.1 |
| 1979 | 15.3 | 91 | 2.3 | 15.1 | 7.7 |
| 1989 | 21.4 | 139 | 3.9 | 18.1 | 5.2 |
| 1999 | 28.2 | 180 | 5.4 | 19.3 | 3.4 |
| 2009* | 38.4 | 230 | 12.0* | 31.3 | 8.3 |
| 2019 | 47.6 | 372 | 14.8 | 31.2 | 2.1 |

* 2009 Urban Population included Peri-Urban

2.8.3. Trends in Population of Urban Centres by Size Category

The numbers and populations of small and medium-size urban centres have shown an upward trend over the years and is expected to do so in future as shown in Table 2.9. In 2019, the number of small urban centres increased to 160 with a total population of 753,873 people. On the other hand, the number of medium-size urban centres rose to 126 with a total population of 3.8 million people due to rural-urban migration.

Table 2.9 Urban Populations by Size and Category of Urban Centres, 1962-2019

| Year | Category of urban centres by population size | | | | | | | |
|------|--|------------|-----------------|------------|---------------|------------|-------------|------------|
| | 1 million and over | | 100,000-999,999 | | 10,000-99,999 | | 2,000-9,999 | |
| | No. | Population | No. | Population | No. | Population | No. | Population |
| 1962 | 0 | 0 | 2 | 523,075 | 5 | 105,712 | 27 | 118,864 |
| 1969 | 0 | 0 | 2 | 756,359 | 9 | 79,267 | 36 | 153,282 |
| 1979 | 0 | 0 | 6 | 1,321,566 | 24 | 717,855 | 64 | 276,275 |
| 1989 | 1 | 1,324,570 | 5 | 1,046,588 | 40 | 1,080,726 | 93 | 426,813 |
| 1999 | 1 | 2,083,509 | 4 | 1,214,927 | 62 | 1,508,180 | 113 | 623,174 |
| 2009 | 1 | 3,109,861 | 22 | 4,617,114 | 97 | 3,665,486 | 110 | 631,109 |
| 2019 | 2 | 5,603,861 | 20 | 4,533,035 | 126 | 3,856,072 | 160 | 753,873 |

2.8.4. Urban Primacy in Kenya

Urban primacy occurs when the largest city in a country dominates the urban hierarchy in terms of its population size. Urban primacy is quantitatively measured in terms of a two-city, a four-city or 11-city primacy index. This report uses the 11-city primacy index which is the ratio of the population of the largest city in the country or region to the combined population of the next 10 cities in population rank. A primacy index of less than 1 is “low”; 1-2.9 is “medium” while 3 and above is “high”, (UNECA,

1989). Figure 2.6 gives the 11-city primacy index for Kenya over the years. Although the primacy index has been generally “low” over time, the trends illustrate the continued dominance of Nairobi City County in the urban hierarchy. It also indicates that the growth of medium-size urban centres has stabilized the primacy index, even as Nairobi continues to have the largest share of the urban population.

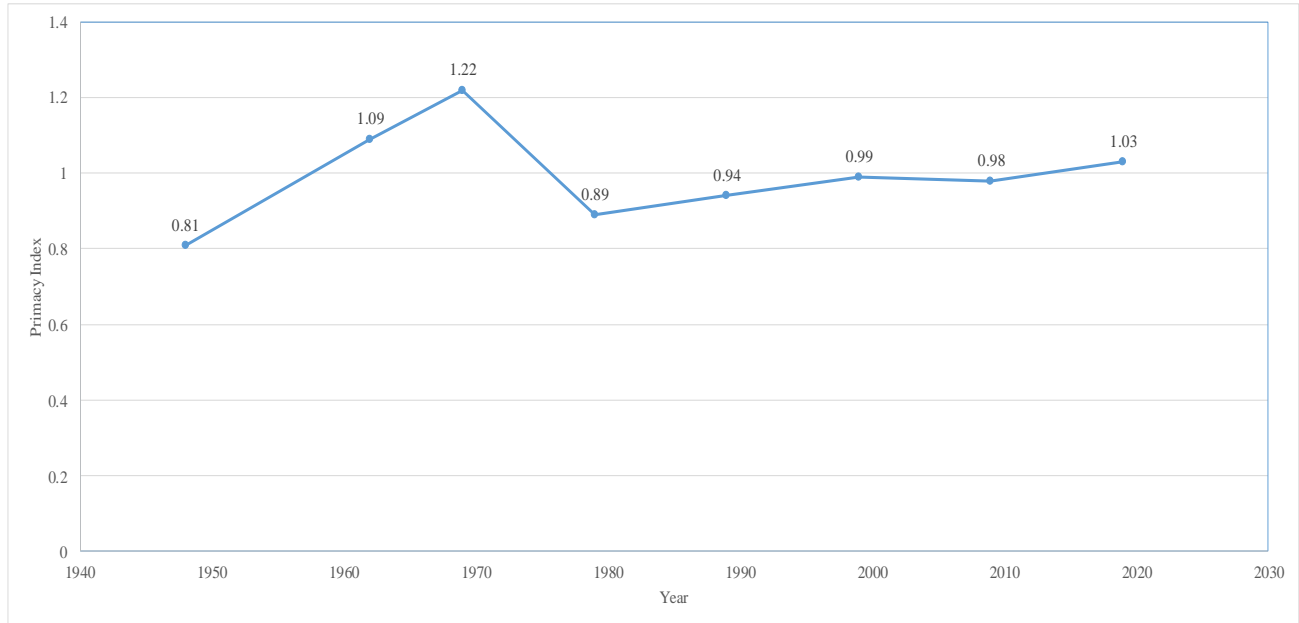


Figure 2.6: The 11-City Primacy Index, 1948 - 2019

2.8.5. Urban Settlements

The 2019 KPHC also captured the population living in informal settlements particularly in the urban centres. Urban informal settlement is a settlement characterized by at least two of the following: inadequate access to safe water; inadequate access to sanitation and other infrastructure; poor structural quality of housing; overcrowding; and insecure residential status.

The total urban population living in informal settlements is 1,016,913. This represents 6.9 percent of the total urban population as shown in Table 2.10. The informal settlements are located in only 19 out of the 372 urban centres falling within 16 counties in Kenya. Nairobi City contributes a disproportionately larger share (80%) of the total urban informal settlements’ population in the country, followed by Kisumu and Mombasa.

Table 2.10 Urban Informal Settlements Population by County and Urban Centers, 2019

| County | Urban Centre | Total Urban Population | Informal settlements population | Share of Population in Informal Settlement to Total Urban Population | Proportion of total urban informal settlements population (%) |
|---------------|----------------------|-------------------------------|--|---|--|
| Kenya | Kenya (Urban) | 14,835,425 | 1,016,913 | 6.9 | 100.0 |
| Nairobi City | Nairobi City | 4,395,749 | 813,848 | 18.5 | 80.0 |
| Kisumu | Kisumu | 397,853 | 85,314 | 21.4 | 8.4 |
| Mombasa | Mombasa | 1,208,112 | 32,387 | 2.7 | 3.2 |
| Machakos | Athi River | 81,286 | 27,680 | 34.1 | 2.7 |
| Nakuru | Naivasha | 198,399 | 12,694 | 6.4 | 1.2 |
| Kiambu | Thika | 251,360 | 11,963 | 4.8 | 1.2 |
| Makueni | Wote | 19,724 | 6,975 | 35.4 | 0.7 |
| Kitui | Kitui | 29,062 | 6,111 | 21.0 | 0.6 |
| Nakuru | Nakuru | 570,614 | 5,136 | 0.9 | 0.5 |
| Taita Taveta | Voi | 53,345 | 4,527 | 8.5 | 0.4 |
| Nyeri | Nyeri | 80,069 | 3,975 | 5.0 | 0.4 |
| Narok | Narok | 65,415 | 1,659 | 2.5 | 0.2 |
| Trans Nzoia | Kitale | 162,154 | 1,058 | 0.7 | 0.1 |
| Kiambu | Kikuyu | 323,825 | 866 | 0.3 | 0.1 |
| Kakamega | Kakamega | 107,205 | 844 | 0.8 | 0.1 |
| Meru | Meru | 80,169 | 685 | 0.9 | 0.1 |
| Turkana | Lodwar | 82,927 | 419 | 0.5 | 0.0 |
| Embu | Embu | 64,974 | 390 | 0.6 | 0.0 |
| Machakos | Machakos | 63,761 | 382 | 0.6 | 0.0 |

Chapter 3: Nuptiality

3.1. Introduction

Nuptiality refers to the frequency of marriages between persons of opposite sexes which involve rights and obligations fixed by law or custom. Marriage is a significant factor in population dynamics since it affects fertility by setting the context for reproductive activities such as entry into sexual activities and childbearing. The propensity to marry and the timing and duration of marriage have effects on the rate of population growth, mortality, migration, and fertility (Keely, 1979). The 2019 Census classified marital status as never married, married monogamous, married polygamous, widowed, divorced, or separated. This chapter examines the association between marital status and other demographic variables such as sex, age and place of residence (rural and urban areas).

3.2. Marital Status by Age and Sex

Age at marriage is an important factor of population because it marks the onset of regular exposure to the risk of childbearing. Table 3.1 shows the percentage distribution of population by marital status, age and sex in 2019. The results reveal that the proportion of never married men and women is highest among adolescents (age 15 – 19) and declines with increase in age. More women (51.1%) than men (48.4%) are married, with more women marrying younger compared with men. Notably, adolescent marriage is more prevalent among women (10.8%) than men (4.2%). Six per cent of women compared with less than one per cent of men are widowed. Furthermore, the proportion of population widowed increases with age. At age 50 and above, more women are widowed compared with men, results which are similar to those obtained from the 2009 Census. The proportion of population divorced or separated is generally low, each accounting for less than 10 per cent of men and women age 15 years and above.

Table 3. 1: Percentage Distribution of Population by Marital Status, Age and Sex, 2019

| Age group | Never Married | | Married | | Widowed | | Divorced/ Separated | | Total population aged 15 years and above | |
|--------------|---------------|-------------|-------------|-------------|------------|------------|---------------------|------------|--|-------------------|
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| Kenya | 48.2 | 39.2 | 48.4 | 51.1 | 0.9 | 6.0 | 2.4 | 3.6 | 13,992,966 | 14,693,567 |
| 15 - 19 | 95.6 | 88.7 | 4.2 | 10.8 | 0.0 | 0.1 | 0.1 | 0.3 | 2,662,163 | 2,581,801 |
| 20 - 24 | 80.7 | 49.6 | 18.5 | 48.2 | 0.1 | 0.2 | 0.6 | 1.8 | 2,079,234 | 2,313,393 |
| 25 - 29 | 44.7 | 24.2 | 53.2 | 71.0 | 0.1 | 0.7 | 1.9 | 4.0 | 1,802,699 | 1,997,152 |
| 30 - 34 | 21.7 | 14.7 | 74.3 | 77.3 | 0.2 | 2.0 | 3.6 | 5.9 | 1,664,397 | 1,857,596 |
| 35 - 39 | 13.6 | 12.4 | 80.9 | 76.9 | 0.4 | 3.3 | 5.0 | 7.2 | 1,321,359 | 1,291,301 |
| 40 - 44 | 9.0 | 10.2 | 84.7 | 76.2 | 0.8 | 6.1 | 5.3 | 7.4 | 1,136,115 | 1,094,050 |
| 45 - 49 | 6.5 | 9.3 | 86.8 | 74.6 | 1.3 | 9.0 | 5.3 | 6.9 | 901,176 | 863,947 |
| 50 - 54 | 5.1 | 8.5 | 88.0 | 71.8 | 2.0 | 13.2 | 4.8 | 6.4 | 652,343 | 640,545 |
| 55 - 59 | 3.9 | 7.0 | 89.0 | 69.4 | 2.8 | 18.0 | 4.3 | 5.5 | 539,974 | 567,614 |
| 60+ | 2.9 | 4.1 | 87.0 | 54.5 | 6.9 | 38.1 | 3.0 | 3.2 | 1,233,506 | 1,486,168 |

3.3. Marital Status by Age, Sex and Place of Residence

The percentage distribution of rural and urban populations by marital status, age and sex in 2019 is presented in Tables 3.2 and 3.3, respectively. A pattern similar to the national level distribution is observed in the rural and urban areas. The results show that the proportion of women who remain unmarried is slightly higher in urban areas than rural areas among the older age groups. The proportion of ever married women is much lower in urban areas (52.8%) than in rural areas (59.2%). In addition, the proportion of married men exceeds that of women by age 30 in urban areas compared with age 40 in rural areas. In both places of residence, the pattern of proportion of population widowed is similar. Divorce and separation for women is higher in urban areas compared with rural areas.

Table 3. 2: Percentage Distribution of Rural Population by Marital Status, Age and Sex, 2019

| Age group | Never Married | | Married | | Widowed | | Divorced/ Separated | | Total population aged 15 years and above | |
|--------------|---------------|-------------|-------------|-------------|------------|------------|---------------------|------------|--|------------------|
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| Kenya | 42.8 | 29.4 | 53.0 | 59.2 | 1.2 | 8.3 | 2.8 | 3.0 | 9,226,816 | 9,744,436 |
| 15-19 | 95.1 | 87.9 | 4.7 | 11.6 | 0.0 | 0.1 | 0.1 | 0.3 | 2,039,536 | 1,876,671 |
| 20-24 | 80.1 | 45.7 | 19.0 | 52.1 | 0.1 | 0.3 | 0.6 | 1.8 | 1,301,633 | 1,347,858 |
| 25-29 | 44.7 | 18.7 | 52.9 | 76.8 | 0.1 | 0.9 | 2.1 | 3.4 | 989,374 | 1,107,014 |
| 30-34 | 23.2 | 10.6 | 72.4 | 82.5 | 0.3 | 2.5 | 4.0 | 4.4 | 947,645 | 1,114,165 |
| 35-39 | 15.5 | 9.2 | 78.6 | 81.7 | 0.4 | 3.7 | 5.4 | 5.2 | 789,361 | 786,188 |
| 40-44 | 10.3 | 7.8 | 82.9 | 80.4 | 0.9 | 6.6 | 5.8 | 5.1 | 716,702 | 725,708 |
| 45-49 | 7.3 | 7.3 | 85.6 | 78.3 | 1.3 | 9.4 | 5.6 | 4.8 | 592,470 | 611,688 |
| 50-54 | 5.6 | 6.6 | 87.1 | 75.1 | 2.0 | 13.6 | 5.1 | 4.5 | 441,950 | 469,027 |
| 55-59 | 4.1 | 5.6 | 88.5 | 72.1 | 2.8 | 18.3 | 4.4 | 3.9 | 390,617 | 442,709 |
| 60+ | 2.8 | 3.3 | 87.1 | 55.7 | 7.0 | 38.4 | 2.9 | 2.5 | 1,017,528 | 1,263,408 |

Table 3. 3: Percentage Distribution of Urban Population by Marital Status, Age and Sex, 2019

| Age group | Never Married | | Married | | Widowed | | Divorced/ Separated | | Total population aged 15 years and above | |
|--------------|---------------|-------------|-------------|-------------|------------|------------|---------------------|------------|--|------------------|
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| Kenya | 39.2 | 37.2 | 57.5 | 52.8 | 0.7 | 3.9 | 2.5 | 6.0 | 4,766,150 | 4,949,131 |
| 15-19 | 97.2 | 91.0 | 2.5 | 8.6 | 0.0 | 0.0 | 0.1 | 0.3 | 622,627 | 705,130 |
| 20-24 | 81.8 | 55.2 | 17.5 | 42.9 | 0.0 | 0.1 | 0.5 | 1.7 | 777,601 | 965,535 |
| 25-29 | 44.7 | 31.0 | 53.5 | 63.7 | 0.1 | 0.4 | 1.6 | 4.7 | 813,325 | 890,138 |
| 30-34 | 19.7 | 20.8 | 76.8 | 69.5 | 0.2 | 1.4 | 3.2 | 8.2 | 716,752 | 743,431 |
| 35-39 | 11.0 | 17.4 | 84.3 | 69.4 | 0.4 | 2.6 | 4.3 | 10.4 | 531,998 | 505,113 |
| 40-44 | 6.9 | 15.1 | 87.7 | 67.8 | 0.7 | 5.1 | 4.6 | 11.8 | 419,413 | 368,342 |
| 45-49 | 5.0 | 14.1 | 89.0 | 65.6 | 1.2 | 8.0 | 4.7 | 12.0 | 308,706 | 252,259 |
| 50-54 | 4.0 | 13.4 | 89.8 | 62.6 | 1.8 | 12.1 | 4.2 | 11.7 | 210,393 | 171,518 |
| 55-59 | 3.3 | 12.1 | 90.1 | 59.8 | 2.6 | 17.1 | 3.8 | 10.8 | 149,357 | 124,905 |
| 60+ | 3.2 | 8.3 | 86.5 | 47.5 | 6.6 | 36.6 | 3.6 | 7.3 | 215,978 | 222,760 |

3.4. Trends in Timing of First Marriages

Marital timing differs by sex, with more women marrying earlier in life than men. This sex differential holds across contexts (Allendorf K., 2017). Age at first marriage determines the length of time women are exposed to the risk of childbearing. The analysis of timing of first marriages is done by examining the proportion of population married at ages 15 – 19 and Singulate Mean Age at Marriage (SMAM). The proportion of population married at age 15-19 provides the level of very young marriages whereas SMAM measures the mean age at first marriage for those who marry before age 50.

Table 3.4 presents the trend in proportion of population ever married in the age group 15 – 19 by sex and the SMAM for the country. Generally, the results show that women in the age group 15-19 marry earlier than men. There is a slight increase in the proportion of population ever married men in the age group 15-19, from three per cent in 2009 to four per cent in 2019. However, the proportion of married men in this age group remains low compared with women. Over the same period, there is a decrease in the proportion of married women in the age group, from 15 per cent to 11 per cent. The SMAM for both sexes have been increasing over the years, implying delayed entry into marriage. In 2019, SMAM for men and women rose by 0.6 years to stand at 27.3 years and 23.1 years, respectively. The results reveal that men marry later than women with an average difference of 4 years.

Table 3. 4: Trends in Timing of Marriages for Age Group 15-19 by Sex, 1989-2019

| | 1989 | | 1999 | | 2009 | | 2019 | |
|---|------|---------|------|---------|------|---------|------|---------|
| | Male | Females | Male | Females | Male | Females | Male | Females |
| Percent Ever Married (age 15-19) | 2.1 | 18.8 | 2.9 | 18.8 | 3.2 | 15.4 | 4.3 | 11.2 |
| SMAM (Years) | 26.0 | 21.6 | 26.5 | 22.3 | 26.7 | 22.5 | 27.3 | 23.1 |

3.4.1. Differentials in Age at Marriage

Age differences between marital partners have been observed across different cultures, such that men are usually older than their marriage partners (Nascimento, 2019). The age when men and women enter marital unions is influenced by social norms and expectations regarding their roles as spouse and parent—factors that are plausibly changing with globalization, urbanization, and rising educational attainment (Barbara et al, 2005).

This section provides differentials in Singulate Mean Age at Marriage among male-female between 1979 and 2019. The difference in Singulate Mean Age at Marriage among male-female declined from 5.1 years in 1979 to 4.2 years in 1999. Between 1999 and 2019, the difference in SMAM has remained constant, at 4.2 years.

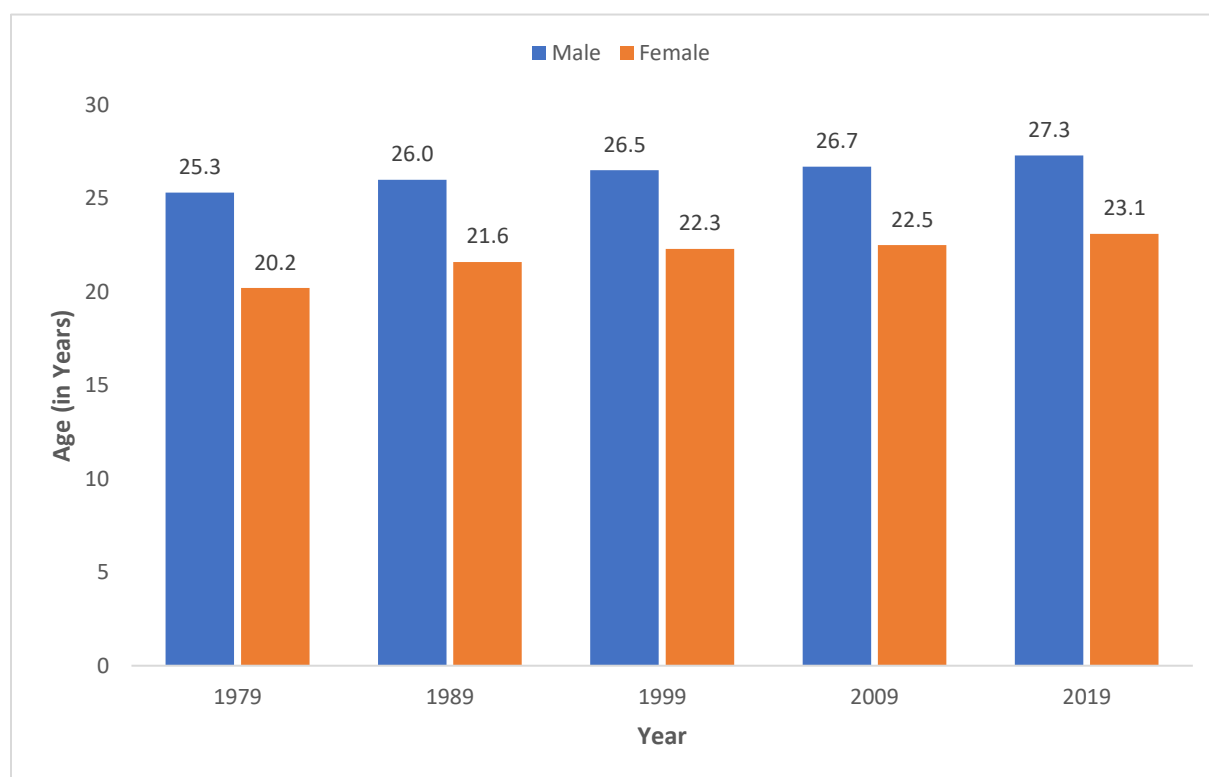


Fig 3.1: Singulate Mean Age at Marriage by Sex, 1979 - 2019

3.4.2. Differentials in Age at Marriage by County

The proportion of population ever married (15 – 19), SMAM and the age differentials in SMAM by counties are presented in Appendix 2. Generally, the proportion of ever married men age 15 – 19 is low across all counties compared with women. The results show that Tana River County (25.6%) and Samburu County (24.8%) had the highest proportion of ever married women age 15 – 19. On the

other hand, Nyeri and Makueni counties had the lowest proportion of ever married women at six per cent.

SMAM for males is lowest in Mandera County (25.0 years) and highest in Nyeri and Makueni counties (29.4 years). Conversely, SMAM for females is lowest in Tana River County (20.4 years) and highest in Vihiga County (24.2 years). Table 3.5 illustrates the five counties with the highest and the lowest male-female age difference. The age difference in the five counties with the highest age difference is 6 years while the least have an age difference ranging between 3 to 4 years.

Table 3. 5: Five Counties with the Highest and Lowest Male-Female Age Differences in SMAM

| Counties with the highest male-female age difference | Age Difference | Counties with the lowest male-female age difference | Age Difference |
|---|-----------------------|--|-----------------------|
| Samburu | 6.4 | Kakamega | 3.5 |
| Nyandarua | 5.8 | Bungoma | 3.5 |
| Nyeri | 5.8 | Kisii | 3.4 |
| Makueni | 5.7 | Elgeyo Marakwet | 3.3 |
| Marsabit | 5.7 | Busia | 3.1 |

Chapter 4: Fertility

4.1. Introduction

Fertility, one of the components of population dynamics, holds a very important place in any population study. As a positive force in population dynamics, fertility is responsible for biological replacement and continuation of human society. Fertility levels determine the age structure of a population, which in turn influence the social, economic, and demographic characteristics of the population. Several indicators are used to measure fertility. These indicators can be grouped into two: lifetime fertility and current fertility. Lifetime fertility is measured by Children Ever Born (CEB) by women in each reproductive age group. Current fertility is measured by the count of births at a given time relative to the female population in the age group, often referred to as Age Specific Fertility Rate (ASFR). A summary measure of age specific fertility rate is the Total Fertility Rate (TFR) which is defined as the number of live births a woman would have if she survived to age 50 and experienced the current fertility rate in each reproductive age group.

4.2. Trends in Current Fertility

Population growth rate in Kenya has been largely driven by fertility levels. The rapid rise in fertility levels in Kenya in the early periods of 1970s reached its peak in the late 1970s, when Total Fertility Rate (TFR) reached a high of 8.1. This rate was one of the highest in the world. The high fertility was followed by rapid decline in the 1980s reaching a TFR of 4.7 in 1998. The rate of fertility decline was about 0.34 births per annum between 1989 and 1993, and 0.14 births per annum between 1993 and 1998 (Blacker, 2002). The most important source of decline being the timing and spacing of births (Brass and Jolly, 1993).

Figure 4.1 presents the trend in TFR from 1999 to 2019 by place of residence. Over the period, the TFR has consistently declined from high to low fertility levels. The TFR has declined by one birth within 10 years, from 4.4 births per woman in 2009 to 3.4 births per woman in 2019. Over the same period, fertility has declined faster in rural than in urban areas.

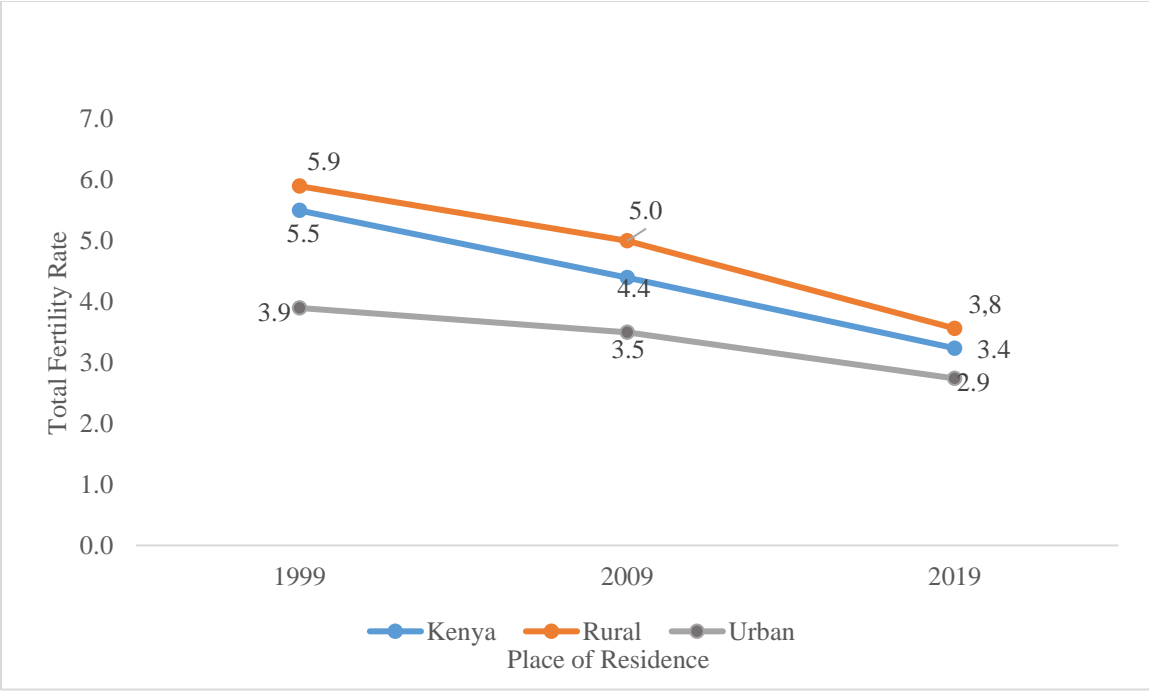


Figure 4.1: Trend in Total Fertility Rate

4.3. Age Specific Fertility Rates, 2019

Table 4.1 presents the Age Specific Fertility Rates by Place of Residence. In 2019 KPHC, the reported ASFRs peaked at 25-29 age group. This is a shift from what was reported in 2009 that peaked at age 20-24, an indication that fertility has been declining. The rural-urban differences in age-specific fertility rates show that ASFRs for the urban areas in 2019 were lower than those in rural areas in all age groups. The results further show that early childbearing among teenagers age 15-19 is still common in Kenya, at 53 births per 1000 teenagers. Early childbearing is higher in rural, at 58 births per 1000 teenagers than urban areas, at 38 births per 1000 teenagers.

Age specific fertility rates by county and place of residence are presented in Appendix 3. The ASFR in most counties peak at age 25-29. Further, teenage childbearing is still common in all counties in Kenya. Counties with the highest teenage childbearing are; Mandera, Wajir, Marsabit, Turkana, Garissa, Narok, Migori, Tana River, West Pokot and Samburu, with over 70 births per 1000 teenagers. Those with the lowest teenage childbearing (30 births and below per 1000 teenagers) are; Nyeri, Kiambu, Makueni, Nyandarua and Nairobi City.

Table 4. 1: Age Specific Fertility Rates by Place of Residence, 2019

| Country/Residence | Age group | | | | | | | TFR |
|-------------------|-----------|---------|---------|---------|---------|---------|---------|-----|
| | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40 - 44 | 45 - 49 | |
| Kenya | 0.053 | 0.169 | 0.175 | 0.141 | 0.098 | 0.041 | 0.008 | 3.4 |
| Rural | 0.058 | 0.194 | 0.195 | 0.149 | 0.104 | 0.045 | 0.009 | 3.8 |
| Urban | 0.038 | 0.134 | 0.151 | 0.129 | 0.089 | 0.035 | 0.005 | 2.9 |

4.4. Total Fertility Rates by County

Table 4.2 presents the distribution of counties by fertility levels. Fertility levels in most counties across the country are less than 4 births per woman, an indication of declining fertility since 2009 Census. Counties with the highest fertility are those in North Eastern and some parts of Northern Kenya (4 above births per woman). The high fertility in these counties could be due to low use of contraceptives. According to the 2014 Kenya Demographic and Health Survey, contraceptive prevalence rate among married women was lowest in Mandera and Wajir (2 percent each), Garissa (6 percent), Turkana (10 percent), and Marsabit (12 percent).

Table 4. 2: Distribution of Counties by level of Total Fertility Rates, 2019

| COUNTRY | Level of TFR | | | | |
|---------------|-----------------|-----------|------------|-----------|----------------|
| | 2.00-2.99 | 3.00-3.99 | 4.00-4.99 | 5.00-5.99 | 6.00 and above |
| Nairobi City | Uasin Gishu | Baringo | Tana River | Turkana | |
| Nyamira | Kericho | Lamu | West Pokot | Wajir | |
| Machakos | Kisumu | Isiolo | | Marsabit | |
| Kirinyaga | Nandi | Kwale | | Mandera | |
| Kiambu | Kitui | Garissa | | | |
| Makueni | Murang'a | Narok | | | |
| Kisii | Kajiado | Samburu | | | |
| Mombasa | Bomet | | | | |
| Nyeri | Nakuru | | | | |
| Embu | Taita-Taveta | | | | |
| Tharaka-Nithi | Nyandarua | | | | |
| Meru | Kakamega | | | | |
| | Vihiga | | | | |
| | Busia | | | | |
| | Siaya | | | | |
| | Bungoma | | | | |
| | Homabay | | | | |
| | Trans Nzoia | | | | |
| | Elgeyo-Marakwet | | | | |
| | Kilifi | | | | |
| | Laikipia | | | | |
| | Migori | | | | |

4.5. Lifetime Fertility

Lifetime fertility refers to the number of children ever born alive during the entire reproductive period of the woman. Lifetime fertility is estimated from data on children ever born alive. Parity distributions of women in different age groups in this context is synonymous with number of children ever born.

Table 4.3 presents the parity distribution of women of reproductive age since 1989. The proportion of teenage girls, age 15-19 with no children increased from 77 percent in 2009 to 90 percent in 2019, an indication that the young females are postponing entry into motherhood. Among women age 45-49, who have completed or nearly completing childbearing, the modal number of children ever born has declined from 8 in 1989 to 3 in 2019. Generally, the data reveals that fertility has been declining across all ages.

Table 4.3: Trends in Percentage Distribution of Women of Reproductive Age by Parity, 1989 – 2019

| Age Group | Year | Total | Average Parity | | | | | | | | | | | NS |
|-----------|------|-------|----------------|------|------|------|------|------|------|------|------|-------|------|------|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 10+ | | |
| 15-19 | 1989 | 100 | 50.0 | 11.2 | 3.3 | 1.0 | 0.6 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.7 |
| | 1999 | 100 | 79.6 | 13.7 | 5.7 | 0.8 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - |
| | 2009 | 100 | 77.3 | 10.3 | 3.2 | 0.7 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8 |
| | 2019 | 100 | 89.9 | 8.1 | 1.5 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - |
| 20-24 | 1989 | 100 | 19.7 | 22.4 | 20.3 | 12.6 | 5.8 | 3.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 14.5 |
| | 1999 | 100 | 33.2 | 27.7 | 20.4 | 11.3 | 4.9 | 1.7 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 | - |
| | 2009 | 100 | 35.3 | 25.3 | 18.8 | 9.5 | 4.2 | 1.5 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 |
| | 2019 | 100 | 45.7 | 30.7 | 15.2 | 5.5 | 2.0 | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | - |
| 25-29 | 1989 | 100 | 6.9 | 9.8 | 14.5 | 18.1 | 17.4 | 12.3 | 7.0 | 6.8 | 0.0 | 0.0 | 0.0 | 7.3 |
| | 1999 | 100 | 14.8 | 16.3 | 20.7 | 18.3 | 13.8 | 8.4 | 4.4 | 2.0 | 0.9 | 0.3 | 0.2 | - |
| | 2009 | 100 | 14.0 | 18.6 | 22.3 | 17.5 | 12.4 | 6.6 | 3.3 | 1.4 | 1.3 | 0.0 | 0.0 | 2.6 |
| | 2019 | 100 | 16.9 | 26.1 | 26.4 | 15.9 | 8.3 | 3.9 | 1.8 | 0.6 | 0.1 | 0.0 | 0.0 | - |
| 30-34 | 1989 | 100 | 4.1 | 4.4 | 6.7 | 9.6 | 12.9 | 15.0 | 14.7 | 15.9 | 11.2 | 0.0 | 0.0 | 5.6 |
| | 1999 | 100 | 5.7 | 7.4 | 13.1 | 16.0 | 16.2 | 14.1 | 11.2 | 7.5 | 4.5 | 2.3 | 2.0 | - |
| | 2009 | 100 | 6.1 | 9.8 | 17.5 | 17.6 | 15.6 | 12.0 | 8.8 | 5.2 | 3.2 | 1.4 | 0.7 | 2.3 |
| | 2019 | 100 | 7.1 | 13.1 | 24.1 | 21.2 | 14.5 | 9.2 | 5.5 | 2.9 | 1.6 | 0.5 | 0.2 | - |
| 35-39 | 1989 | 100 | 3.3 | 3.0 | 4.3 | 6.1 | 8.2 | 10.4 | 12.5 | 13.0 | 12.1 | 9.0 | 13.0 | 5 |
| | 1999 | 100 | 4.0 | 4.1 | 7.3 | 10.8 | 13.3 | 13.8 | 13.0 | 11.2 | 8.8 | 5.9 | 7.6 | - |
| | 2009 | 100 | 3.6 | 5.8 | 12.1 | 15.4 | 15.1 | 13.1 | 11.5 | 8.8 | 6.9 | 3.7 | 2.1 | 1.9 |
| | 2019 | 100 | 5.0 | 8.5 | 19.5 | 22.6 | 16.6 | 11.0 | 7.3 | 4.4 | 2.7 | 1.4 | 1.0 | - |
| 40-44 | 1989 | 100 | 3.2 | 2.7 | 3.6 | 4.7 | 6.0 | 7.7 | 9.5 | 11.0 | 11.8 | 9.0 | 13.0 | 5 |
| | 1999 | 100 | 3.7 | 3.3 | 5.0 | 7.1 | 9.5 | 11.1 | 11.9 | 11.9 | 11.1 | 8.9 | 16.6 | - |
| | 2009 | 100 | 3.0 | 4.3 | 8.8 | 12.7 | 14.1 | 12.9 | 12.0 | 10.4 | 9.5 | 6.1 | 4.3 | 1.9 |
| | 2019 | 100 | 4.1 | 6.5 | 14.3 | 19.0 | 16.5 | 12.5 | 9.5 | 6.7 | 4.8 | 2.9 | 3.2 | - |
| 45-49 | 1989 | 100 | 3.3 | 2.6 | 3.3 | 4.3 | 5.3 | 6.9 | 8.6 | 10.0 | 11.3 | 10.9 | 28.7 | 4.9 |
| | 1999 | 100 | 3.5 | 2.9 | 4.1 | 5.6 | 7.5 | 9.2 | 10.8 | 11.7 | 11.7 | 10.3 | 22.6 | - |
| | 2009 | 100 | 2.7 | 3.6 | 6.6 | 10.0 | 12.9 | 13.2 | 13.0 | 11.7 | 10.9 | 7.7 | 5.9 | 1.7 |
| | 2019 | 100 | 3.6 | 5.8 | 12.0 | 16.4 | 15.7 | 12.8 | 10.4 | 8.0 | 6.0 | 3.9 | 5.2 | - |

4.6. Trends in Average Parities

The parity of a woman at a given point in time is the number of live births that the woman has had. The average number of children ever born to women in different age groups provides a convenient summary of fertility in a population. The average parities are calculated by dividing the total number of children born to women in an age group by the total number of women in the same age group, with appropriate allowance for women for whom number of children ever born is not stated.

Table 4.4 provides the trends in average parities by age and census years. For all age groups, the average number of children ever born has been declining since 1999. Declining average parities is an indication that fertility has been declining in Kenya.

Table 4.4: Trends in Average Parities by Age, 1969-2019

| Age | 1969 | 1979 | 1989 | 1999 | 2009 | 2019 |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 15-19 | 0.366 | 0.321 | 0.273 | 0.280 | 0.210 | 0.126 |
| 20-24 | 1.939 | 1.899 | 1.610 | 1.350 | 1.250 | 0.902 |
| 25-29 | 3.764 | 3.743 | 3.357 | 2.610 | 2.400 | 1.955 |
| 30-34 | 5.267 | 5.523 | 5.049 | 4.150 | 3.630 | 3.020 |
| 35-39 | 6.186 | 6.632 | 6.247 | 5.390 | 4.610 | 3.561 |
| 40-44 | 6.637 | 7.197 | 7.093 | 6.380 | 5.390 | 4.228 |
| 45-49 | 6.891 | 7.353 | 7.440 | 6.950 | 5.970 | 4.650 |

Table 4.5 presents the average parities for females age 12-19 by place of residence and county. Childbearing is still prevalent among adolescents in Kenya. Overall, the average number of children per 1,000 teenagers age 12-19 is about 130. Generally, childbearing is high in rural compared with urban areas. The lower childbearing in urban areas could be associated with factors like; increased female education, decreased child mortality, increased urbanization, increased contraceptive use and the rise in age at first marriage. Counties with the highest childbearing (over 200 births per 1,000 women) are Mandera, Samburu, Narok, Migori, West Pokot, Tana River, Wajir and Homabay. Analysis reveals that most of these counties are in the Arid and Semi-Arid (ASAL) areas of the country.

Table 4. 5: Average Parities for Females 12-19 Years by Place of Residence and County, 2019

| Place of Residence | Average Parities | | |
|--------------------|------------------|--------------|--------------|
| | 12 - 14 | 15 - 19 | 12 - 19 |
| Kenya | 0.004 | 0.126 | 0.130 |
| Rural | 0.005 | 0.138 | 0.143 |
| Urban | 0.003 | 0.093 | 0.096 |
| County | | | |
| Mombasa | 0.002 | 0.095 | 0.097 |
| Kwale | 0.002 | 0.165 | 0.167 |
| Kilifi | 0.002 | 0.115 | 0.117 |
| Tana River | 0.004 | 0.214 | 0.218 |
| Lamu | 0.001 | 0.132 | 0.133 |
| Taita-Taveta | 0.001 | 0.105 | 0.106 |
| Garissa | 0.012 | 0.167 | 0.179 |
| Wajir | 0.014 | 0.194 | 0.208 |
| Mandera | 0.027 | 0.332 | 0.359 |
| Marsabit | 0.008 | 0.188 | 0.196 |
| Isiolo | 0.005 | 0.182 | 0.187 |
| Meru | 0.003 | 0.143 | 0.145 |
| Tharaka-Nithi | 0.002 | 0.080 | 0.082 |
| Embu | 0.001 | 0.077 | 0.078 |
| Kitui | 0.003 | 0.090 | 0.093 |
| Machakos | 0.002 | 0.072 | 0.073 |
| Makueni | 0.001 | 0.059 | 0.060 |
| Nyan darua | 0.001 | 0.059 | 0.060 |
| Nyeri | 0.001 | 0.047 | 0.048 |
| Kirinyaga | 0.001 | 0.078 | 0.079 |
| Murang'a | 0.001 | 0.074 | 0.075 |
| Kiambu | 0.001 | 0.064 | 0.065 |
| Turkana | 0.016 | 0.182 | 0.197 |
| West Pokot | 0.008 | 0.212 | 0.220 |
| Samburu | 0.010 | 0.265 | 0.275 |
| Trans Nzoia | 0.003 | 0.130 | 0.133 |
| Uasin Gishu | 0.002 | 0.088 | 0.089 |
| Elgeyo-Marakwet | 0.003 | 0.108 | 0.112 |
| Nandi | 0.002 | 0.109 | 0.111 |
| Baringo | 0.009 | 0.156 | 0.165 |
| Laikipia | 0.002 | 0.113 | 0.116 |
| Nakuru | 0.002 | 0.094 | 0.096 |
| Narok | 0.006 | 0.227 | 0.233 |
| Kajiado | 0.007 | 0.164 | 0.171 |
| Kericho | 0.003 | 0.129 | 0.132 |
| Bomet | 0.003 | 0.136 | 0.139 |
| Kakamega | 0.002 | 0.101 | 0.104 |
| Vihiga | 0.001 | 0.075 | 0.076 |
| Bungoma | 0.003 | 0.127 | 0.129 |
| Busia | 0.002 | 0.114 | 0.117 |
| Siaya | 0.002 | 0.125 | 0.127 |
| Kisumu | 0.003 | 0.126 | 0.129 |
| Homabay | 0.007 | 0.196 | 0.203 |
| Migori | 0.006 | 0.224 | 0.231 |
| Kisii | 0.005 | 0.151 | 0.156 |
| Nyamira | 0.005 | 0.133 | 0.137 |
| Nairobi City | 0.003 | 0.082 | 0.085 |

4.7. Childlessness

Childlessness refers to infertility in a population of women of reproductive age, as opposed to infecundity, the biological incapability of conceiving. Low fertility and childlessness have been largely interpreted as being driven by the same mechanisms, although they may be qualitatively different phenomena (Brini, 2020). Increasing childlessness is one of the most recent shifts in demographic behavior across countries.

Figure 4.2 presents the proportion of childless women, age 45-49 by place of residence. Nationally, a sizeable proportion of women, about 3.6 percent remain childless by age 45-49, an indication that sterility may be affecting fewer women. The proportion of childlessness is higher in urban, at 5.2 compared to rural areas, at 3.0.



Figure 4.2: Proportion of Childless Women Age 45-49 by Place of Residence, 2019

Table 4.6 shows the proportion of childlessness among women age 45-49 by county. Counties with the highest proportion of childless women age 45-49 are; Garissa with 11.9 percent, Mandera and Mombasa with 7.3 percent each and Wajir with 7.0 percent while those with the lowest proportion are; Narok and Nandi with 1.9 percent each, Nyandarua with 2.0 percent, Laikipia with 2.1 percent, Makueni and Samburu with 2.2 percent each.

Table 4.6: Proportion of Childlessness Among Women Age 45-49 by County

| | | | |
|---------------|------------|-----------------|-----|
| Kenya | 3.6 | West Pokot | 2.9 |
| Mombasa | 7.3 | Samburu | 2.2 |
| Kwale | 4.1 | Trans Nzoia | 2.4 |
| Kilifi | 4.9 | Uasin Gishu | 2.5 |
| Tana River | 4.3 | Elgeyo-Marakwet | 2.5 |
| Lamu | 5.6 | Nandi | 1.9 |
| Taita-Taveta | 4.6 | Baringo | 3.1 |
| Garissa* | 11.9 | Laikipia | 2.1 |
| Wajir | 7.0 | Nakuru | 2.6 |
| Mandera | 7.3 | Narok | 1.9 |
| Marsabit | 3.2 | Kajiado | 3.5 |
| Isiolo | 5.0 | Kericho | 2.5 |
| Meru | 2.7 | Bomet | 2.3 |
| Tharaka-Nithi | 2.8 | Kakamega | 3.0 |
| Embu | 3.1 | Vihiga | 3.6 |
| Kitui | 2.5 | Bungoma | 2.9 |
| Machakos | 3.1 | Busia | 3.3 |
| Makueni | 2.2 | Siaya | 3.8 |
| Nyandarua | 2.0 | Kisumu | 4.1 |
| Nyeri | 3.1 | Homabay | 4.2 |
| Kirinyaga | 3.2 | Migori | 3.3 |
| Murang'a | 3.1 | Kisii | 2.5 |
| Kiambu | 3.7 | Nyamira | 2.8 |
| Turkana | 6.7 | Nairobi City | 6.5 |

* High proportion of childlessness in Garissa county is associated with data quality

Chapter 5: Mortality and Health

5.1. Introduction

Mortality is one of the population dynamics, which affect the structure, size and growth of a population. It is based on death statistics. Death is defined as "the permanent disappearance of evidence of life at any time after birth has taken place" (UN,1991). Information on mortality rates contributes to a better understanding of a country's socioeconomic situation and sheds light on the quality of life of population. Preparation, implementation, monitoring and evaluation of population, health, and other socioeconomic programs and policies depend to a large extent on target population identification (NCPD, 2013). This chapter presents the reported deaths and the various mortality indicators.

5.2. Reported Estimates of Mortality

In the 2019 KPHC, direct questions on mortality were obtained from responses to Questions on Section H-11, H-12, H-14 and H-15. The respondents were asked whether any death had occurred in the household in the one-year period before the census date that is between 24/08/2018 and 24/08/2019 including the, name, age and the sex of the dead member.

Recent deaths provide information on age patterns of mortality. Table 5.1 shows the distribution of deaths reported in households by age. A total of 152,051 deaths were reported out of which 2.1 percent were under the age of one year. Majority of the reported deaths were accounted for by the below one year(25 per cent) and 65 years and above (24 per cent).

Table 5. 1: Percent Distribution of Reported Deaths in Household by Age and Sex

| Age | Total | Male | Female |
|-------------------------|----------------|---------------|---------------|
| 0 | 24.9 | 24.0 | 26.2 |
| 1-4 | 5.8 | 5.4 | 6.4 |
| 5-9 | 2.4 | 2.3 | 2.6 |
| 10-14 | 2.2 | 2.3 | 2.0 |
| 15-19 | 2.5 | 2.5 | 2.4 |
| 20-24 | 3.5 | 3.7 | 3.2 |
| 25-29 | 4.0 | 4.1 | 3.8 |
| 30-34 | 4.9 | 4.9 | 4.9 |
| 35-39 | 4.8 | 5.0 | 4.6 |
| 40-44 | 4.9 | 5.2 | 4.6 |
| 45-49 | 4.2 | 4.6 | 3.7 |
| 50-54 | 4.1 | 4.4 | 3.8 |
| 55-59 | 3.9 | 4.1 | 3.6 |
| 60-64 | 3.9 | 4.2 | 3.5 |
| 65+ | 23.8 | 23.2 | 24.7 |
| Number of Deaths | 152,051 | 88,809 | 63,242 |

5.3. Childhood Mortality

Globally, substantial progress has been made in reducing childhood mortality. According to World Health Organization (WHO), there has been a worldwide decline of under five deaths from 12.6 million in 1990 to 5.5 million in 2020 (WHO, 2020). In Kenya, the level of under-five mortality was recorded as 52 deaths per 1,000 live births with ranges from 28 to 107 deaths per 1,000 live births (KNBS, 2019). This is equivalent to 1 in 19 children dying before reaching age 5.

Table 5.2 shows the age patterns of childhood mortality derived from direct questions on deaths in the last 12 months prior to the census, by sex. Of these deaths, about 81 percent of deaths occur under age 1 showing that most deaths occur before the first birthday.

Table 5. 2: Percent Distribution of Reported Childhood Deaths by Age, Sex and Place of Residence in the Last 12 Months Prior to Census

| Age | KENYA | | | RURAL | | | URBAN | | |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 0 | 81.0 | 81.6 | 80.3 | 79.1 | 79.7 | 78.2 | 84.8 | 85.2 | 84.4 |
| 1 | 8.5 | 8.0 | 9.1 | 8.7 | 8.2 | 9.3 | 8.0 | 7.5 | 8.6 |
| 2 | 4.9 | 4.9 | 4.9 | 5.6 | 5.6 | 5.7 | 3.4 | 3.6 | 3.3 |
| 3 | 3.3 | 3.3 | 3.3 | 3.8 | 3.8 | 3.9 | 2.2 | 2.2 | 2.1 |
| 4 | 2.3 | 2.3 | 2.4 | 2.8 | 2.7 | 2.9 | 1.6 | 1.5 | 1.6 |
| Number of Deaths(0-4 Years) | 46,785 | 26,122 | 20,663 | 30,861 | 17,309 | 13,552 | 15,924 | 8,813 | 7,111 |

Table 5.3 shows the distribution of deaths in the 12 months prior to the census by age and county. Wajir County recorded the highest proportion of infant deaths to total deaths with nearly half (49.3 per cent) of the total deaths. Garissa, Mandera, Tana River and West Pokot followed closely with 46.7, 46.0, 44.6 and 43.7 per cent, respectively. Nyeri, Murang'a, Vihiga, Meru and Makueni Counties recorded the least proportions with 10.2, 11.3, 11.4, 12.1 and 13.0 per cent respectively. The same counties recorded similar trend in the proportion of under five deaths to total reported deaths with the highest being Garissa County with 60.5 per cent and Nyeri County recording the least with 12.8 per cent. The proportion of infant deaths to under-five deaths ranges from 71.1 per cent in Vihiga County to 87.2 per cent in Taita-Taveta County.

Table 5.3: Distribution of deaths in the last 12 months by Age and County, 2019

| | Total Number of Deaths | No. of Deaths Age 1-4 Years | No. of Deaths under 1 year | No. of Deaths Under 5 Years | Proportion of Deaths under 1 year to Total Deaths (%) | Proportion of Deaths under 5 year to Total Deaths (%) | Proportion of Deaths under 1 year to Proportion of Deaths under 5 years (%) |
|-----------------|------------------------|-----------------------------|----------------------------|-----------------------------|---|---|---|
| KENYA | 152,051 | 8,878 | 37,908 | 46,785 | 24.9 | 30.8 | 81.0 |
| RURAL | 113,824 | 6,458 | 24,402 | 30,860 | 21.4 | 27.1 | 79.1 |
| URBAN | 38,227 | 2,419 | 13,506 | 15,925 | 35.3 | 41.7 | 84.8 |
| Mombasa | 3,427 | 265 | 1,316 | 1,581 | 38.4 | 46.1 | 83.2 |
| Kwale | 2,711 | 161 | 732 | 893 | 27.0 | 32.9 | 82.0 |
| Kilifi | 4,072 | 215 | 940 | 1,155 | 23.1 | 28.4 | 81.4 |
| Tana River | 1,006 | 80 | 449 | 529 | 44.6 | 52.6 | 84.9 |
| Lamu | 489 | 27 | 132 | 159 | 27.0 | 32.5 | 83.0 |
| Taita-Taveta | 1,560 | 40 | 272 | 312 | 17.4 | 20.0 | 87.2 |
| Garissa | 3,054 | 422 | 1,425 | 1,847 | 46.7 | 60.5 | 77.2 |
| Wajir | 2,522 | 186 | 1,243 | 1,429 | 49.3 | 56.7 | 87.0 |
| Mandera | 3,181 | 337 | 1,463 | 1,800 | 46.0 | 56.6 | 81.3 |
| Marsabit | 811 | 53 | 241 | 294 | 29.7 | 36.3 | 82.0 |
| Isiolo | 627 | 34 | 165 | 199 | 26.3 | 31.7 | 82.9 |
| Meru | 4,765 | 130 | 576 | 706 | 12.1 | 14.8 | 81.6 |
| Tharaka-Nithi | 1,336 | 44 | 178 | 222 | 13.3 | 16.6 | 80.2 |
| Embu | 2,345 | 87 | 412 | 499 | 17.6 | 21.3 | 82.6 |
| Kitui | 3,995 | 139 | 762 | 901 | 19.1 | 22.6 | 84.6 |
| Machakos | 4,989 | 151 | 784 | 935 | 15.7 | 18.7 | 83.9 |
| Makueni | 3,932 | 100 | 510 | 610 | 13.0 | 15.5 | 83.6 |
| Nyandarua | 2,446 | 74 | 458 | 532 | 18.7 | 21.7 | 86.1 |
| Nyeri | 3,470 | 91 | 353 | 444 | 10.2 | 12.8 | 79.5 |
| Kirinyaga | 2,424 | 82 | 352 | 434 | 14.5 | 17.9 | 81.1 |
| Murang'a | 4,959 | 108 | 558 | 666 | 11.3 | 13.4 | 83.8 |
| Kiambu | 7,349 | 312 | 1,897 | 2,209 | 25.8 | 30.1 | 85.9 |
| Turkana | 2,624 | 267 | 814 | 1,081 | 31.0 | 41.2 | 75.3 |
| West Pokot | 1,463 | 140 | 640 | 780 | 43.7 | 53.3 | 82.1 |
| Samburu | 615 | 41 | 197 | 238 | 32.0 | 38.7 | 82.8 |
| Trans Nzoia | 3,042 | 180 | 743 | 923 | 24.4 | 30.3 | 80.5 |
| Uasin Gishu | 3,070 | 132 | 628 | 760 | 20.5 | 24.8 | 82.6 |
| Elgeyo-Marakwet | 1,217 | 48 | 228 | 276 | 18.7 | 22.7 | 82.6 |
| Nandi | 2,716 | 111 | 441 | 552 | 16.2 | 20.3 | 79.9 |
| Baringo | 2,031 | 134 | 597 | 731 | 29.4 | 36.0 | 81.7 |
| Laikipia | 1,477 | 63 | 286 | 349 | 19.4 | 23.6 | 81.9 |
| Nakuru | 6,777 | 325 | 1,955 | 2,280 | 28.8 | 33.6 | 85.7 |
| Narok | 1,899 | 143 | 651 | 794 | 34.3 | 41.8 | 82.0 |
| Kajiado | 2,090 | 126 | 756 | 882 | 36.2 | 42.2 | 85.7 |
| Kericho | 2,387 | 88 | 489 | 577 | 20.5 | 24.2 | 84.7 |
| Bomet | 2,249 | 76 | 482 | 558 | 21.4 | 24.8 | 86.4 |
| Kakamega | 7,180 | 469 | 1,476 | 1,945 | 20.6 | 27.1 | 75.9 |
| Vihiga | 3,598 | 167 | 411 | 578 | 11.4 | 16.1 | 71.1 |
| Bungoma | 4,685 | 378 | 1,045 | 1,423 | 22.3 | 30.4 | 73.4 |
| Busia | 3,224 | 293 | 736 | 1,029 | 22.8 | 31.9 | 71.5 |
| Siaya | 4,888 | 413 | 1,088 | 1,501 | 22.3 | 30.7 | 72.5 |
| Kisumu | 4,437 | 350 | 1,180 | 1,530 | 26.6 | 34.5 | 77.1 |
| Homabay | 4,258 | 390 | 1,322 | 1,712 | 31.0 | 40.2 | 77.2 |
| Migori | 3,799 | 436 | 1,288 | 1,724 | 33.9 | 45.4 | 74.7 |
| Kisii | 4,400 | 198 | 796 | 994 | 18.1 | 22.6 | 80.1 |
| Nyamira | 2,059 | 73 | 305 | 378 | 14.8 | 18.4 | 80.7 |
| Nairobi City | 10,396 | 699 | 4,136 | 4,835 | 39.8 | 46.5 | 85.5 |

5.3.1. Levels of Childhood Mortality

Table 5.4 shows the childhood mortality by sex at national level. Approximately, 32 out of 1,000 children born die before reaching their first birthday while 52 out of every 1,000 children born don't reach their fifth birthday. Out of every 1,000 children born, 50 female children die before reaching the age of five, while the corresponding number for male children is 54, indicating a slightly higher mortality rate among male children. Estimates from the 2014 KDHS show that 39 out of every 1,000 children born die before reaching their first birthday. This is a bit higher compared to the results in the 2019 census. Most childhood deaths accounting for 61.7 percent occur within the first year of life.

Table 5.4: Early Childhood Mortality Rates

| CHILDHOOD MORTALITY INDICATORS | 2014 KDHS | 2019 CENSUS |
|--|------------------|--------------------|
| Infant Mortality Rate | | |
| Males | | 34.5 |
| Females | | 29.7 |
| Both Sexes | 39.0 | 32.1 |
| Child Mortality Rate | | |
| Males | | 19.5 |
| Females | | 20.3 |
| Both Sexes | 14.0 | 19.9 |
| Under 5 Mortality Rate | | |
| Males | | 54.0 |
| Females | | 50.0 |
| Both Sexes | 52.0 | 52.0 |
| Ratio of Infant Mortality Rate to Under 5 Mortality Rate(Both Sexes)(%) | 75.0 | 61.7 |

Table 5.5 shows the indicators of childhood mortality by county.

Table 5.5: Childhood Mortality Rates

| RESIDENCE/ COUNTY | MALE | | | FEMALE | | | MALE - FEMALE RATIO | | | MALE | FEMALE |
|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------|---------------|---------------|---------------|---------------|
| | q0 | q1 | q5 | q0 | q1 | q5 | q0 | q1 | q5 | 1q0 / 5q0 | 1q0 / 5q0 |
| Kenya | 0.0345 | 0.0193 | 0.0540 | 0.0297 | 0.0202 | 0.0500 | 1.1616 | 0.9554 | 1.0800 | 0.3574 | 0.4040 |
| Rural | 0.0379 | 0.0146 | 0.0530 | 0.0335 | 0.0173 | 0.0510 | 1.1313 | 0.8439 | 1.0392 | 0.2755 | 0.3392 |
| Urban | 0.0376 | 0.0129 | 0.0510 | 0.0340 | 0.0147 | 0.0490 | 1.1059 | 0.8776 | 1.0408 | 0.2529 | 0.3000 |
| Mombasa | 0.0363 | 0.0203 | 0.0568 | 0.0247 | 0.0168 | 0.0416 | 1.4696 | 1.2083 | 1.3662 | 0.3573 | 0.4040 |
| Kwale | 0.0422 | 0.0173 | 0.0600 | 0.0291 | 0.0219 | 0.0510 | 1.4502 | 0.7900 | 1.1765 | 0.2883 | 0.4294 |
| Kilifi | 0.0473 | 0.0192 | 0.0670 | 0.0328 | 0.0253 | 0.0580 | 1.4421 | 0.7589 | 1.1552 | 0.2866 | 0.4362 |
| Tana River | 0.0591 | 0.0243 | 0.0840 | 0.0358 | 0.0274 | 0.0630 | 1.6508 | 0.8869 | 1.3333 | 0.2893 | 0.4349 |
| Lamu | 0.0483 | 0.0269 | 0.0754 | 0.0268 | 0.0182 | 0.0450 | 1.8022 | 1.4780 | 1.6744 | 0.3569 | 0.4043 |
| Taita Taveta | 0.0308 | 0.0172 | 0.0482 | 0.0200 | 0.0100 | 0.0366 | 1.5400 | 1.7200 | 1.3187 | 0.3566 | 0.2734 |
| Garissa | 0.0523 | 0.0211 | 0.0740 | 0.0319 | 0.0233 | 0.0552 | 1.6395 | 0.9056 | 1.3406 | 0.2851 | 0.4221 |
| Wajir | 0.0572 | 0.0233 | 0.0810 | 0.0266 | 0.0194 | 0.0460 | 2.1477 | 1.1985 | 1.7609 | 0.2870 | 0.4217 |
| Mandera | 0.0522 | 0.0212 | 0.0740 | 0.0304 | 0.0227 | 0.0530 | 1.7171 | 0.9339 | 1.3962 | 0.2865 | 0.4283 |
| Marsabit | 0.0311 | 0.0174 | 0.0486 | 0.0216 | 0.0147 | 0.0364 | 1.4398 | 1.1837 | 1.3371 | 0.3578 | 0.4042 |
| Isiolo | 0.0410 | 0.0229 | 0.0641 | 0.0292 | 0.0199 | 0.0491 | 1.4041 | 1.1508 | 1.3036 | 0.3575 | 0.4050 |
| Meru | 0.0394 | 0.0220 | 0.0616 | 0.0275 | 0.0187 | 0.0462 | 1.4327 | 1.1765 | 1.3317 | 0.3573 | 0.4045 |
| Tharaka-Nithi | 0.0217 | 0.0121 | 0.0339 | 0.0152 | 0.0104 | 0.0257 | 1.4276 | 1.1635 | 1.3226 | 0.3565 | 0.4053 |
| Embu | 0.0305 | 0.0170 | 0.0477 | 0.0221 | 0.0150 | 0.0371 | 1.3801 | 1.1333 | 1.2857 | 0.3564 | 0.4043 |
| Kitui | 0.0296 | 0.0165 | 0.0463 | 0.0201 | 0.0137 | 0.0339 | 1.4726 | 1.2044 | 1.3661 | 0.3563 | 0.4042 |
| Machakos | 0.0341 | 0.0146 | 0.0490 | 0.0229 | 0.0161 | 0.0390 | 1.4891 | 0.9068 | 1.2564 | 0.2980 | 0.4128 |
| Makueni | 0.0363 | 0.0153 | 0.0520 | 0.0255 | 0.0185 | 0.0440 | 1.4235 | 0.8270 | 1.1818 | 0.2942 | 0.4205 |
| Nyandarua | 0.0363 | 0.0153 | 0.0517 | 0.0239 | 0.0171 | 0.0413 | 1.5188 | 0.8947 | 1.2517 | 0.2960 | 0.4140 |
| Nyeri | 0.0300 | 0.0117 | 0.0419 | 0.0266 | 0.0143 | 0.0411 | 1.1278 | 0.8182 | 1.0208 | 0.2791 | 0.3482 |
| Kirinyaga | 0.0261 | 0.0146 | 0.0407 | 0.0221 | 0.0151 | 0.0373 | 1.1810 | 0.9669 | 1.0929 | 0.3585 | 0.4052 |
| Murang'a | 0.0393 | 0.0163 | 0.0560 | 0.0220 | 0.0150 | 0.0370 | 1.7864 | 1.0867 | 1.5111 | 0.2913 | 0.4050 |
| Kiambu | 0.0218 | 0.0121 | 0.0340 | 0.0169 | 0.0115 | 0.0284 | 1.2899 | 1.0522 | 1.2009 | 0.3554 | 0.4056 |
| Turkana | 0.0447 | 0.0249 | 0.0698 | 0.0349 | 0.0237 | 0.0586 | 1.2808 | 1.0506 | 1.1912 | 0.3567 | 0.4045 |
| West Pokot | 0.0479 | 0.0195 | 0.0680 | 0.0281 | 0.0210 | 0.0490 | 1.7046 | 0.9286 | 1.3878 | 0.2868 | 0.4286 |
| Samburu | 0.0253 | 0.0141 | 0.0395 | 0.0229 | 0.0156 | 0.0385 | 1.1048 | 0.9038 | 1.0270 | 0.3568 | 0.4054 |
| Trans Nzoia | 0.0354 | 0.0198 | 0.0553 | 0.0279 | 0.0190 | 0.0469 | 1.2688 | 1.0421 | 1.1799 | 0.3579 | 0.4053 |
| Uasin Gishu | 0.0291 | 0.0162 | 0.0454 | 0.0203 | 0.0138 | 0.0342 | 1.4335 | 1.1739 | 1.3288 | 0.3567 | 0.4037 |
| Elgeyo Marakwet | 0.0399 | 0.0166 | 0.0570 | 0.0255 | 0.0185 | 0.0440 | 1.5647 | 0.8973 | 1.2976 | 0.2910 | 0.4209 |
| Nandi | 0.0302 | 0.0169 | 0.0472 | 0.0226 | 0.0154 | 0.0380 | 1.3360 | 1.0969 | 1.2412 | 0.3573 | 0.4043 |
| Baringo | 0.0327 | 0.0182 | 0.0511 | 0.0201 | 0.0136 | 0.0337 | 1.6269 | 1.3382 | 1.5130 | 0.3565 | 0.4030 |
| Laikipia | 0.0203 | 0.0113 | 0.0317 | 0.0143 | 0.0098 | 0.0241 | 1.4196 | 1.1531 | 1.3131 | 0.3567 | 0.4062 |
| Nakuru | 0.0369 | 0.0206 | 0.0577 | 0.0286 | 0.0194 | 0.0481 | 1.2902 | 1.0619 | 1.2017 | 0.3567 | 0.4037 |
| Narok | 0.0480 | 0.0194 | 0.0680 | 0.0265 | 0.0195 | 0.0460 | 1.8109 | 0.9959 | 1.4807 | 0.2857 | 0.4248 |
| Kajiado | 0.0355 | 0.0151 | 0.0505 | 0.0234 | 0.0166 | 0.0405 | 1.5171 | 0.9096 | 1.2490 | 0.2988 | 0.4103 |
| Kericho | 0.0378 | 0.0158 | 0.0539 | 0.0244 | 0.0176 | 0.0421 | 1.5492 | 0.8977 | 1.2811 | 0.2931 | 0.4182 |
| Bomet | 0.0429 | 0.0176 | 0.0608 | 0.0234 | 0.0165 | 0.0402 | 1.8333 | 1.0667 | 1.5120 | 0.2895 | 0.4104 |
| Kakamega | 0.0429 | 0.0239 | 0.0670 | 0.0317 | 0.0216 | 0.0534 | 1.3533 | 1.1065 | 1.2560 | 0.3566 | 0.4047 |
| Vihiga | 0.0459 | 0.0256 | 0.0716 | 0.0449 | 0.0304 | 0.0752 | 1.0223 | 0.8421 | 0.9531 | 0.3574 | 0.4044 |
| Bungoma | 0.0350 | 0.0195 | 0.0547 | 0.0260 | 0.0177 | 0.0437 | 1.3462 | 1.1017 | 1.2527 | 0.3564 | 0.4052 |
| Busia | 0.0465 | 0.0259 | 0.0727 | 0.0352 | 0.0239 | 0.0591 | 1.3210 | 1.0837 | 1.2290 | 0.3564 | 0.4042 |
| Siaya | 0.0478 | 0.0266 | 0.0746 | 0.0358 | 0.0243 | 0.0602 | 1.3352 | 1.0947 | 1.2399 | 0.3565 | 0.4038 |
| Kisumu | 0.0439 | 0.0245 | 0.0686 | 0.0343 | 0.0233 | 0.0576 | 1.2799 | 1.0515 | 1.1925 | 0.3569 | 0.4048 |
| Homa Bay | 0.0653 | 0.0362 | 0.1014 | 0.0496 | 0.0336 | 0.0830 | 1.3165 | 1.0774 | 1.2210 | 0.3571 | 0.4047 |
| Migori | 0.0786 | 0.0433 | 0.1213 | 0.0558 | 0.0377 | 0.0931 | 1.4086 | 1.1485 | 1.3035 | 0.3569 | 0.4050 |
| Kisii | 0.0302 | 0.0168 | 0.0472 | 0.0215 | 0.0147 | 0.0362 | 1.4047 | 1.1429 | 1.3013 | 0.3562 | 0.4056 |
| Nyamira | 0.0303 | 0.0169 | 0.0474 | 0.0239 | 0.0163 | 0.0402 | 1.2678 | 1.0368 | 1.1810 | 0.3563 | 0.4058 |
| Nairobi | 0.0405 | 0.0226 | 0.0632 | 0.0310 | 0.0211 | 0.0522 | 1.3065 | 1.0711 | 1.2124 | 0.3574 | 0.4045 |

5.4. Adult Mortality

Table 5.6 shows the age specific mortality rates for men and women between ages 15-49 based on using parental survival often referred to as the orphanhood method. The input data required for the orphanhood method include number of respondents with mother/father alive classified by a 5-year age group and by sex, number of respondents who stated that they don't know whether their mother or father was alive by 5-year age group by sex, and total number of respondents classified by 5-year age group by sex. (Detailed explanation on the methodology is in the 2019 KPHC analytical report on Mortality.)

The age patterns for both male and female are similar throughout the age groups showing that male have a higher mortality. The ASMR increase with the age groups for both sexes in 2019. However, across the other years, the ASMR for female 45 – 49 is lower than the preceding age group (40 – 44).

Table 5.6: Trends in Age Specific Mortality Rates for Women and Men Age 15 - 49

| Age Group | 2009 Census | | 2008/9 KDHS | | 2014 KDHS | | 2019 Census | |
|-----------|-------------|--------|-------------|--------|-----------|--------|-------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| 15-19 | 2.92 | 1.85 | 2.5 | 1.7 | 2.05 | 1.67 | 2.5 | 1.6 |
| 20-24 | 2.48 | 3.02 | 3.1 | 3.3 | 2.36 | 2.10 | 3.5 | 2.2 |
| 25-29 | 3.46 | 5.58 | 4.1 | 5.9 | 3.62 | 2.66 | 4 | 2.7 |
| 30-34 | 4.78 | 10.66 | 7.2 | 7 | 5.23 | 4.73 | 4.8 | 3.2 |
| 35-39 | 7.67 | 13.82 | 8.4 | 9 | 7.11 | 6.78 | 6.2 | 3.9 |
| 40-44 | 12.24 | 10.97 | 12.3 | 11 | 9.71 | 6.83 | 8.4 | 4.9 |
| 45-49 | 13.17 | 10.09 | 14.9 | 10.3 | 10.39 | 5.00 | 11.9 | 6.4 |

Figure 5.1 shows the probabilities of dying between ages 5 and 89 by sex. The male mortality rates are higher than the females across all the age groups. The gap widens more between ages 40 and 75.

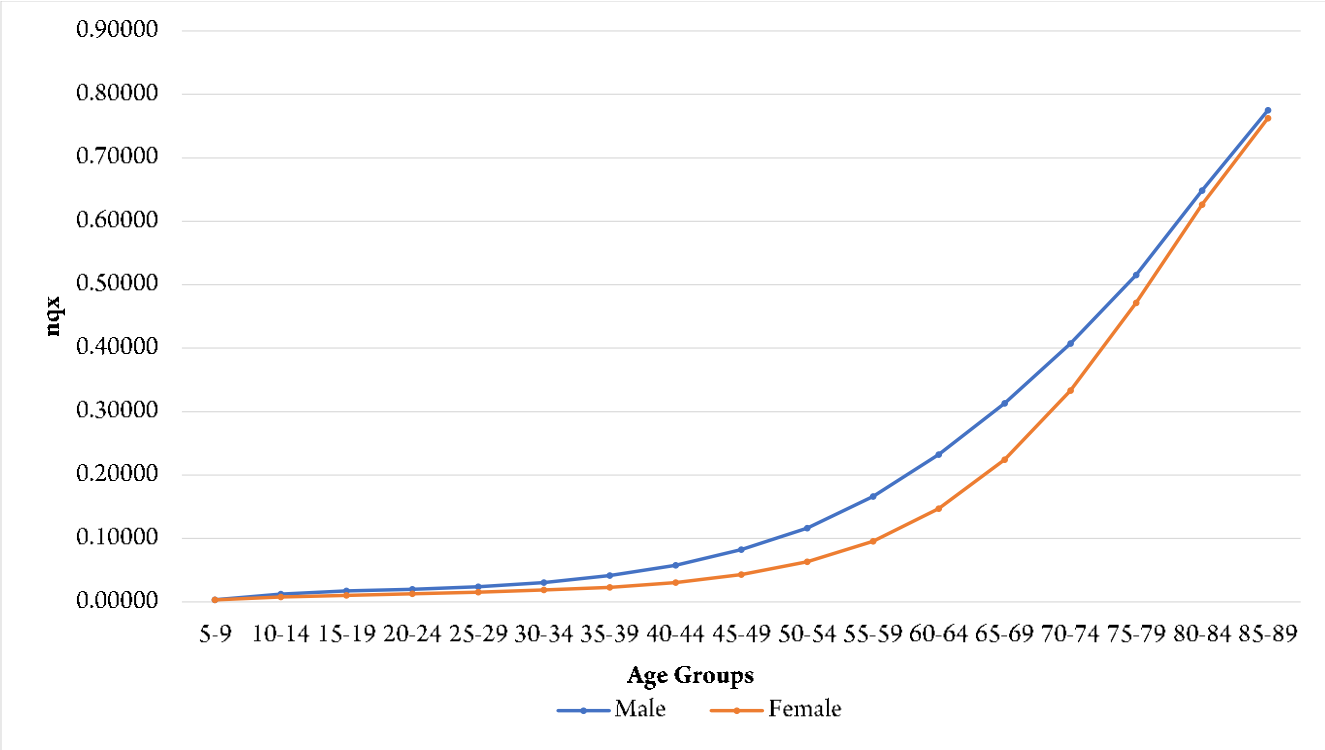


Figure 5. 1: Probability of Dying by Age and Sex

5.5. Overall Mortality

The overall mortality patterns can be summarized using the life expectancies by age. The life expectancy at birth for males and females are 60.6 years and 66.5 years, respectively. This is a notable improvement from the life expectancies recorded in 2009 KPHC. The life expectancy for a male who had reached age 20, 60 and 80 is about 44.9, 14.2 and 5.7 years respectively. Similarly, a female age 20 expects to live for an average of 50.8 years while elderly women age of 60 and 80 are expected to live on average 17.2 and 6.2 years. Evidently, women are expected to live longer than men in Kenya.

Table 5.7 shows the life expectancy at age 0, age 20, age 60 and age 80 by sex and counties.

Table 5.7: Life Expectancy at Age 0, Age 20, Age 60 and Age 80 (in Years)

| COUNTY/ RESIDENCE | MALE | | | | FEMALE | | | |
|----------------------|------|------|------|-----|--------|------|------|-----|
| | e0 | e20 | e60 | e80 | e0 | e20 | e60 | e80 |
| Kenya | 60.6 | 44.9 | 14.2 | 5.7 | 66.5 | 50.8 | 17.2 | 6.2 |
| Rural | 60.3 | 44.6 | 14.5 | 5.4 | 66.2 | 50.9 | 17.7 | 6.3 |
| Urban | 63.0 | 47.2 | 15.3 | 5.6 | 68.6 | 52.9 | 18.4 | 6.4 |
| Mombasa | 65.7 | 51.0 | 17.7 | 5.9 | 71.1 | 55.3 | 20.0 | 6.5 |
| Kwale | 58.2 | 42.9 | 14.0 | 5.3 | 60.7 | 45.5 | 16.2 | 6.1 |
| Kilifi | 57.8 | 43.0 | 14.1 | 5.3 | 59.2 | 44.6 | 15.9 | 6.0 |
| Tana River | 56.2 | 42.5 | 14.0 | 5.2 | 58.6 | 44.4 | 15.9 | 6.0 |
| Lamu | 64.1 | 50.9 | 17.7 | 5.9 | 68.9 | 53.3 | 18.9 | 6.3 |
| Taita Taveta | 61.2 | 45.9 | 15.7 | 5.6 | 69.2 | 52.9 | 18.7 | 6.2 |
| Garissa | 57.4 | 43.1 | 14.1 | 5.2 | 60.5 | 45.6 | 16.2 | 6.1 |
| Wajir | 56.7 | 42.8 | 14.1 | 5.2 | 62.0 | 46.4 | 16.4 | 6.2 |
| Mandera | 57.3 | 43.0 | 14.1 | 5.2 | 60.5 | 45.5 | 16.2 | 6.1 |
| Marsabit | 57.9 | 42.6 | 14.7 | 5.5 | 62.6 | 46.4 | 16.0 | 5.7 |
| Isiolo | 60.1 | 45.9 | 15.7 | 5.6 | 59.6 | 44.4 | 15.4 | 5.7 |
| Meru | 62.2 | 47.8 | 16.4 | 5.7 | 68.2 | 52.8 | 18.7 | 6.2 |
| Tharaka-Nithi | 63.8 | 47.3 | 16.2 | 5.7 | 70.3 | 53.1 | 18.8 | 6.3 |
| Embu | 58.7 | 43.3 | 14.9 | 5.5 | 70.1 | 53.9 | 19.2 | 6.4 |
| Kitui | 55.7 | 40.3 | 14.0 | 5.4 | 68.8 | 52.3 | 18.4 | 6.2 |
| Machakos | 57.9 | 41.9 | 13.7 | 5.3 | 63.9 | 47.7 | 16.8 | 6.3 |
| Makueni | 58.1 | 42.2 | 13.8 | 5.3 | 62.4 | 46.6 | 16.5 | 6.2 |
| Nyandarua | 58.0 | 42.2 | 13.8 | 5.3 | 63.2 | 47.2 | 16.7 | 6.2 |
| Nyeri | 66.4 | 49.9 | 16.3 | 6.0 | 75.8 | 59.6 | 22.2 | 7.4 |
| Kirinyaga | 59.9 | 44.0 | 15.1 | 5.5 | 71.1 | 54.8 | 19.7 | 6.5 |
| Murang'a | 58.1 | 42.6 | 13.9 | 5.3 | 64.7 | 48.3 | 17.0 | 6.3 |
| Kiambu | 60.8 | 44.4 | 15.2 | 5.5 | 72.8 | 55.8 | 20.2 | 6.6 |
| Turkana | 55.9 | 42.1 | 14.5 | 5.4 | 60.0 | 45.6 | 15.7 | 5.7 |
| West Pokot | 57.6 | 42.9 | 14.1 | 5.2 | 61.1 | 45.8 | 16.3 | 6.1 |
| Samburu | 58.5 | 42.6 | 14.6 | 5.5 | 67.4 | 51.3 | 18.0 | 6.1 |
| Trans Nzoia | 64.4 | 49.6 | 17.1 | 5.8 | 67.9 | 52.5 | 18.5 | 6.2 |
| Uasin Gishu | 63.6 | 48.0 | 16.5 | 5.7 | 71.7 | 55.2 | 19.9 | 6.5 |
| Elgeyo Marakwet | 57.9 | 42.4 | 13.9 | 5.3 | 62.5 | 46.7 | 16.5 | 6.2 |
| Nandi | 60.0 | 44.6 | 15.3 | 5.5 | 70.4 | 54.3 | 19.4 | 6.4 |
| Baringo | 65.4 | 50.3 | 17.4 | 5.9 | 68.9 | 52.4 | 18.5 | 6.2 |
| Laikipia | 59.2 | 42.6 | 14.7 | 5.5 | 71.9 | 54.5 | 19.5 | 6.4 |
| Nakuru | 58.3 | 43.6 | 15.0 | 5.5 | 69.1 | 53.8 | 19.2 | 6.3 |
| Narok | 57.8 | 43.0 | 14.1 | 5.3 | 61.9 | 46.3 | 16.4 | 6.2 |
| Kajiado | 57.8 | 41.9 | 13.7 | 5.3 | 63.5 | 47.4 | 16.7 | 6.3 |
| Kericho | 58.1 | 42.4 | 13.9 | 5.3 | 62.9 | 47.0 | 16.6 | 6.2 |
| Bomet | 58.1 | 42.9 | 14.0 | 5.3 | 63.6 | 47.5 | 16.8 | 6.3 |
| Kakamega | 63.4 | 49.5 | 17.1 | 5.8 | 66.1 | 51.3 | 18.0 | 6.1 |
| Vihiga | 59.8 | 46.2 | 15.8 | 5.6 | 62.1 | 49.0 | 17.0 | 5.9 |
| Bungoma | 65.5 | 50.6 | 17.6 | 5.9 | 68.2 | 52.6 | 18.6 | 6.2 |
| Busia | 62.3 | 48.8 | 16.8 | 5.7 | 66.2 | 51.8 | 18.2 | 6.1 |
| Siaya | 53.4 | 39.9 | 13.9 | 5.4 | 61.6 | 47.2 | 16.3 | 5.8 |
| Kisumu | 54.0 | 40.1 | 14.0 | 5.4 | 63.1 | 48.6 | 16.8 | 5.9 |
| Homa Bay | 50.5 | 38.7 | 13.7 | 5.3 | 60.2 | 47.6 | 16.5 | 5.8 |
| Migori | 50.5 | 40.1 | 14.0 | 5.4 | 60.6 | 48.9 | 17.0 | 5.9 |
| Kisii | 56.1 | 40.7 | 14.2 | 5.4 | 66.9 | 50.6 | 17.7 | 6.0 |
| Nyamira | 55.3 | 40.0 | 14.0 | 5.4 | 66.2 | 50.2 | 17.5 | 6.0 |
| Nairobi | 62.6 | 48.4 | 16.6 | 5.7 | 65.2 | 50.2 | 17.5 | 6.0 |

5.6. Maternal Mortality

Maternal mortality refers to deaths due to complications from pregnancy or childbirth. Table 5.8 presents the reported and adjusted maternal mortality indicators at national level. The adjusted maternal related deaths were 4,680 about giving and maternal mortality ratio of 355 per 100,000 live births at national level. This is within the range estimated by WHO of 342 deaths per 100,000.

Table 5.8: Distribution of the Reported Number of Women and Women Dead due to Pregnancy Related Causes in the 1 Year Preceding the Census, 2019

| Age group | Number of women | Number of female deaths | Adjusted number of female | Reported number of pregnancy | Adjusted number of maternal | Births in the last 12 months | Maternal mortality Ratio |
|--------------|-------------------|-------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|--------------------------|
| 15-19 | 2,585,125 | 1,537 | 4,418 | 220 | 632 | 136,200 | 464 |
| 20-24 | 2,316,271 | 2,049 | 5,061 | 436 | 1,079 | 391,662 | 275 |
| 25-29 | 1,999,654 | 2,412 | 5,095 | 468 | 1,005 | 350,144 | 287 |
| 30-34 | 1,859,889 | 3,088 | 5,593 | 489 | 902 | 261,744 | 345 |
| 35-39 | 1,293,038 | 2,912 | 4,867 | 321 | 553 | 126,849 | 436 |
| 40-44 | 1,095,662 | 2,883 | 5,249 | 187 | 356 | 45,315 | 786 |
| 45-49 | 865,089 | 2,335 | 5,515 | 65 | 154 | 6,940 | 2,219 |
| Total | 12,014,728 | 17,216 | 35,799 | 2,186 | 4,680 | 1,318,855 | 355 |

Figure 5.2 shows the maternal mortality ratio by county and residence. Garissa reported the highest MMR of 641 maternal deaths per 100,000 live births while Nyeri recorded the least number of maternal deaths of 67. There was a slight variation of maternal deaths by area of residence. In rural Kenya, there were 374 maternal deaths per 100,000 live births while in urban Kenya there was 317 maternal deaths per 100,000 live births.

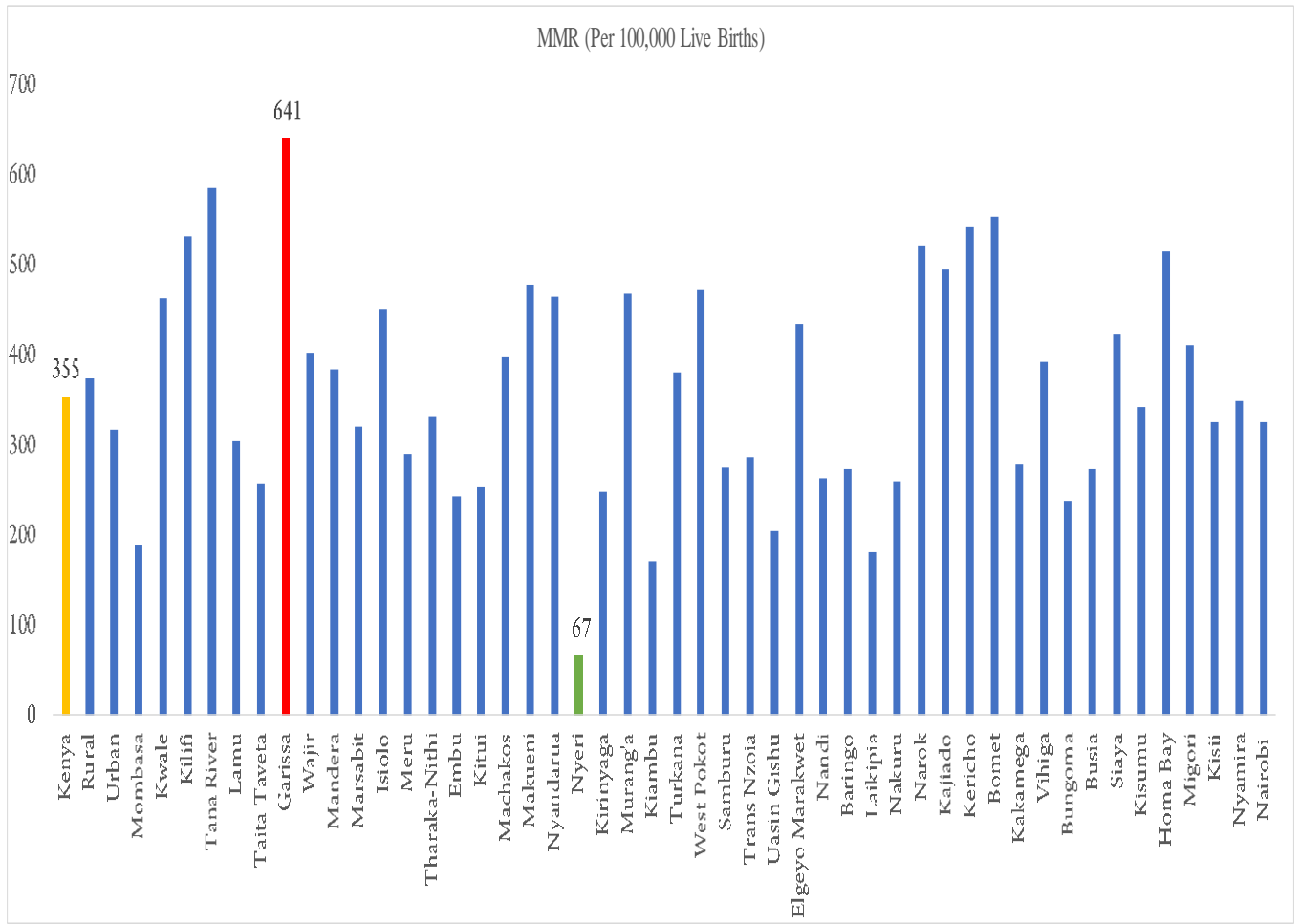


Figure S. 2: Maternal Mortality by County, 2019

Chapter 6: Migration

6.1. Introduction

Migration is one of the major demographic factors that brings change in the population size, structure, and distribution. A migrant is defined as a person who has changed his/her place of usual residence, or persons who live outside the country of which they are a citizen or national (UN Statistics Division, 2016).

Measurement for migration for 2019 Kenya Population and Housing Census was based on information captured using the household questionnaire and the emigrant short questionnaire. The key migration variables were place of birth (P19), previous residence in 2018 (P20), duration of residence (P21/P22), place of enumeration (the county of enumeration imputed from the household questionnaire identification panel), and emigrants (H-40). Members of households were asked to provide information on emigrants in the last fifteen years (H 40). The short questionnaire was used to capture information on educational attainment, professional training, country of destination and residence, year of departure, reason for emigration and remittances, among other variables.

6.2. Internal Migration

This section presents information on recent and lifetime internal migration between counties. Analysis of recent migration highlights the most recent patterns of human mobility in each time interval. The 2019 Census questionnaire asked respondents for their place of residence in August 2018 and targeted population age 1 and above. The population whose county of residence in August 2018 was different from county of enumeration in August 2019 constituted recent migrants. Recent migrants are part of lifetime migrants as they present the most recent movements of the population. Current migration data are generally analyzed in terms of in-migration rate, out-migration rate, and net migration rate.

Table 6.1 and Figure 6.1 present details about the top 13 net recent in-migration counties. Analysis of data per 1000 population shows that Kajiado (90.1), Kiambu (72.0), Mombasa (60.9), Nairobi City (52.3) and Lamu (49.2) counties had the highest propensity for in-migration, followed by Uasin Gishu (47.6), Nakuru (38.0), and Laikipia (20.1). The counties received the largest number of migrants per 1000 population than other counties in the country.

Table 6. 1: Top 13 Net Recent In-migration Counties

| County | Both sexes | Males | Females |
|--------------|------------|-------|---------|
| Kajiado | 90.1 | 85.9 | 94.3 |
| Kiambu | 72.0 | 65.9 | 77.9 |
| Mombasa | 60.9 | 55.3 | 66.7 |
| Nairobi City | 52.3 | 44.8 | 59.8 |
| Lamu | 49.2 | 73.8 | 21.6 |
| UasinGishu | 47.6 | 46.1 | 49.0 |
| Nakuru | 38.0 | 37.5 | 38.4 |
| Laikipia | 20.1 | 22.8 | 17.5 |
| Narok | 16.6 | 14.9 | 18.3 |
| Kirinyaga | 11.8 | 13.1 | 10.4 |
| Nyandarua | 9.4 | 12.5 | 6.3 |
| Machakos | 8.7 | 12.1 | 5.4 |
| Trans Nzoia | 5.5 | 5.3 | 5.6 |

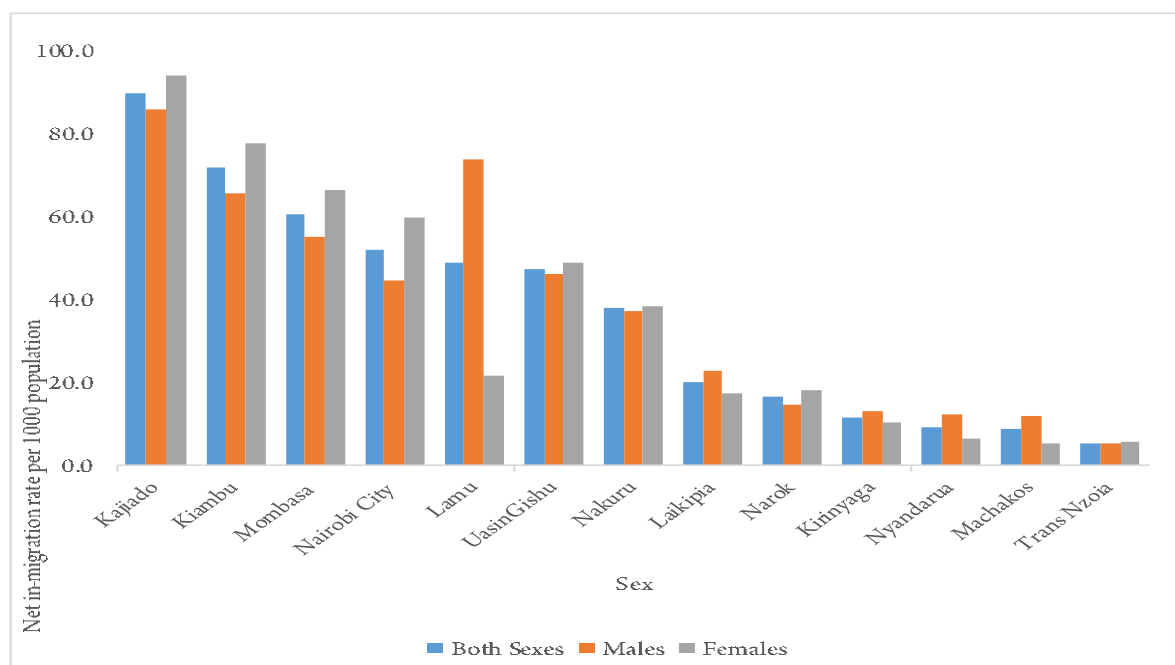


Figure 6. 1: Counties with top Net In-migration rates

Table 6.2 and Figure 6.2 present details about the top 13 net recent out-migration county rates. Counties with the highest net outmigration were Vihiga (-97.0), Kisii (-75.9), Kitui (-63.4), Kakamega (-51.0), Busia (-46.8) and Baringo (-46.0). Recent migrants by County of residence 1 year ago and current residence and trends of recent in-migration, out-migration and Net migration by Sex, County and Region are found in Appendix 4 and Appendix 5, respectively.

Table 6.2: Top 13 Net Recent Out-migration Counties

| County | Both Sexes | Males | Females |
|-----------------|-------------------|--------------|----------------|
| Vihiga | -97.0 | -91.2 | -102.4 |
| Kisii | -75.9 | -76.1 | -75.7 |
| Kitui | -63.4 | -62.6 | -64.2 |
| Kakamega | -51.0 | -52.3 | -49.8 |
| Busia | -46.8 | -45.9 | -47.5 |
| Baringo | -46.0 | -42.2 | -49.9 |
| Makueni | -44.0 | -38.6 | -49.4 |
| Bungoma | -43.2 | -44.4 | -42.1 |
| Elkeyo/Marakwet | -34.6 | -29.9 | -39.3 |
| Bomet | -34.1 | -35.5 | -32.7 |
| Siaya | -27.0 | -21.9 | -31.7 |
| Murang'a | -24.7 | -17.8 | -31.4 |
| Nyamira | -21.8 | -29.5 | -14.7 |

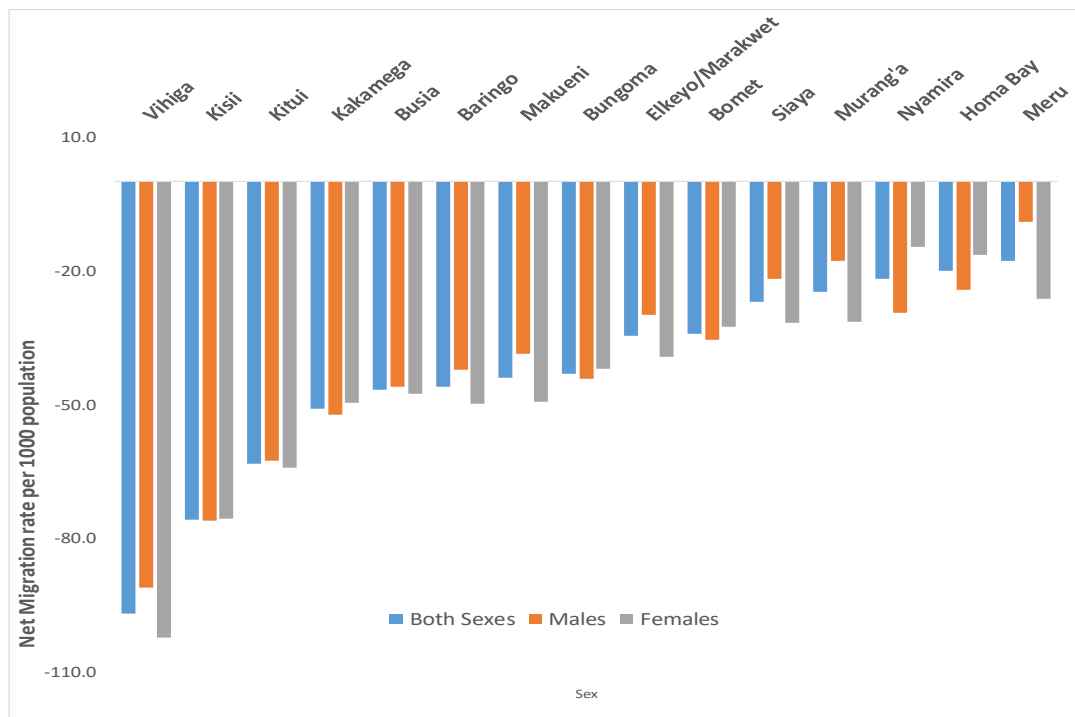


Figure 6.2: Counties with top Net Recent Out-migration rates

6.3. Recent Migrants by Age and Sex

Table 6.3 presents the reasons for migration nationally for recent migrants by sex and age. Majority (42.5%) of the recent migrants cited economic reasons as the main reason for migrating. This was followed by marriage and family related issues, settlement and education at 24.2 percent, 13.4 percent and 9.7 percent, respectively.

Men mainly migrated for economic reasons at 56.9 percent, followed by settlement, education, and marriage and family related issues at 13.2 percent, 10.6 percent, and 10.1 percent, respectively. Females mainly migrated for the reason of marriage and family related issues at 36.6 percent, followed by economic reasons (29.9%), Settlement (13.6%) and education (8.9%).

The results also show that women are almost 4 times (36.6%) more likely to migrate for marriage and family related issues compared to men (10.1%). Men are two times (56.9%) more likely to migrate for economic reasons compared to women (29.9%). Almost the same proportion (13.2% and 13.6%) of both sexes gave settlement as the reason for migration.

Nearly the same percentage of migrants of both sexes migrated in age groups 25-34 years and 35-59 years at 34.0 percent and 34.8 percent, respectively. The majority in these age groups migrated mainly for economic reasons at 51.0 percent and 47.5 percent, respectively. Migrants in age group 15-24 migrated mainly for marriage and family related issues (30.8%), followed by economic reasons (23.1%), education (19.3%) and settlement (11.0%).

Migrants age 60+ mainly migrated for settlement (33.0%) followed by marriage and family related issues (28.4 percent) and economic reasons (25.9%). The peak age groups of migration for men is 35-59 years (37.4%) followed by 25-34 and 15-24 years at 32.6 percent and 23.5 percent, respectively. Men in these groups mainly migrated for economic reasons. Men aged 60+ migrated mainly for economic reasons (41.7%) and settlement (36.8%) while women in this age groups migrate mainly for family related issues (44.3%) followed by settlement at 30.0 percent. The same number of women aged 15-24 (35.8%) and 25-34 (35.2%) years migrate for the reason of marriage. Marriage and family issues was the main reason cited for migration by women in all age groups except age 15-24 years which reported economic reasons as the main reason for migration.

Table 6.3: Proportion of recent migrants' reasons for migration by sex and age, Kenya 2019

| (Both sexes) | Reasons for migration | | | | | | | |
|----------------|-----------------------|------------------|-----------------------------|-------------|-------------|---------------------|------------|------------|
| | Total | Economic Reasons | Marriage and Family Related | Education | Settlement | Forced Displacement | Other | Don't Know |
| Total | 100.0 | 42.5 | 24.2 | 9.7 | 13.4 | 2.3 | 5.2 | 2.7 |
| 15-24 | 25.4 | 23.1 | 30.8 | 19.3 | 11.0 | 2.7 | 10.1 | 2.9 |
| 25-34 | 34.0 | 51.0 | 22.1 | 9.1 | 9.0 | 1.7 | 4.1 | 2.9 |
| 35-59 | 34.8 | 47.5 | 22.5 | 4.4 | 17.5 | 2.6 | 3.2 | 2.4 |
| 60+ | 6.8 | 25.9 | 28.4 | 2.4 | 33.0 | 4.0 | 4.7 | 1.6 |
| Males | 100.0 | 56.9 | 10.1 | 10.6 | 13.2 | 2.4 | 4.0 | 2.8 |
| 15-24 | 23.5 | 28.2 | 24.0 | 21.8 | 11.3 | 3.3 | 8.6 | 2.8 |
| 25-34 | 32.6 | 67.3 | 6.7 | 10.2 | 8.0 | 1.8 | 3.0 | 2.9 |
| 35-59 | 37.4 | 64.3 | 6.5 | 4.7 | 17.0 | 2.4 | 2.4 | 2.7 |
| 60+ | 6.4 | 41.7 | 8.8 | 3.3 | 36.8 | 4.1 | 3.4 | 2.0 |
| Females | 100.0 | 29.9 | 36.6 | 8.9 | 13.6 | 2.2 | 6.2 | 2.6 |
| 15-24 | 27.0 | 19.3 | 35.8 | 17.5 | 10.8 | 2.2 | 11.3 | 3.1 |
| 25-34 | 33.4 | 37.2 | 35.2 | 8.2 | 9.8 | 1.7 | 5.0 | 2.9 |
| 35-59 | 32.5 | 30.6 | 38.6 | 4.0 | 18.0 | 2.7 | 4.0 | 2.0 |
| 60+ | 7.1 | 12.9 | 44.3 | 1.7 | 30.0 | 3.9 | 5.7 | 1.3 |

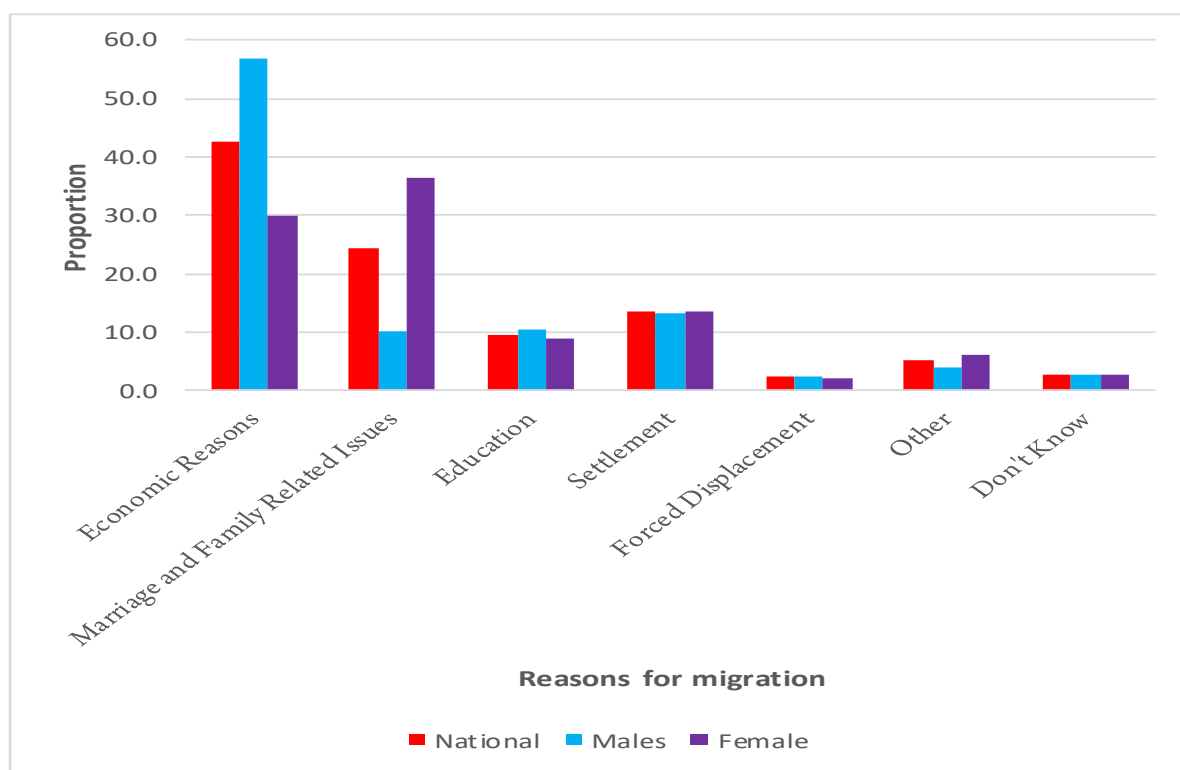


Figure 6.1: Reasons of Migration Nationally and by Sex

6.4. Distribution of Current Internal Migrant Population by Place of Residence, Reason for Migration and Age.

Table 6.4 shows current internal migrant population by place of residence, age and sex. Male migrants in both rural and urban areas cited economic reasons as the main reason for migrating.

In rural areas, the peak age of migration for males was 35-59 years, followed by age group (15-24), (25-34) and 60+. Males mainly moved for economic reasons followed by settlement in the age categories of (35-59) and (25-34) while men in age category (15-24) mainly moved for both economic and family related issues. Men aged 60+ migrated for the reason of settlement (55.4%) and economic reasons (22.4%).

Women in rural areas moved mainly for the reason of marriage while in urban areas the main reason was economic. The peak age of migration for women was 35-59 years in these areas followed by age (25-34), (15-24) and 60+. Generally, females mainly moved for marriage and settlement.

In urban areas, men in all age categories mainly migrated for economic reasons with age category (35-59) recording a peak of 73.7 percent, followed by age category (25-34) years with 70.2 percent. For age category (15-24), economic reasons (29.3%), education (25.8%) and family related issues (22.9%) were the major reasons for movement.

Table 6.4: Proportion of Recent Migrants' Reasons for Migration by Place of Residence, Sex and Age

| Sex/Age | Rural | | | | | | | | | Urban | | | | | | | | |
|---------------|-------|------------------|---------------------------|-----------|------------|--------------|-------|------------|-------|------------------|----------|-----------------------|-----------|------------|--------------|-------|------------|--|
| | Total | Economic Reasons | Marriage & Family related | Education | Settlement | Displacement | Other | Don't Know | Total | Economic Reasons | Marriage | Family Related Issues | Education | Settlement | Displacement | Other | Don't Know | |
| Male | | | | | | | | | | | | | | | | | | |
| Total | 40.6 | 39.5 | 14.5 | 4.4 | 26.2 | 4.9 | 4.4 | 6.1 | 49.2 | 63.7 | 0.3 | 8.0 | 13.0 | 8.3 | 1.5 | 3.8 | 1.5 | |
| 15-24 | 26.1 | 25.3 | 14.5 | 13.2 | 15.1 | 6.1 | 8.5 | 5.1 | 11.3 | 29.3 | 0.1 | 22.9 | 25.8 | 9.4 | 1.8 | 8.9 | 1.9 | |
| 25-34 | 24.1 | 55.9 | 26.8 | 2.6 | 14.8 | 4.0 | 3.7 | 8.3 | 18.0 | 70.2 | 0.3 | 5.3 | 12.2 | 6.3 | 1.2 | 2.9 | 1.5 | |
| 35-59 | 37.3 | 42.9 | 10.7 | 0.8 | 32.7 | 4.5 | 2.6 | 6.3 | 7.5 | 73.7 | 0.4 | 4.6 | 6.3 | 10.0 | 1.5 | 2.2 | 1.2 | |
| 60+ | 12.5 | 22.4 | 10.2 | 0.7 | 55.4 | 5.4 | 2.5 | 3.1 | 2.1 | 62.5 | 0.5 | 6.5 | 6.2 | 16.1 | 2.6 | 4.6 | 1.0 | |
| Female | | | | | | | | | | | | | | | | | | |
| Total | 59.4 | 11.4 | 54.5 | 2.8 | 18.5 | 3.5 | 4.6 | 4.7 | 50.8 | 40.0 | 14.3 | 12.5 | 12.2 | 10.9 | 1.5 | 7.0 | 1.5 | |
| 15-24 | 22.8 | 8.6 | 48.8 | 9.7 | 13.0 | 3.9 | 10.0 | 6.0 | 14.6 | 23.8 | 9.0 | 21.5 | 20.9 | 9.7 | 1.4 | 12.0 | 1.9 | |
| 25-34 | 27.2 | 15.6 | 58.2 | 1.6 | 11.1 | 2.8 | 4.2 | 6.6 | 18.4 | 46.0 | 15.9 | 10.0 | 10.8 | 9.3 | 1.2 | 5.3 | 1.4 | |
| 35-59 | 36.6 | 11.4 | 56.2 | 0.7 | 22.2 | 3.6 | 2.6 | 3.3 | 6.0 | 44.8 | 15.6 | 10.1 | 6.4 | 14.5 | 2.1 | 5.3 | 1.2 | |
| 60+ | 13.4 | 4.8 | 51.8 | 0.3 | 35.2 | 4.1 | 2.5 | 1.4 | 1.9 | 27.3 | 17.9 | 13.5 | 4.2 | 20.3 | 3.7 | 11.9 | 1.2 | |

6.5. Distribution of recent migrants by main urban centres

Table 6.5 presents the distribution of recent migrants by main urban centres and sex. The results show that Nairobi City (48.4%) and Mombasa (12.5%) were the most popular urban centres of destination for recent migrants, followed by Ruiru (6.0%), Nakuru and Eldoret at 5.3 percent each. The remaining urban centres accounted for less than 5.0 percent of the migrants. There were more female recent migrants compared to their male counterparts with females accounting for more than 50 percent in all the main urban centres.

Table 6. 5: Distribution of Recent Migrants by Sex and Main Urban Centres, 2019

| | Numbers | | | Percentage | | |
|---------------|------------------|----------------|----------------|--------------|-------------|-------------|
| | Total | Male | Female | Total | Male | Female |
| Kenya | 1,648,090 | 774,400 | 873,589 | 100.0 | 47.0 | 53.0 |
| Nairobi City | 797,357 | 373,560 | 423,747 | 48.4 | 46.8 | 53.1 |
| Mombasa | 205,644 | 98,942 | 106,696 | 12.5 | 48.1 | 51.9 |
| Nakuru | 88,058 | 41,738 | 46,316 | 5.3 | 47.4 | 52.6 |
| Ruiru | 99,330 | 45,999 | 53,318 | 6.0 | 46.3 | 53.7 |
| Eldoret | 87,572 | 41,610 | 45,959 | 5.3 | 47.5 | 52.5 |
| Kisumu | 61,164 | 28,600 | 32,562 | 3.7 | 46.8 | 53.2 |
| Kikuyu | 57,294 | 25,855 | 31,435 | 3.5 | 45.1 | 54.9 |
| Thika | 45,471 | 21,027 | 24,440 | 2.8 | 46.2 | 53.7 |
| Naivasha | 36,805 | 17,615 | 19,185 | 2.2 | 47.9 | 52.1 |
| Karuri | 35,685 | 16,029 | 19,655 | 2.2 | 44.9 | 55.1 |
| Ongata Rongai | 38,910 | 18,338 | 20,571 | 2.4 | 47.1 | 52.9 |
| Kitale | 23,004 | 11,207 | 11,795 | 1.4 | 48.7 | 51.3 |
| Juja | 31,242 | 14,865 | 16,374 | 1.9 | 47.6 | 52.4 |
| Kitengela | 40,554 | 19,015 | 21,536 | 2.5 | 46.9 | 53.1 |

6.6. International Migration

6.6.1. Introduction

International migration is the temporal or permanent movement of people from the country of usual residence to another. There are two categories of international migration, namely, emigration and immigration. Emigration is when a person leaves his or her country of origin to reside in another country. On the other hand, immigration is a movement of people into destination country of which they are not citizens in order to reside there. This section provides information about international migration based on 2019 census data.

International migrant population considered are foreign born population, “recent” immigrants, emigrants, and refugees/asylum seekers. In this section, a recent immigrant is one who was living in a different country in August 2018 and was enumerated in Kenya. Whereas a foreign-born person is one who was enumerated in Kenya but was born in another country.

6.6.2. Foreign Born Population

Table 6.6 shows that Uganda, Somalia, Tanzania, South Sudan and India were the top 5 countries of origin of the foreign-born migrants. Congo DRC, Ethiopia, Burundi, Congo Republic and USA were the other major sources. Uganda contributed the majority of the migrants at 22.1 percent; followed by Somalia (15.1%), Tanzania (12.3 %), and South Sudan (12.2 %). Congo DRC, Ethiopia, Burundi

and Congo Republic and USA accounted for 4.8, 3.1, 2.9 and 2.6, percent, respectively. Of persons who lived outside Africa, 8.2 per cent were from India and 2.2 were from the United States of America (USA).

Table 6.6: Top ten countries of origin of Foreign-Born migrants

| Country/Sex | Number | | | | | | | | | |
|-------------------|------------|---------|----------|-------------|--------|-----------|----------|---------|------------|-------|
| | Uganda | Somalia | Tanzania | South Sudan | India | Congo DRC | Ethiopia | Burundi | Congo Rep. | USA |
| Both Sexes | 92,636 | 63,492 | 51,603 | 51,041 | 34,362 | 20,268 | 13,068 | 12,125 | 11,023 | 9,065 |
| Male | 38,823 | 27,453 | 25,430 | 25,552 | 18,276 | 10,922 | 6,646 | 7,980 | 5,976 | 4,568 |
| Female | 53,813 | 36,039 | 26,173 | 25,489 | 16,086 | 9,346 | 6,422 | 4,145 | 5,047 | 4,497 |
| Country/Sex | Proportion | | | | | | | | | |
| | Uganda | Somalia | Tanzania | South Sudan | India | Congo DRC | Ethiopia | Burundi | Congo Rep. | USA |
| Both Sexes | 22.1 | 15.1 | 12.3 | 12.2 | 8.2 | 4.8 | 3.1 | 2.9 | 2.6 | 2.2 |
| Male | 9.3 | 6.5 | 6.1 | 6.1 | 4.4 | 2.6 | 1.6 | 1.9 | 1.4 | 2.2 |
| Female | 12.8 | 8.6 | 6.2 | 6.1 | 3.8 | 2.2 | 1.5 | 1.0 | 1.2 | 2.1 |

6.6.3. Recent International Migration

In the 2019 census, data was collected on the place of residence one year preceding the census (August 2018). The information provided data on recent migration, for persons who were in a different country in 2018, recent immigrants in this case.

Figure 6.4 shows the top ten countries in which persons reported to have been living in August 2018. The results show that EAC (Uganda, Tanzania, South Sudan, Burundi and Rwanda) countries accounted for half (51.8 percent) of the top ten sending countries. Immigrants from Uganda accounted for the largest share of 30 percent. Of persons who lived outside Africa, 5.8 per cent were from the United States of America (USA), 3.5 percent from the United Kingdom (UK) and 3.4 per cent from India.

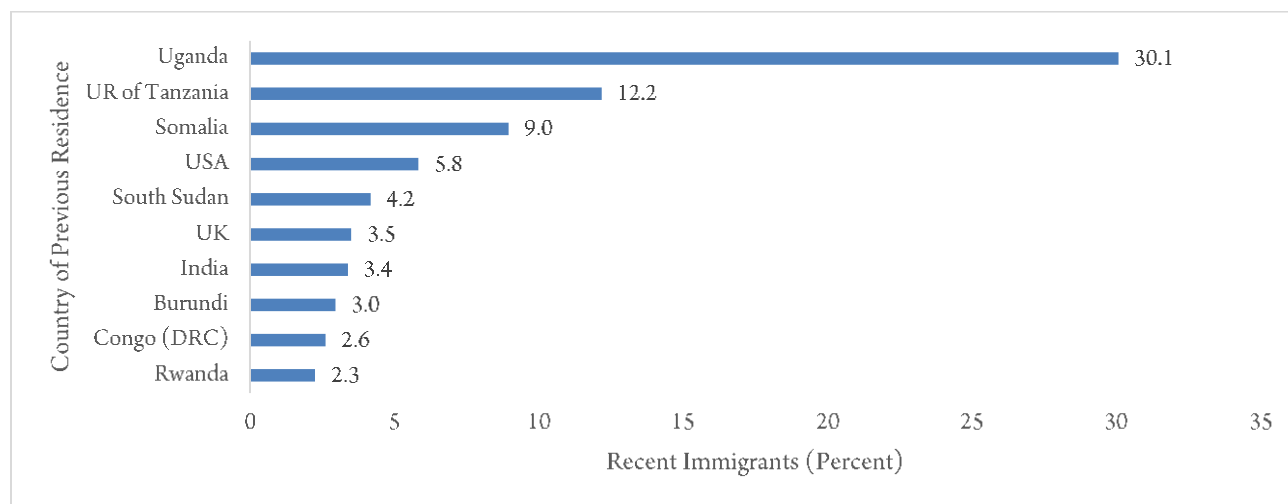


Figure 6.2: Top Ten Countries of Previous Residence in August 2018

6.6.4. Emigration

In the 2019 KPHC, emigrants in households were identified and estimated by asking if member(s) of all enumerated households had ever migrated to a different country in the past fifteen years.

Figure 6.5 shows persons who have ever emigrated by the top ten regions of current residence. Arab Gulf countries (Qatar, United Arab Emirates, Saudi Arabia, Bahrain, Kuwait, and Oman) in Asia were popular amongst all persons who have ever emigrated, hosting the bulk of the emigrants from Kenya followed by the Americas. EAC and Europe accounted 15 percent and 14 percent, respectively.

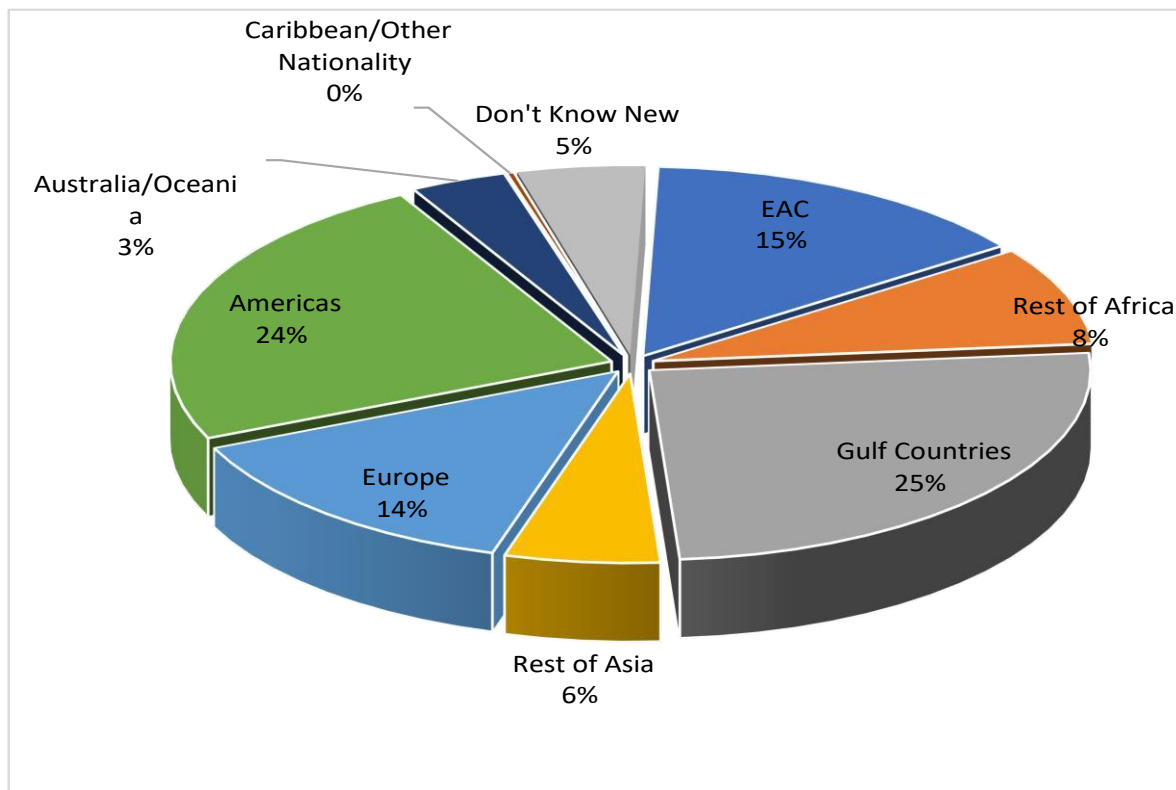


Figure 6. 3: Persons Ever Emigrated by Top Ten Countries/Regions of Current Residence

Chapter 7: Conclusions and Recommendations

7.1. Introduction

This chapter summarizes components of population change in Kenya derived from the 2019 KPHC. The term population dynamics is the mechanisms by which population changes over time. Such change is the result of natural increase (the balance of births and deaths) and migration (the balance of persons moving in and out of the country or area concerned). The rate of change in birth and death rates is also dependent on the population structure.

7.2. Conclusions

Coverage

Generally, there was improved age reporting in 2019 KPHC compared to the previous census. However, the quality of data varied by place of residence and county. Age reporting was better in rural areas compared to urban areas according to the UN accuracy index. Some ASAL counties have the lowest accuracy on age reporting. In these counties, male adults age 60 and above were over-reported. Analysis of demographic indicators require that the denominator be smoothed to correct the data errors especially due to digit preference and age misreporting.

Nuptiality

The marital characteristics presented in this chapter reveal the universality of marriage in Kenya. The proportion of population married by sex and age shows that women tend to marry earlier than men. Further, the data indicates that in the older ages, a higher proportion of women than men are widowed. Overall, the proportion of married women (51.1%) is higher compared with that of men (48.4%). Generally, the proportion of population divorced or separated remain low for both sexes. Cases of separation are higher compared with divorce, with more separations experienced at ages 35 – 49.

The percentages of the never married men and women are highest in the age-group 15-19 at 96 percent and 89 percent, respectively. In addition, the SMAM for men is 27 years, while for women is 23 years. This shows that on average, men remained single 4 more years than women before getting into marriage.

Fertility

From 1999 to 2019, the Total Fertility Rate has consistently declined from high to low fertility levels. The TFR has declined by about one birth from 4.8 births per woman in 2009 to 3.4 births per woman in 2019. Over the period, fertility has declined faster in rural than in urban areas. Regarding Age

Specific Fertility Rates (ASFRs), there has been a shift in reported ASFRs within the last 10 years. In 2019 KPHC, the reported ASFRs peaked at 25-29 age group, which is a shift from what was reported in 2009 that peaked at age 20-24, an indication that fertility has been declining. The rural-urban differences in age-specific fertility rates show that ASFRs for the urban areas in 2019 were lower than those in rural areas in all age groups. The results further show that the proportion of teenage girls, age 15-19 with no children has been increasing since 1989, an indication that the young females are postponing entry into motherhood. Among women in the age group 45-49, the modal number of children ever born has declined from 8 in 1989 to 3 in 2019. Further, a sizeable proportion of Kenyan women, about 3.6 percent remain childless by age 45-49, an indication that sterility may be affecting fewer women.

Mortality

Despite interventions in the health sector targeting mothers, children and infants, mortality indicators are still relatively high compared to the set SDG targets of 25 deaths per 1,000 live births. However, the rates are declining across all the mortality indicators and counties. Differentials in the childhood mortality rates by sex across the counties still exists with males dying more compared to the females. The improvement in the life expectancies for sexes shows a higher chance of survival from birth and in old ages.

Migration

Counties of Kajiado (90.1), Kiambu (72.0), Mombasa (60.9), Nairobi city (52.3) and Lamu (49.2) have the highest predisposition for in-migration. In contrast, Vihiga (-97.0), Kisii (-75.9), Kitui (-63.4), Kakamega (-51.0), and Busia have the highest propensity for out-migration. Nairobi (48.4 percent) and Mombasa (12.5 percent) were the most popular urban centres of destination for lifetime and recent migrants, followed by Nakuru (6.0 percent) and Ruiru at 5.3 percent.

Uganda, Somalia, Tanzania, South Sudan and India were the top 5 countries of origin of foreign-born migrants with majority enumerated in the major urban centers in country. Nairobi hosted two in five of the foreign-born persons.

Arabian Gulf countries are hosting the bulk of the emigrants from Kenya followed by the Americas. Refugees from Somalia, South Sudan and Congo DRC accounted for about three in five of the all the persons who reported to have come into the country as refugees. Recent migration and lifetime were mainly experienced in the major urban counties (Nairobi, Mombasa, and Nakuru) and rural counties (Kiambu, Uasin Gishu, Trans Nzoia, Kajiado, and Narok). Counties that experienced net loss of recent migrants were Siaya, Kakamega, Bungoma, Kisii, Homa Bay, Kitui, Makueni, Turkana, Garissa, Wajir, Mandera, Kilifi and Kwale, among others.

The majority of immigrants were from African countries including Uganda, Tanzania, Ethiopia, Rwanda, Burundi, South Sudan and Somalia. Migration to Africa and the Middle East countries are becoming more popular than the traditional countries and regions in Europe and America in the country.

7.3. Recommendations

Based on the findings of this report, the following are recommended for future intervention.

- Care must be taken during training of enumerators with a view to improve age reporting during data collection. In addition, there should be a complete review of the historical calendar of events for various regions.
- More in-depth analysis may be required at the county level and to determine if reporting of age data may be related to socio-economic characteristics such as education.
- Programmes should be developed targeted to address child marriages and early childbearing with the aim of reducing the burden to zero.
- Programmes targeting ASAL counties should be developed with a view to accelerating fertility decline in those counties.
- There is need to focus interventions to reduce the high childhood and maternal mortality rates.
- Strengthen competencies in analysis of mortality data and formulation of health programs and policies.
- There is need to establish policies and practical mechanisms to repatriate, resettle and/or evacuate refugees. Finding long lasting solutions to causes and triggers of refugees in the region is also significant.
- Programs promoting equitable development between rural and urban areas have a great potential of reducing both population pressure on urban areas and rural urban migration.
- There is need to undertake a detailed study on migration in Kenya to better understand causes, drivers, and consequences of migration as several observations cannot be explained because of limitations of census data on migration. The study should provide adequate gender perspectives in migration patterns.

- Continue strengthening family planning programs by providing universal access to quality, accessible, affordable, and comprehensive sexual and reproductive information, and contraceptives. This will help in preventing unplanned pregnancies, which in turn improves the lives of the family unit members since they are able to optimize their resources.
- Strengthen provision of social protection systems to cushion the vulnerable population in the society, as a measure on poverty alleviation, for example, increasing the coverage for the elderly cash transfer system to include universal pension coverage and health care to cater for the ageing population.
- To achieve sustainable cities and minimize the environmental impact, there is need to strengthen urban planning to regulate proper use of space focusing on physical form, economic functions, and social impacts of the urban development. This is critical in management of social amenities and utilities, such as waste management, access to safe water, urban safety, and roads to eliminate the informal/slum settlements and management of high population density.

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REPUBLIC OF KENYA

REPUBLIC OF KENYA



CONFIDENTIAL

POPULATION AND HOUSING CENSUS 24th /25th AUGUST 2019
SHORT QUESTIONNAIRE FOR EMIGRANTS

| E-01: Serial No. | E-01(a): Line No. of Respondent | E-02: Name of Emigrant Please give me the name(s) of the emigrant(s)? | E-03: Sex What is <NAME>'s Sex? Male=1 Female=2 | E-04: Age How old was <NAME> at the time of his/her departure? | E-05: Level of Education What was the highest level of education that <NAME> had completed at the time of his/her departure? | E-06: Professional training What professional training had <NAME> acquired before departure from Kenya? (Applicable to persons age 15 years & above) | E-07: Country of first Destination What was <NAME>'s country of first destination during his/her departure? | E-08: Year of Departure When did <NAME> depart from Kenya? | E-09: Main reason for Departure What was the main reason for <NAME> departing from Kenya? | E-10: Country of current residence What is the current country of residence of <NAME>? | E-10a: Select the Name of the Emigrant if currently in Kenya. | E-11: Remittances Did <NAME> remit money to any member of this household while outside Kenya in the last 12 months? Yes=1 No=2 DK=9 | E-12: Utilization of funds How was the money utilized? (Allow for maximum of 3 responses) |
|------------------|---------------------------------|--|--|---|---|--|--|---|--|---|---|---|---|
| 1 | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | |



REPUBLIC OF KENYA



POPULATION AND HOUSING CENSUS 24th /25th AUGUST 2019

CONFIDENTIAL

SHORT QUESTIONNAIRE FOR STREET PERSONS/OUTDOOR SLEEPERS/VAGRANTS

County Sub-county Division

Location Sub-Location EA Number

Constituency Ward

Name of the street.....Code.....

| Line /NO | Name (List at least two names) | SEX 1. Male 2. Female Stated | 3. Other 4. Not Stated | AGE in Completed years | COUNTY/ COUNTRY OF BIRTH | ETHNICITY/NATIONALITY <i>What is <NAME>'s Nationality/Ethnicity?</i> |
|----------|-----------------------------------|---------------------------------------|---------------------------|------------------------|--------------------------|---|
| 1 | | <input type="text"/> | | <input type="text"/> | | |
| 2 | | <input type="text"/> | | <input type="text"/> | | |
| 3 | | <input type="text"/> | | <input type="text"/> | | |
| 4 | | <input type="text"/> | | <input type="text"/> | | |
| 5 | | <input type="text"/> | | <input type="text"/> | | |
| 6 | | <input type="text"/> | | <input type="text"/> | | |
| 7 | | <input type="text"/> | | <input type="text"/> | | |
| 8 | | <input type="text"/> | | <input type="text"/> | | |

TOTAL: MALES _____ FEMALES _____ OTHER _____ UNSPECIFIED SEX _____ TOTAL _____

Appendix 2: Proportion of Married Persons, Age 15-19 and Singulate Mean Age at Marriage by Sex, Place of Residence and County, 2019

| Residence/ County | Percent ever married (age 15-19) | | SMAM (Years) | | Male-Female Difference in SMAM |
|-------------------|-------------------------------------|-------------|--------------|-------------|--------------------------------------|
| | Male | Female | Male | Female | |
| Kenya | 4.3 | 11.2 | 27.3 | 23.1 | 4.2 |
| Rural | 4.8 | 12.0 | 27.3 | 22.4 | 4.9 |
| Urban | 2.6 | 8.9 | 27.3 | 23.6 | 3.7 |
| Mombasa | 2.4 | 10.3 | 27.4 | 23.5 | 3.9 |
| Kwale | 3.4 | 15.9 | 26.9 | 22.2 | 4.7 |
| Kilifi | 3.0 | 11.3 | 26.9 | 23.0 | 3.9 |
| Tana River | 5.4 | 25.6 | 25.3 | 20.4 | 4.9 |
| Taita-Taveta | 2.6 | 9.9 | 28.5 | 23.0 | 5.5 |
| Garissa | 8.7 | 17.6 | 26.8 | 22.6 | 4.2 |
| Wajir | 8.8 | 19.6 | 25.6 | 21.9 | 3.7 |
| Mandera | 9.6 | 23.9 | 25.0 | 21.4 | 3.6 |
| Marsabit | 6.6 | 18.5 | 28.0 | 22.3 | 5.7 |
| Isiolo | 5.7 | 18.3 | 27.0 | 22.1 | 4.9 |
| Meru | 6.1 | 15.1 | 27.5 | 22.8 | 4.7 |
| Tharaka-Nithi | 4.2 | 9.1 | 27.9 | 23.5 | 4.4 |
| Embu | 3.9 | 9.6 | 28.7 | 23.4 | 5.3 |
| Kitui | 3.9 | 7.8 | 28.4 | 23.1 | 5.3 |
| Machakos | 3.6 | 7.6 | 28.6 | 24.0 | 4.7 |
| Makueni | 3.1 | 5.8 | 29.4 | 23.7 | 5.7 |
| Nyandarua | 2.7 | 6.7 | 28.6 | 22.8 | 5.8 |
| Nyeri | 2.7 | 5.7 | 29.4 | 23.6 | 5.8 |
| Kirinyaga | 4.2 | 9.5 | 28.2 | 22.9 | 5.3 |
| Murang'a | 3.1 | 8.1 | 29.0 | 23.3 | 5.7 |
| Kiambu | 2.4 | 6.8 | 27.8 | 23.7 | 4.1 |
| Turkana | 5.8 | 14.3 | 27.5 | 22.9 | 4.7 |
| West Pokot | 7.8 | 19.1 | 25.4 | 21.5 | 3.9 |
| Samburu | 5.1 | 24.8 | 27.6 | 21.2 | 6.4 |
| Trans Nzoia | 3.4 | 9.7 | 27.0 | 23.1 | 3.9 |
| Uasin Gishu | 3.2 | 6.7 | 28.0 | 24.0 | 4.0 |
| Elgeyo-Marakwet | 5.9 | 9.6 | 26.8 | 23.5 | 3.3 |
| Nandi | 3.9 | 7.6 | 28.1 | 23.7 | 4.4 |
| Baringo | 5.7 | 12.2 | 27.1 | 23.1 | 4.0 |
| Laikipia | 3.2 | 11.3 | 27.8 | 22.4 | 5.5 |
| Nakuru | 2.8 | 8.8 | 27.3 | 22.9 | 4.4 |
| Narok | 5.5 | 19.9 | 25.7 | 21.1 | 4.5 |
| Kajiado | 4.1 | 13.3 | 27.1 | 23.1 | 4.0 |
| Kericho | 4.7 | 11.2 | 27.8 | 22.9 | 4.9 |
| Bomet | 5.5 | 12.8 | 27.5 | 22.8 | 4.7 |
| Kakamega | 4.0 | 9.5 | 26.7 | 23.2 | 3.5 |
| Vihiga | 3.3 | 7.3 | 28.0 | 24.2 | 3.7 |
| Bungoma | 5.5 | 11.6 | 26.3 | 22.8 | 3.5 |
| Busia | 3.8 | 9.8 | 26.3 | 23.2 | 3.1 |
| Siaya | 2.8 | 8.4 | 27.0 | 23.2 | 3.8 |
| Kisumu | 2.9 | 8.6 | 27.2 | 23.7 | 3.6 |
| Homabay | 4.3 | 12.1 | 26.2 | 22.2 | 4.0 |
| Migori | 4.8 | 16.1 | 25.5 | 21.6 | 3.9 |
| Kisii | 5.3 | 12.0 | 26.2 | 22.8 | 3.4 |
| Nyamira | 5.0 | 10.7 | 26.8 | 22.8 | 4.0 |
| Nairobi City | 1.8 | 7.8 | 27.5 | 23.7 | 3.8 |

Appendix 3: Age Specific Fertility Rates by County and Place of Residence, 2019

| Residence/ County | Age group | | | | | | | TFR |
|-------------------|-----------|---------|---------|---------|---------|---------|---------|-----|
| | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40 - 44 | 45 - 49 | |
| Kenya | 0.053 | 0.169 | 0.175 | 0.141 | 0.098 | 0.041 | 0.008 | 3.4 |
| Rural | 0.058 | 0.194 | 0.195 | 0.149 | 0.104 | 0.045 | 0.009 | 3.8 |
| Urban | 0.038 | 0.134 | 0.151 | 0.129 | 0.089 | 0.035 | 0.005 | 2.9 |
| County | | | | | | | | |
| Mombasa | 0.035 | 0.129 | 0.149 | 0.128 | 0.089 | 0.035 | 0.006 | 2.9 |
| Kwale | 0.066 | 0.206 | 0.213 | 0.182 | 0.126 | 0.060 | 0.014 | 4.3 |
| Kilifi | 0.048 | 0.172 | 0.189 | 0.160 | 0.112 | 0.052 | 0.012 | 3.7 |
| Tana River | 0.075 | 0.223 | 0.248 | 0.213 | 0.167 | 0.088 | 0.030 | 5.2 |
| Lamu | 0.051 | 0.185 | 0.205 | 0.172 | 0.112 | 0.066 | 0.019 | 4.0 |
| Taita-Taveta | 0.046 | 0.169 | 0.172 | 0.141 | 0.103 | 0.043 | 0.005 | 3.4 |
| Garissa | 0.086 | 0.207 | 0.216 | 0.178 | 0.125 | 0.054 | 0.006 | 4.4 |
| Wajir | 0.117 | 0.267 | 0.304 | 0.283 | 0.231 | 0.123 | 0.020 | 6.7 |
| Mandera | 0.162 | 0.310 | 0.340 | 0.323 | 0.277 | 0.163 | 0.031 | 8.0 |
| Marsabit | 0.113 | 0.282 | 0.325 | 0.299 | 0.236 | 0.119 | 0.018 | 7.0 |
| Isiolo | 0.048 | 0.168 | 0.187 | 0.178 | 0.129 | 0.080 | 0.037 | 4.1 |
| Meru | 0.057 | 0.149 | 0.148 | 0.115 | 0.080 | 0.031 | 0.007 | 2.9 |
| Tharaka-Nithi | 0.037 | 0.149 | 0.159 | 0.116 | 0.081 | 0.030 | 0.006 | 2.9 |
| Embu | 0.036 | 0.150 | 0.151 | 0.121 | 0.081 | 0.034 | 0.005 | 2.9 |
| Kitui | 0.040 | 0.183 | 0.174 | 0.123 | 0.079 | 0.031 | 0.007 | 3.2 |
| Machakos | 0.033 | 0.144 | 0.147 | 0.111 | 0.073 | 0.023 | 0.004 | 2.7 |
| Makueni | 0.028 | 0.167 | 0.158 | 0.108 | 0.066 | 0.023 | 0.002 | 2.8 |
| Nyandarua | 0.030 | 0.176 | 0.184 | 0.142 | 0.098 | 0.042 | 0.008 | 3.4 |
| Nyeri | 0.023 | 0.144 | 0.161 | 0.129 | 0.081 | 0.032 | 0.004 | 2.9 |
| Kirinyaga | 0.037 | 0.146 | 0.143 | 0.110 | 0.073 | 0.027 | 0.004 | 2.7 |
| Murang'a | 0.036 | 0.167 | 0.176 | 0.138 | 0.090 | 0.036 | 0.005 | 3.2 |
| Kiambu | 0.027 | 0.123 | 0.146 | 0.127 | 0.086 | 0.032 | 0.005 | 2.7 |
| Turkana | 0.102 | 0.264 | 0.304 | 0.274 | 0.212 | 0.103 | 0.014 | 6.4 |
| West Pokot | 0.075 | 0.234 | 0.267 | 0.243 | 0.188 | 0.089 | 0.029 | 5.6 |
| Samburu | 0.074 | 0.230 | 0.220 | 0.193 | 0.144 | 0.077 | 0.034 | 4.9 |
| Trans Nzoia | 0.057 | 0.182 | 0.180 | 0.149 | 0.112 | 0.046 | 0.010 | 3.7 |
| Uasin Gishu | 0.036 | 0.141 | 0.156 | 0.131 | 0.093 | 0.040 | 0.007 | 3.0 |
| Elgeyo-Marakwet | 0.043 | 0.180 | 0.202 | 0.157 | 0.103 | 0.046 | 0.008 | 3.7 |
| Nandi | 0.047 | 0.161 | 0.162 | 0.122 | 0.091 | 0.042 | 0.009 | 3.2 |
| Baringo | 0.047 | 0.178 | 0.194 | 0.173 | 0.130 | 0.052 | 0.017 | 4.0 |
| Laikipia | 0.047 | 0.193 | 0.189 | 0.155 | 0.104 | 0.047 | 0.011 | 3.7 |
| Nakuru | 0.041 | 0.166 | 0.170 | 0.140 | 0.100 | 0.044 | 0.009 | 3.4 |
| Narok | 0.082 | 0.234 | 0.215 | 0.166 | 0.131 | 0.073 | 0.025 | 4.6 |
| Kajiado | 0.056 | 0.157 | 0.164 | 0.136 | 0.089 | 0.043 | 0.014 | 3.3 |
| Kericho | 0.050 | 0.162 | 0.153 | 0.117 | 0.087 | 0.035 | 0.008 | 3.1 |
| Bomet | 0.054 | 0.176 | 0.166 | 0.124 | 0.090 | 0.042 | 0.009 | 3.3 |
| Kakamega | 0.046 | 0.186 | 0.187 | 0.136 | 0.093 | 0.033 | 0.005 | 3.4 |
| Vihiga | 0.038 | 0.181 | 0.194 | 0.145 | 0.100 | 0.033 | 0.005 | 3.5 |
| Bungoma | 0.055 | 0.183 | 0.188 | 0.143 | 0.107 | 0.042 | 0.008 | 3.6 |
| Busia | 0.049 | 0.185 | 0.192 | 0.143 | 0.097 | 0.037 | 0.006 | 3.5 |
| Siaya | 0.053 | 0.196 | 0.188 | 0.141 | 0.095 | 0.031 | 0.004 | 3.5 |
| Kisumu | 0.049 | 0.165 | 0.166 | 0.128 | 0.084 | 0.028 | 0.005 | 3.1 |
| Homabay | 0.068 | 0.193 | 0.189 | 0.140 | 0.094 | 0.036 | 0.007 | 3.6 |
| Migori | 0.079 | 0.207 | 0.190 | 0.145 | 0.103 | 0.043 | 0.010 | 3.9 |
| Kisii | 0.059 | 0.166 | 0.156 | 0.098 | 0.062 | 0.020 | 0.003 | 2.8 |
| Nyamira | 0.051 | 0.167 | 0.152 | 0.093 | 0.053 | 0.016 | 0.004 | 2.7 |
| Nairobi City | 0.030 | 0.117 | 0.132 | 0.115 | 0.077 | 0.029 | 0.004 | 2.5 |

Appendix 4: Recent migrants by County of residence 1 year ago and current residence

| County of residence at time of census | Usual residence 1 year ago | | | | | | | | | | | |
|---------------------------------------|----------------------------|-----------|---------|-----------|------------|---------|--------------|---------|---------|---------|----------|---------|
| | Total | Mombasa | Kwale | Kilifi | Tana River | Lamu | Taita-Taveta | Garissa | Wajir | Mandera | Marsabit | Isiolo |
| Total/County | 45,999,761 | 1,081,811 | 842,393 | 1,409,700 | 305,490 | 131,106 | 327,938 | 830,598 | 769,019 | 856,304 | 443,171 | 260,528 |
| Mombasa | 1,155,431 | 985,122 | 25,273 | 32,548 | 2,103 | 3,042 | 10,095 | 1,582 | 830 | 620 | 303 | 357 |
| Kwale | 833,315 | 5,600 | 802,724 | 6,830 | 366 | 248 | 1,995 | 205 | 106 | 142 | 57 | 46 |
| Kilifi | 1,401,932 | 10,917 | 6,171 | 1,350,247 | 2,841 | 1,813 | 2,835 | 640 | 252 | 140 | 78 | 96 |
| Tana River | 304,945 | 702 | 140 | 2,034 | 293,451 | 500 | 176 | 817 | 164 | 186 | 48 | 61 |
| Lamu | 138,189 | 1,294 | 341 | 3,956 | 3,215 | 122,154 | 156 | 527 | 47 | 43 | 24 | 142 |
| Taita-Taveta | 327,197 | 6,428 | 1,802 | 1,945 | 346 | 94 | 300,630 | 152 | 75 | 112 | 59 | 73 |
| Garissa | 819,601 | 192 | 38 | 152 | 181 | 49 | 38 | 809,793 | 569 | 399 | 55 | 311 |
| Wajir | 764,103 | 91 | 67 | 41 | 16 | 7 | 14 | 951 | 759,104 | 213 | 54 | 157 |
| Mandera | 843,556 | 55 | 12 | 51 | 13 | 45 | 13 | 125 | 253 | 840,119 | 109 | 77 |
| Marsabit | 436,256 | 67 | 4 | 8 | 18 | 7 | 15 | 62 | 253 | 321 | 431,429 | 369 |
| Isiolo | 261,330 | 242 | 30 | 58 | 34 | 53 | 20 | 2,121 | 379 | 471 | 1,016 | 247,250 |
| Meru | 1,503,750 | 1,292 | 90 | 279 | 50 | 54 | 149 | 162 | 165 | 266 | 625 | 3,854 |
| Tharaka-Nithi | 383,364 | 425 | 42 | 87 | 16 | 13 | 64 | 32 | 21 | 15 | 59 | 141 |
| Embu | 592,771 | 1,101 | 111 | 230 | 43 | 46 | 153 | 137 | 39 | 41 | 134 | 158 |
| Kitui | 1,106,795 | 2,986 | 260 | 384 | 310 | 45 | 309 | 532 | 107 | 221 | 75 | 67 |
| Machakos | 1,383,394 | 3,825 | 431 | 685 | 110 | 129 | 834 | 182 | 122 | 277 | 263 | 176 |
| Makueni | 958,867 | 2,965 | 512 | 483 | 52 | 61 | 1,167 | 70 | 61 | 211 | 39 | 53 |
| Nyandarua | 621,641 | 647 | 36 | 79 | 14 | 64 | 87 | 60 | 15 | 16 | 95 | 94 |
| Nyeri | 737,339 | 1,574 | 100 | 207 | 60 | 95 | 232 | 103 | 63 | 90 | 214 | 328 |
| Kirinyaga | 593,364 | 1,314 | 63 | 180 | 48 | 158 | 132 | 54 | 16 | 32 | 112 | 104 |
| Murang'a | 1,030,532 | 1,482 | 111 | 189 | 59 | 142 | 203 | 175 | 23 | 33 | 114 | 96 |
| Kiambu | 2,332,796 | 5,974 | 402 | 1,455 | 275 | 504 | 1,065 | 629 | 241 | 321 | 652 | 528 |
| Turkana | 897,698 | 104 | 16 | 19 | 12 | 11 | 31 | 255 | 40 | 146 | 32 | 65 |
| West Pokot | 598,643 | 53 | 3 | 27 | 6 | 3 | 11 | 34 | 20 | 46 | 19 | 3 |
| Samburu | 298,997 | 86 | 18 | 16 | 3 | 8 | 17 | 31 | 16 | 25 | 542 | 338 |
| Trans Nzoia | 960,446 | 902 | 46 | 156 | 23 | 25 | 121 | 68 | 25 | 85 | 41 | 45 |
| Uasin Gishu | 1,123,415 | 1,599 | 147 | 380 | 68 | 78 | 213 | 252 | 264 | 313 | 213 | 170 |
| Elgeyo-Marakwet | 441,235 | 35 | 12 | 17 | 5 | 1 | 14 | 24 | 5 | 19 | 18 | 8 |
| Nandi | 863,604 | 330 | 24 | 57 | 12 | 23 | 50 | 16 | 17 | 47 | 43 | 15 |
| Baringo | 646,381 | 141 | 23 | 30 | 19 | 30 | 28 | 29 | 18 | 67 | 33 | 33 |
| Laikipia | 500,363 | 616 | 73 | 130 | 52 | 95 | 110 | 83 | 87 | 138 | 359 | 794 |
| Nakuru | 2,085,652 | 3,690 | 417 | 743 | 153 | 225 | 643 | 289 | 237 | 574 | 472 | 459 |
| Narok | 1,116,177 | 270 | 38 | 65 | 68 | 58 | 84 | 108 | 100 | 217 | 85 | 88 |
| Kajiado | 1,074,808 | 2,853 | 333 | 692 | 141 | 158 | 1,261 | 354 | 184 | 617 | 471 | 696 |
| Kericho | 876,576 | 345 | 19 | 57 | 17 | 21 | 67 | 16 | 16 | 104 | 39 | 25 |
| Bomet | 853,125 | 150 | 25 | 14 | - | 5 | 23 | 21 | 30 | 62 | 22 | 8 |
| Kakamega | 1,817,729 | 2,347 | 140 | 272 | 35 | 53 | 222 | 66 | 38 | 103 | 60 | 59 |
| Vihiga | 574,677 | 991 | 46 | 96 | 23 | 13 | 91 | 24 | 21 | 88 | 23 | 14 |
| Bungoma | 1,622,125 | 1,192 | 104 | 166 | 53 | 35 | 154 | 51 | 25 | 85 | 23 | 39 |
| Busia | 861,142 | 1,569 | 58 | 99 | 22 | 26 | 93 | 61 | 101 | 108 | 39 | 52 |
| Siaya | 963,820 | 3,137 | 84 | 230 | 25 | 16 | 167 | 64 | 17 | 161 | 39 | 47 |
| Kisumu | 1,115,376 | 3,011 | 170 | 282 | 58 | 34 | 241 | 142 | 61 | 133 | 50 | 51 |
| Homabay | 1,096,436 | 1,698 | 80 | 153 | 18 | 23 | 127 | 224 | 40 | 184 | 60 | 145 |
| Migori | 1,076,770 | 1,041 | 52 | 102 | 16 | 35 | 92 | 132 | 71 | 234 | 53 | 50 |
| Kisii | 1,232,653 | 1,147 | 163 | 187 | 19 | 27 | 109 | 79 | 25 | 55 | 39 | 51 |
| Nyamira | 591,229 | 549 | 40 | 92 | 23 | 12 | 54 | 16 | 10 | 21 | 7 | 12 |
| Nairobi City | 4,180,216 | 19,660 | 1,502 | 3,490 | 998 | 768 | 3,533 | 9,048 | 4,646 | 8,383 | 4,775 | 2,723 |

Appendix 5: Recent migrants by County of residence 1 year ago and current residence, cont'd

| County of residence at time of census | Usual residence 1 year ago | | | | | | | | | | | | |
|---------------------------------------|----------------------------|---------------|---------|-----------|-----------|-----------|-----------|---------|-----------|-----------|-----------|---------|--|
| | Meru | Tharaka-Nithi | Embu | Kitui | Machakos | Makueni | Nyandarua | Nyeri | Kirinyaga | Murang'a | Kiambu | Turkana | |
| Total/County | 1,531,232 | 388,912 | 592,586 | 1,178,846 | 1,370,959 | 1,002,331 | 615,650 | 746,245 | 586,189 | 1,056,603 | 2,158,620 | 899,626 | |
| Mombasa | 3,206 | 558 | 1,006 | 11,892 | 3,627 | 6,384 | 503 | 1,280 | 952 | 1,603 | 2,278 | 170 | |
| Kwale | 521 | 263 | 194 | 1,221 | 1,838 | 1,481 | 88 | 248 | 184 | 282 | 443 | 28 | |
| Kilifi | 1,308 | 325 | 589 | 2,449 | 1,359 | 1,605 | 198 | 530 | 341 | 534 | 1,172 | 66 | |
| Tana River | 494 | 39 | 79 | 2,995 | 201 | 89 | 50 | 109 | 124 | 187 | 207 | 15 | |
| Lamu | 415 | 41 | 116 | 271 | 179 | 139 | 221 | 185 | 392 | 409 | 501 | 31 | |
| Taita-Taveta | 434 | 79 | 131 | 1,043 | 1,047 | 2,965 | 102 | 248 | 146 | 287 | 463 | 50 | |
| Garissa | 395 | 26 | 415 | 2,455 | 252 | 104 | 71 | 79 | 39 | 170 | 224 | 21 | |
| Wajir | 436 | 43 | 65 | 877 | 90 | 37 | 18 | 40 | 18 | 25 | 74 | 16 | |
| Mandera | 187 | 26 | 71 | 324 | 60 | 59 | 20 | 53 | 25 | 61 | 107 | 29 | |
| Marsabit | 787 | 54 | 73 | 121 | 61 | 49 | 36 | 128 | 39 | 76 | 88 | 162 | |
| Isiolo | 3,729 | 170 | 130 | 228 | 134 | 72 | 86 | 243 | 64 | 79 | 202 | 100 | |
| Meru | 1,454,866 | 8,215 | 1,962 | 1,935 | 989 | 615 | 659 | 2,626 | 1,087 | 1,576 | 2,082 | 173 | |
| Tharaka-Nithi | 5,456 | 365,653 | 2,146 | 709 | 332 | 208 | 130 | 548 | 733 | 512 | 1,013 | 40 | |
| Embu | 4,105 | 2,881 | 550,686 | 3,407 | 3,166 | 611 | 489 | 2,053 | 4,585 | 2,450 | 2,886 | 36 | |
| Kitui | 826 | 466 | 875 | 1,076,175 | 5,531 | 3,553 | 139 | 301 | 308 | 491 | 1,086 | 41 | |
| Machakos | 2,216 | 492 | 2,098 | 11,811 | 1,254,627 | 21,100 | 926 | 1,675 | 1,006 | 3,512 | 6,324 | 104 | |
| Makueni | 584 | 126 | 421 | 5,777 | 16,045 | 910,664 | 116 | 294 | 200 | 481 | 1,079 | 28 | |
| Nyandarua | 848 | 120 | 515 | 220 | 540 | 193 | 549,849 | 7,582 | 785 | 5,306 | 11,091 | 113 | |
| Nyeri | 4,800 | 676 | 2,394 | 668 | 1,134 | 518 | 4,537 | 654,387 | 4,767 | 7,572 | 7,322 | 154 | |
| Kirinyaga | 2,624 | 965 | 6,429 | 918 | 1,098 | 371 | 1,035 | 5,466 | 547,913 | 4,762 | 4,151 | 41 | |
| Murang'a | 2,405 | 547 | 2,295 | 1,218 | 3,781 | 797 | 2,807 | 6,420 | 3,224 | 939,870 | 18,703 | 69 | |
| Kiambu | 9,425 | 2,153 | 6,481 | 8,210 | 12,124 | 4,410 | 12,988 | 14,620 | 6,550 | 33,934 | 2,013,643 | 616 | |
| Turkana | 292 | 66 | 95 | 101 | 70 | 45 | 69 | 112 | 44 | 67 | 205 | 885,788 | |
| West Pokot | 39 | 4 | 12 | 44 | 53 | 36 | 70 | 52 | 20 | 46 | 77 | 423 | |
| Samburu | 694 | 70 | 49 | 50 | 34 | 55 | 412 | 265 | 64 | 89 | 170 | 127 | |
| Trans Nzoia | 232 | 68 | 116 | 135 | 368 | 151 | 513 | 552 | 121 | 539 | 1,422 | 2,534 | |
| Uasin Gishu | 558 | 123 | 282 | 429 | 691 | 436 | 1,114 | 903 | 289 | 722 | 1,862 | 1,789 | |
| Elgeyo-Marakwet | 42 | 8 | 83 | 36 | 80 | 33 | 29 | 50 | 8 | 42 | 79 | 272 | |
| Nandi | 139 | 25 | 52 | 74 | 162 | 104 | 131 | 115 | 40 | 100 | 246 | 250 | |
| Baringo | 98 | 20 | 39 | 52 | 126 | 57 | 185 | 132 | 41 | 97 | 243 | 451 | |
| Laikipia | 4,249 | 310 | 543 | 303 | 430 | 208 | 4,890 | 11,727 | 949 | 1,852 | 3,026 | 505 | |
| Nakuru | 2,602 | 465 | 1,276 | 1,569 | 2,746 | 1,601 | 17,473 | 7,954 | 1,681 | 7,492 | 19,788 | 1,526 | |
| Narok | 665 | 111 | 129 | 273 | 463 | 443 | 1,539 | 673 | 193 | 623 | 1,912 | 157 | |
| Kajiado | 3,376 | 595 | 1,522 | 4,077 | 9,105 | 11,660 | 2,481 | 3,067 | 1,180 | 4,153 | 9,951 | 374 | |
| Kericho | 171 | 28 | 48 | 93 | 206 | 93 | 321 | 199 | 74 | 245 | 421 | 54 | |
| Bomet | 87 | 14 | 32 | 80 | 106 | 53 | 47 | 67 | 26 | 84 | 185 | 27 | |
| Kakamega | 373 | 60 | 170 | 367 | 636 | 330 | 244 | 319 | 163 | 340 | 1,255 | 280 | |
| Vihiga | 144 | 25 | 51 | 109 | 232 | 120 | 90 | 129 | 57 | 143 | 603 | 44 | |
| Bungoma | 269 | 47 | 118 | 232 | 471 | 222 | 226 | 276 | 112 | 267 | 791 | 305 | |
| Busia | 147 | 17 | 68 | 163 | 230 | 128 | 130 | 134 | 65 | 142 | 458 | 78 | |
| Siaya | 171 | 31 | 88 | 167 | 331 | 130 | 55 | 104 | 56 | 106 | 625 | 127 | |
| Kisumu | 279 | 58 | 130 | 369 | 551 | 357 | 106 | 223 | 106 | 204 | 768 | 183 | |
| Homabay | 114 | 17 | 68 | 142 | 237 | 90 | 28 | 70 | 45 | 72 | 323 | 55 | |
| Migori | 195 | 26 | 59 | 150 | 202 | 150 | 60 | 121 | 58 | 144 | 311 | 29 | |
| Kisii | 354 | 61 | 146 | 367 | 586 | 277 | 225 | 265 | 131 | 369 | 819 | 61 | |
| Nyamira | 156 | 36 | 49 | 119 | 264 | 118 | 119 | 87 | 62 | 111 | 323 | 18 | |
| Nairobi City | 15,719 | 2,709 | 8,190 | 34,421 | 44,364 | 29,410 | 10,025 | 19,534 | 7,122 | 34,375 | 37,618 | 2,066 | |

Appendix 6: Recent migrants by County of residence 1 year ago and current residence, cont'd

| County of residence at time of census | Usual residence 1 year ago | | | | | | | | | | | | |
|---------------------------------------|----------------------------|---------|-------------|-------------|-----------------|---------|---------|----------|-----------|-----------|---------|---------|--|
| | West Pokot | Samburu | Trans Nzoia | Uasin Gishu | Elgeyo-Marakwet | Nandi | Baringo | Laikipia | Nakuru | Narok | Kajiado | Kericho | |
| Total/County | 600,427 | 302,260 | 955,034 | 1,068,076 | 456,953 | 873,878 | 677,049 | 489,923 | 2,003,598 | 1,096,939 | 974,074 | 888,374 | |
| Mombasa | 100 | 439 | 1,379 | 1,576 | 249 | 685 | 646 | 418 | 3,245 | 379 | 908 | 676 | |
| Kwale | 25 | 68 | 258 | 202 | 49 | 107 | 109 | 112 | 476 | 49 | 309 | 90 | |
| Kilifi | 39 | 84 | 410 | 469 | 80 | 215 | 207 | 166 | 1,083 | 126 | 532 | 175 | |
| Tana River | 12 | 14 | 59 | 41 | 20 | 21 | 61 | 40 | 357 | 21 | 32 | 20 | |
| Lamu | 17 | 13 | 57 | 120 | 21 | 34 | 93 | 110 | 1,165 | 49 | 124 | 50 | |
| Taita-Taveta | 16 | 105 | 205 | 169 | 36 | 78 | 88 | 107 | 943 | 83 | 745 | 80 | |
| Garissa | 20 | 11 | 59 | 96 | 32 | 23 | 443 | 32 | 399 | 39 | 69 | 41 | |
| Wajir | 23 | 9 | 37 | 28 | 16 | 15 | 276 | 115 | 43 | 19 | 32 | 23 | |
| Mandera | 31 | 7 | 37 | 77 | 29 | 28 | 142 | 52 | 153 | 39 | 21 | 30 | |
| Marsabit | 3 | 309 | 28 | 39 | 14 | 16 | 60 | 143 | 133 | 17 | 37 | 14 | |
| Isiolo | 23 | 1,058 | 55 | 176 | 26 | 40 | 77 | 517 | 427 | 55 | 73 | 28 | |
| Meru | 49 | 459 | 422 | 479 | 112 | 199 | 268 | 2,792 | 1,833 | 285 | 561 | 255 | |
| Tharaka-Nithi | 12 | 59 | 89 | 109 | 35 | 40 | 55 | 231 | 380 | 72 | 186 | 56 | |
| Embu | 35 | 95 | 224 | 250 | 71 | 108 | 105 | 443 | 1,087 | 129 | 464 | 96 | |
| Kitui | 27 | 40 | 93 | 158 | 42 | 72 | 213 | 101 | 412 | 103 | 417 | 69 | |
| Machakos | 101 | 189 | 1,353 | 1,223 | 243 | 505 | 518 | 608 | 4,394 | 519 | 4,073 | 652 | |
| Makueni | 30 | 42 | 210 | 223 | 45 | 86 | 165 | 125 | 718 | 182 | 1,747 | 107 | |
| Nyandarua | 84 | 321 | 871 | 1,909 | 91 | 309 | 496 | 5,850 | 16,160 | 1,078 | 1,031 | 827 | |
| Nyeri | 94 | 318 | 665 | 997 | 138 | 301 | 304 | 8,484 | 5,756 | 514 | 1,172 | 416 | |
| Kirinyaga | 19 | 80 | 274 | 295 | 34 | 118 | 110 | 1,047 | 1,711 | 183 | 624 | 138 | |
| Murang'a | 60 | 133 | 740 | 689 | 74 | 295 | 219 | 1,248 | 4,538 | 472 | 1,585 | 336 | |
| Kiambu | 262 | 612 | 5,395 | 5,151 | 555 | 1,840 | 1,397 | 5,134 | 24,493 | 2,675 | 7,659 | 2,253 | |
| Turkana | 147 | 36 | 2,606 | 664 | 154 | 208 | 1,853 | 80 | 430 | 58 | 63 | 94 | |
| West Pokot | 590,674 | 14 | 2,231 | 482 | 590 | 182 | 467 | 26 | 178 | 44 | 22 | 82 | |
| Samburu | 82 | 291,113 | 63 | 142 | 21 | 28 | 1,929 | 681 | 661 | 63 | 65 | 57 | |
| Trans Nzoia | 4,000 | 45 | 883,623 | 5,614 | 3,335 | 2,403 | 1,168 | 289 | 2,525 | 362 | 292 | 797 | |
| Uasin Gishu | 1,096 | 167 | 10,972 | 993,136 | 16,372 | 20,244 | 5,977 | 1,009 | 5,984 | 1,268 | 515 | 3,039 | |
| Elgeyo-Marakwet | 404 | 9 | 1,943 | 3,943 | 425,440 | 957 | 3,102 | 68 | 495 | 105 | 53 | 249 | |
| Nandi | 174 | 32 | 2,116 | 8,521 | 1,035 | 820,365 | 860 | 230 | 1,353 | 480 | 121 | 4,373 | |
| Baringo | 105 | 59 | 755 | 1,592 | 1,390 | 681 | 630,277 | 321 | 3,146 | 257 | 87 | 945 | |
| Laikipia | 73 | 2,637 | 517 | 1,344 | 209 | 417 | 2,356 | 444,278 | 5,484 | 569 | 503 | 488 | |
| Nakuru | 431 | 1,110 | 5,335 | 8,255 | 1,382 | 3,304 | 12,212 | 6,255 | 1,844,302 | 9,845 | 2,432 | 15,584 | |
| Narok | 81 | 297 | 791 | 1,183 | 271 | 812 | 955 | 630 | 7,069 | 1,058,655 | 1,024 | 2,136 | |
| Kajiado | 220 | 414 | 2,758 | 2,068 | 551 | 1,175 | 1,197 | 1,268 | 5,640 | 1,842 | 934,811 | 1,104 | |
| Kericho | 77 | 46 | 584 | 1,640 | 387 | 2,628 | 899 | 212 | 6,780 | 2,387 | 123 | 831,472 | |
| Bomet | 25 | 12 | 220 | 588 | 171 | 672 | 436 | 88 | 4,491 | 5,672 | 58 | 9,434 | |
| Kakamega | 246 | 64 | 4,220 | 4,722 | 426 | 2,073 | 456 | 179 | 3,227 | 334 | 697 | 731 | |
| Vihiga | 50 | 16 | 940 | 1,145 | 104 | 2,289 | 142 | 77 | 1,272 | 147 | 216 | 350 | |
| Bungoma | 337 | 37 | 7,686 | 2,473 | 288 | 713 | 455 | 124 | 1,786 | 211 | 249 | 413 | |
| Busia | 68 | 30 | 1,087 | 937 | 160 | 273 | 221 | 87 | 1,219 | 191 | 166 | 274 | |
| Siaya | 68 | 52 | 809 | 1,226 | 103 | 322 | 219 | 82 | 2,362 | 220 | 338 | 557 | |
| Kisumu | 103 | 63 | 1,084 | 1,713 | 217 | 1,381 | 393 | 173 | 2,803 | 493 | 301 | 1,631 | |
| Homabay | 42 | 28 | 437 | 571 | 58 | 296 | 229 | 83 | 1,091 | 279 | 187 | 705 | |
| Migori | 28 | 24 | 268 | 368 | 64 | 230 | 237 | 60 | 862 | 498 | 142 | 385 | |
| Kisii | 49 | 29 | 724 | 780 | 110 | 429 | 220 | 155 | 2,555 | 1,388 | 401 | 1,219 | |
| Nyamira | 22 | 20 | 347 | 356 | 47 | 236 | 157 | 66 | 1,277 | 411 | 168 | 853 | |
| Nairobi City | 743 | 1,441 | 9,998 | 10,137 | 2,056 | 6,425 | 4,580 | 5,527 | 26,700 | 4,072 | 8,639 | 4,970 | |

Appendix 7: Recent migrants by County of residence 1 year ago and current residence, cont'd

| County of residence at time of census | Usual residence 1 year ago | | | | | | | | | | | |
|---------------------------------------|----------------------------|-----------|---------|-----------|---------|---------|-----------|-----------|-----------|-----------|---------|--------------|
| | Bomet | Kakamega | Vihiga | Bungoma | Busia | Siaya | Kisumu | Homabay | Migori | Kisii | Nyamira | Nairobi City |
| Total/County | 882,976 | 1,912,965 | 631,923 | 1,694,297 | 902,951 | 990,643 | 1,126,449 | 1,119,208 | 1,082,451 | 1,328,827 | 604,440 | 3,950,189 |
| Mombasa | 392 | 6,111 | 1,795 | 3,369 | 3,892 | 4,166 | 4,662 | 3,227 | 2,618 | 3,896 | 1,218 | 14,051 |
| Kwale | 48 | 928 | 313 | 519 | 372 | 362 | 523 | 371 | 297 | 597 | 179 | 1,842 |
| Kilifi | 117 | 1,605 | 476 | 822 | 659 | 684 | 981 | 658 | 481 | 1,272 | 323 | 3,762 |
| Tana River | 14 | 118 | 44 | 157 | 67 | 62 | 77 | 87 | 40 | 136 | 46 | 531 |
| Lamu | 24 | 130 | 47 | 97 | 104 | 62 | 123 | 77 | 66 | 143 | 30 | 634 |
| Taita-Taveta | 65 | 555 | 186 | 342 | 209 | 227 | 368 | 268 | 151 | 380 | 104 | 2,976 |
| Garissa | 145 | 205 | 35 | 335 | 151 | 68 | 184 | 236 | 115 | 220 | 50 | 565 |
| Wajir | 85 | 100 | 50 | 88 | 58 | 51 | 103 | 54 | 23 | 79 | 30 | 292 |
| Mandera | 33 | 109 | 18 | 220 | 65 | 44 | 55 | 42 | 31 | 79 | 19 | 301 |
| Marsabit | 19 | 78 | 30 | 60 | 39 | 86 | 96 | 89 | 81 | 49 | 17 | 572 |
| Isiolo | 44 | 112 | 37 | 59 | 67 | 71 | 96 | 107 | 65 | 104 | 29 | 1,073 |
| Meru | 201 | 715 | 187 | 721 | 259 | 326 | 463 | 321 | 232 | 755 | 257 | 7,828 |
| Tharaka-Nithi | 56 | 179 | 51 | 121 | 106 | 77 | 102 | 65 | 43 | 116 | 45 | 2,684 |
| Embu | 98 | 516 | 117 | 447 | 210 | 160 | 223 | 134 | 76 | 340 | 73 | 7,722 |
| Kitui | 87 | 356 | 111 | 258 | 190 | 169 | 237 | 119 | 115 | 336 | 84 | 7,898 |
| Machakos | 426 | 4,206 | 1,320 | 3,074 | 1,811 | 1,508 | 1,904 | 1,207 | 871 | 3,637 | 1,124 | 35,003 |
| Makueni | 80 | 667 | 177 | 451 | 230 | 199 | 246 | 185 | 123 | 310 | 117 | 10,913 |
| Nyandarua | 154 | 968 | 245 | 969 | 302 | 76 | 247 | 85 | 108 | 774 | 260 | 10,057 |
| Nyeri | 242 | 1,124 | 282 | 1,083 | 471 | 229 | 412 | 185 | 184 | 860 | 279 | 20,834 |
| Kirinyaga | 66 | 649 | 149 | 567 | 225 | 105 | 219 | 83 | 74 | 267 | 107 | 8,234 |
| Murang'a | 171 | 1,419 | 432 | 1,578 | 430 | 208 | 292 | 162 | 164 | 2,136 | 1,136 | 27,252 |
| Kiambu | 1,328 | 13,144 | 5,351 | 10,425 | 5,692 | 2,873 | 3,841 | 2,231 | 2,372 | 10,032 | 2,616 | 78,265 |
| Turkana | 124 | 525 | 137 | 910 | 297 | 178 | 311 | 154 | 54 | 193 | 60 | 677 |
| West Pokot | 71 | 415 | 95 | 994 | 137 | 103 | 150 | 59 | 29 | 211 | 55 | 231 |
| Samburu | 34 | 84 | 17 | 50 | 45 | 36 | 74 | 38 | 25 | 76 | 24 | 410 |
| Trans Nzoia | 380 | 7,638 | 2,839 | 23,032 | 1,830 | 800 | 1,092 | 393 | 243 | 3,242 | 1,328 | 4,888 |
| Uasin Gishu | 1,860 | 13,079 | 4,091 | 8,111 | 3,525 | 2,209 | 2,839 | 1,282 | 823 | 2,930 | 1,249 | 8,743 |
| Elgeyo-Marakwet | 211 | 675 | 168 | 1,238 | 219 | 105 | 122 | 74 | 50 | 132 | 45 | 508 |
| Nandi | 1,010 | 4,047 | 7,732 | 1,683 | 436 | 444 | 1,233 | 391 | 278 | 1,240 | 489 | 2,889 |
| Baringo | 473 | 664 | 264 | 891 | 287 | 210 | 279 | 130 | 108 | 303 | 99 | 1,066 |
| Laikipia | 262 | 723 | 208 | 630 | 269 | 182 | 277 | 146 | 188 | 738 | 253 | 6,083 |
| Nakuru | 16,502 | 10,145 | 4,060 | 7,755 | 4,390 | 4,334 | 4,772 | 2,692 | 2,185 | 14,187 | 4,998 | 25,110 |
| Narok | 12,467 | 975 | 416 | 751 | 487 | 430 | 798 | 941 | 2,182 | 10,382 | 1,830 | 2,252 |
| Kajiado | 1,055 | 6,641 | 2,638 | 5,367 | 2,867 | 2,334 | 2,723 | 2,052 | 1,578 | 6,748 | 2,231 | 26,225 |
| Kericho | 12,709 | 1,131 | 707 | 546 | 387 | 636 | 2,440 | 1,304 | 499 | 2,452 | 1,722 | 2,129 |
| Bomet | 824,111 | 339 | 189 | 264 | 159 | 203 | 470 | 459 | 310 | 1,409 | 982 | 1,195 |
| Kakamega | 324 | 1,727,079 | 15,652 | 14,940 | 7,018 | 4,875 | 4,156 | 1,198 | 900 | 1,744 | 487 | 14,049 |
| Vihiga | 126 | 8,417 | 538,784 | 1,674 | 1,139 | 1,519 | 2,798 | 453 | 533 | 633 | 143 | 8,533 |
| Bungoma | 378 | 17,617 | 3,671 | 1,563,324 | 6,423 | 1,129 | 1,654 | 469 | 388 | 1,127 | 278 | 5,632 |
| Busia | 137 | 9,002 | 1,842 | 6,586 | 819,406 | 5,865 | 2,171 | 649 | 376 | 587 | 148 | 5,672 |
| Siaya | 197 | 6,962 | 2,558 | 1,924 | 7,032 | 890,959 | 18,305 | 5,547 | 2,485 | 853 | 137 | 14,525 |
| Kisumu | 481 | 7,336 | 4,927 | 2,618 | 3,688 | 23,554 | 1,011,602 | 19,637 | 5,760 | 3,216 | 950 | 13,685 |
| Homabay | 234 | 2,112 | 850 | 1,003 | 1,076 | 7,014 | 19,416 | 1,027,169 | 18,720 | 3,166 | 849 | 6,808 |
| Migori | 195 | 1,862 | 1,823 | 702 | 605 | 3,254 | 6,568 | 22,745 | 1,021,106 | 5,872 | 966 | 4,523 |
| Kisii | 560 | 1,381 | 588 | 868 | 537 | 682 | 1,907 | 2,594 | 2,663 | 1,188,393 | 9,772 | 9,087 |
| Nyamira | 487 | 583 | 247 | 399 | 189 | 210 | 746 | 841 | 537 | 19,662 | 557,489 | 3,581 |
| Nairobi City | 4,693 | 49,539 | 25,967 | 22,275 | 24,894 | 27,565 | 24,092 | 17,798 | 12,101 | 32,813 | 9,713 | 3,538,399 |

Appendix 8: Trends of Recent in Migration, Outmigration and Net migration by Sex, County and Region

| | Total | | | | | | Male | | | | | | Female | | | | | |
|--------------|------------------|------------------|------------------|------------------|----------|----------|----------------|------------------|----------------|------------------|----------|----------|----------------|------------------|----------------|------------------|----------|----------|
| | In | | Out | | Net | | In | | Out | | Net | | In | | Out | | Net | |
| | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 | 2009 | 2019 |
| KENYA | 1,270,890 | 3,397,649 | 1,270,890 | 3,397,649 | - | - | 621,638 | 1,545,662 | 621,638 | 1,545,662 | - | - | 649,252 | 1,851,821 | 649,252 | 1,851,821 | - | - |
| Mombasa | 71,036 | 170,309 | 39,678 | 96,689 | 31,358 | 73,620 | 33,674 | 81,193 | 20,085 | 47,451 | 13,589 | 33,742 | 37,362 | 89,110 | 19,593 | 49,235 | 17,769 | 39,875 |
| Kwale | 9,216 | 30,591 | 14,664 | 39,669 | -5,448 | -9,078 | 4,822 | 14,168 | 7,182 | 18,918 | -2,360 | -4,750 | 4,394 | 16,422 | 7,482 | 20,750 | -3,088 | -4,328 |
| Kilifi | 17,792 | 51,685 | 20,489 | 59,453 | -2,697 | -7,768 | 8,618 | 24,302 | 9,929 | 28,687 | -1,311 | -4,385 | 9,174 | 27,383 | 10,560 | 30,760 | -1,386 | -3,377 |
| Tana River | 4,911 | 11,494 | 4,519 | 12,039 | 392 | -545 | 2,898 | 6,362 | 2,595 | 6,353 | 303 | 9 | 2,013 | 5,131 | 1,924 | 5,685 | 89 | -554 |
| Lamu | 5,373 | 16,035 | 3,231 | 8,952 | 2,142 | 7,083 | 3,364 | 9,926 | 1,723 | 4,306 | 1,641 | 5,620 | 2,009 | 6,108 | 1,508 | 4,644 | 501 | 1,464 |
| TaitaTaveta | 9,238 | 26,567 | 9,144 | 27,308 | 94 | -741 | 4,867 | 13,321 | 4,229 | 11,926 | 638 | 1,395 | 4,371 | 13,246 | 4,915 | 15,382 | -544 | -2,136 |
| Garissa | 5,688 | 9,808 | 7,811 | 20,804 | -2,123 | -10,996 | 3,418 | 5,797 | 4,604 | 10,775 | -1,186 | -4,978 | 2,270 | 4,010 | 3,207 | 10,026 | -937 | -6,016 |
| Wajir | 2,142 | 4,999 | 4,092 | 9,915 | -1,950 | -4,916 | 1,472 | 3,183 | 2,387 | 5,244 | -915 | -2,061 | 670 | 1,814 | 1,705 | 4,670 | -1,035 | -2,856 |
| Mandera | 1,020 | 3,437 | 3,660 | 16,185 | -2,640 | -12,748 | 720 | 2,518 | 2,107 | 8,767 | -1,387 | -6,249 | 300 | 919 | 1,553 | 7,418 | -1,253 | -6,499 |
| Marsabit | 3,181 | 4,827 | 6,695 | 11,742 | -3,514 | -6,915 | 2,120 | 2,982 | 4,172 | 6,338 | -2,052 | -3,356 | 1,061 | 1,844 | 2,523 | 5,404 | -1,462 | -3,560 |
| Isiolo | 4,734 | 14,080 | 5,803 | 13,278 | -1,069 | 802 | 2,937 | 7,580 | 3,555 | 7,145 | -618 | 435 | 1,797 | 6,499 | 2,248 | 6,132 | -451 | 367 |
| Meru | 14,117 | 48,884 | 13,044 | 76,366 | 1,073 | -27,482 | 7,926 | 25,496 | 6,291 | 32,461 | 1,635 | -6,965 | 6,191 | 23,387 | 6,753 | 43,902 | -562 | -20,515 |
| Tharaka/Ni | 4,633 | 17,711 | 14,552 | 23,259 | -9,919 | -5,548 | 2,417 | 7,608 | 6,721 | 11,235 | -4,304 | -3,627 | 2,216 | 10,103 | 7,831 | 12,024 | -5,615 | -1,921 |
| Embu | 8,526 | 42,085 | 14,688 | 41,900 | -6,162 | 185 | 4,485 | 19,862 | 6,844 | 17,773 | -2,359 | 2,089 | 4,041 | 22,218 | 7,844 | 24,126 | -3,803 | -1,908 |
| Kitui | 5,218 | 30,620 | 46,002 | 102,671 | -40,784 | -72,051 | 2,754 | 14,665 | 22,253 | 49,042 | -19,499 | -34,377 | 2,464 | 15,954 | 23,749 | 53,624 | -21,285 | -37,670 |
| Machakos | 31,321 | 128,767 | 41,485 | 116,332 | -10,164 | 12,435 | 16,582 | 60,909 | 19,135 | 52,288 | -2,553 | 8,621 | 14,739 | 67,855 | 22,350 | 64,039 | -7,611 | 3,816 |
| Makueni | 7,930 | 48,203 | 31,985 | 91,667 | -24,055 | -43,464 | 4,159 | 22,603 | 15,231 | 41,484 | -11,072 | -18,881 | 3,771 | 25,599 | 16,754 | 50,182 | -12,983 | -24,583 |
| Nyandarua | 26,357 | 71,792 | 23,057 | 65,801 | 3,300 | 5,991 | 12,892 | 32,962 | 10,918 | 29,019 | 1,974 | 3,943 | 13,465 | 38,828 | 12,139 | 36,778 | 1,326 | 2,050 |
| Nyeri | 24,838 | 82,952 | 33,451 | 91,858 | -8,613 | -8,906 | 13,268 | 38,693 | 15,970 | 41,057 | -2,702 | -2,364 | 11,570 | 44,254 | 17,481 | 50,799 | -5,911 | -6,545 |
| Kirinyaga | 9,979 | 45,451 | 11,595 | 38,276 | -1,616 | 7,175 | 4,904 | 20,192 | 5,592 | 16,221 | -688 | 3,971 | 5,075 | 25,258 | 6,003 | 22,055 | -928 | 3,203 |
| Murang'a | 65,971 | 90,662 | 32,095 | 116,733 | 33,876 | -26,071 | 32,820 | 40,810 | 14,410 | 50,152 | 18,410 | -9,342 | 33,151 | 49,846 | 17,685 | 66,575 | 15,466 | -16,729 |
| Kiambu | 95,710 | 319,153 | 97,541 | 144,977 | -1,831 | 174,176 | 45,934 | 143,279 | 47,593 | 65,037 | -1,659 | 78,242 | 49,776 | 175,840 | 49,948 | 79,932 | -172 | 95,908 |
| Turkana | 4,070 | 11,910 | 4,694 | 13,838 | -624 | -1,928 | 2,311 | 6,709 | 2,906 | 7,617 | -595 | -908 | 1,759 | 5,201 | 1,788 | 6,221 | -29 | -1,020 |
| West Pokot | 2,193 | 7,969 | 3,487 | 9,753 | -1,294 | -1,784 | 1,284 | 3,854 | 1,955 | 4,737 | -671 | -883 | 909 | 4,115 | 1,532 | 5,016 | -623 | -901 |
| Samburu | 3,722 | 7,884 | 4,365 | 11,147 | -643 | -3,263 | 2,507 | 4,513 | 2,791 | 6,144 | -284 | -1,631 | 1,215 | 3,371 | 1,574 | 5,001 | -359 | -1,630 |
| Trans Nzoia | 22,624 | 76,823 | 21,361 | 71,411 | 1,263 | 5,412 | 11,018 | 34,736 | 10,518 | 32,151 | 500 | 2,585 | 11,606 | 42,084 | 10,843 | 39,256 | 763 | 2,828 |
| UasinGishu | 47,733 | 130,279 | 27,440 | 74,940 | 20,293 | 55,339 | 24,387 | 61,349 | 13,742 | 34,572 | 10,645 | 26,777 | 23,346 | 68,925 | 13,698 | 40,365 | 9,648 | 28,560 |
| Elkeyo/Mar | 4,715 | 15,795 | 9,476 | 31,513 | -4,761 | -15,718 | 2,607 | 7,457 | 4,529 | 14,249 | -1,922 | -6,792 | 2,108 | 8,338 | 4,947 | 17,263 | -2,839 | -8,925 |
| Nandi | 13,881 | 43,239 | 15,958 | 53,513 | -2,077 | -10,274 | 7,143 | 19,015 | 7,722 | 23,312 | -579 | -4,297 | 6,738 | 24,222 | 8,236 | 30,197 | -1,498 | -5,975 |
| Baringo | 5,763 | 16,104 | 10,951 | 46,772 | -5,188 | -30,668 | 3,121 | 7,912 | 5,598 | 22,091 | -2,477 | -14,179 | 2,642 | 8,191 | 5,353 | 24,678 | -2,711 | -16,487 |
| Laikipia | 20,053 | 56,085 | 18,195 | 45,645 | 1,858 | 10,440 | 10,160 | 27,332 | 9,901 | 21,620 | 259 | 5,912 | 9,893 | 28,552 | 8,294 | 24,024 | 1,599 | 4,528 |
| Nakuru | 78,356 | 241,350 | 67,245 | 159,296 | 11,111 | 82,054 | 40,704 | 116,410 | 34,497 | 76,011 | 6,207 | 40,399 | 37,652 | 124,929 | 32,748 | 83,280 | 4,904 | 41,649 |
| Narok | 19,685 | 57,322 | 11,618 | 38,284 | 8,067 | 19,238 | 10,793 | 28,154 | 6,280 | 19,537 | 4,513 | 8,617 | 8,892 | 29,366 | 5,338 | 18,747 | 3,554 | 10,619 |
| Kajiado | 47,136 | 139,996 | 13,483 | 39,263 | 33,653 | 100,733 | 23,178 | 67,791 | 7,697 | 19,919 | 15,481 | 47,872 | 23,958 | 72,199 | 5,786 | 19,342 | 18,172 | 52,857 |
| Kericho | 14,974 | 45,104 | 13,640 | 56,902 | 1,334 | -11,798 | 7,625 | 20,011 | 6,678 | 25,595 | 947 | -5,584 | 7,349 | 25,089 | 6,962 | 31,306 | 387 | -6,217 |
| Bomet | 9,685 | 29,014 | 14,514 | 58,865 | -4,829 | -29,851 | 4,847 | 12,184 | 7,457 | 27,611 | -2,610 | -15,427 | 4,838 | 16,830 | 7,057 | 31,250 | -2,219 | -14,420 |
| Kakamega | 28,253 | 90,650 | 49,134 | 185,886 | -20,881 | -95,236 | 12,932 | 34,487 | 22,633 | 81,427 | -9,701 | -46,940 | 15,321 | 56,160 | 26,501 | 104,444 | -11,180 | -48,284 |
| Vihiga | 8,684 | 35,893 | 26,958 | 93,139 | -18,274 | -57,246 | 3,917 | 13,803 | 12,450 | 39,683 | -8,533 | -25,880 | 4,767 | 22,089 | 14,508 | 53,451 | -9,741 | -31,362 |
| Bungoma | 17,750 | 58,801 | 30,192 | 130,973 | -12,442 | -72,172 | 8,439 | 22,945 | 14,568 | 58,983 | -6,129 | -36,038 | 9,311 | 35,855 | 15,624 | 71,973 | -6,313 | -36,118 |
| Busia | 13,271 | 41,736 | 21,877 | 83,545 | -8,606 | -41,809 | 6,040 | 16,218 | 10,120 | 35,803 | -4,080 | -19,585 | 7,231 | 25,518 | 11,757 | 47,738 | -4,526 | -22,220 |
| Siaya | 24,622 | 72,861 | 31,922 | 99,684 | -7,300 | -26,823 | 11,430 | 30,107 | 14,103 | 40,415 | -2,673 | -10,308 | 13,192 | 42,752 | 17,819 | 59,266 | -4,627 | -16,514 |
| Kisumu | 40,683 | 103,774 | 35,299 | 114,847 | 5,384 | -11,073 | 18,718 | 42,440 | 16,624 | 46,765 | 2,094 | -4,325 | 21,965 | 61,330 | 18,675 | 68,079 | 3,290 | -6,749 |
| Homa Bay | 21,333 | 69,267 | 26,075 | 92,039 | -4,742 | -22,772 | 9,579 | 22,848 | 11,787 | 35,949 | -2,208 | -13,101 | 11,754 | 46,416 | 14,288 | 56,083 | -2,534 | -9,667 |
| Migori | 15,232 | 55,664 | 18,655 | 61,345 | -3,423 | -5,681 | 6,683 | 18,751 | 8,576 | 25,191 | -1,893 | -6,440 | 8,549 | 36,911 | 10,079 | 36,153 | -1,530 | 758 |
| Kisii | 13,407 | 44,260 | 146,885 | 140,434 | -133,478 | -96,174 | 6,747 | 18,864 | 70,742 | 64,994 | -63,995 | -46,130 | 6,660 | 25,393 | 76,143 | 75,434 | -69,483 | -50,041 |
| Nyamira | 116,446 | 33,740 | 14,530 | 46,951 | 101,916 | -13,211 | 55,093 | 12,961 | 7,396 | 21,545 | 47,697 | -8,584 | 61,353 | 20,779 | 7,134 | 25,403 | 54,219 | -4,624 |
| Nairobi | 247,688 | 641,817 | 153,655 | 411,790 | 94,033 | 230,027 | 113,324 | 296,200 | 76,842 | 198,062 | 36,482 | 98,138 | 134,364 | 345,578 | 76,813 | 213,709 | 57,551 | 131,869 |

Appendix 9: Contributors to the 2019 Kenya Population and Housing Census Monographs

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