POPULATION DYNAMICS AND SOCIAL POLICY

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AIDS	Acquired Immunodeficiency Syndrome
ART	Anti-Retro Viral Therapy
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Survey
ESRF	Economic and Social Research Foundation, Tanzania
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
IMR	Infant Mortality Rate
MDG	Millennium Development Goals
MICS	Multi cluster indicator Survey
MKUKUTA	Mkakati wa Kukuza Uchumina Kupunguza Umaskini Tanzania (The National Strategy for Growth and Reduction of Poverty)
MKUZA	Mkakati wa Kukuza Uchumi na Kuondoa Umaskini Zanzibar
NBS	National Bureau of Statistics
ILFS	Integrated Labour Force Survey
ILO	International Labour Organization
IOM	International Organization for Migration
OCGS	Office of Chief Government Statistician
PoA	Plan of Action
POPC	President's Office Planning Commission
TACAIDS	Tanzania Commission for AIDS
TDHS	Tanzania Demographic and Health Survey
TDV	Tanzania Development Vision
TFR	Total Fertility Rate
THDR 2014	Tanzania Human Development Report 2014
THMIS	Tanzania HIV/AIDS and Malaria Indicator Survey
TRCHS	Tanzania Reproductive and Child Health Survey 1999
UN	United Nations
UNDESA	United Nations, Department of Economic and Social Affairs
UNECA	United Nations Economic Commission for Africa
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Emergency Fund
USAID	United States Agency for International Development
URT	United Republic of Tanzania
WHO	World Health Organization

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ABSTRACT

This background paper provides an update on the status of population dynamics and its implication for social policy.

The population of the United Republic of Tanzania is currently estimated to be about 47.4 million and growing at a rate of 2.7 per cent per annum. The continued high population growth rate has for the past 50 years resulted in a youthful population. The population dynamics of Tanzania is marked by a slow pace of fertility decline with wide regional differentials. Almost half of the country's 30 regions have pre-transition fertility levels of 6 or more births per woman. The main factors behind the slow pace of fertility decline include the unchanging high fertility among those in a low socioeconomic class and high adolescent birth rates. The regions with high fertility have a high unmet need for family planning, high demand for large family sizes, and low levels of education, especially among women. Mortality has declined at all ages and by geography. Substantial progress has been made in bridging the gap in childhood mortality between the poor and the wealthiest groups. However, urban areas continue to have higher mortality at all ages compared to rural areas.

Data and information relating to migration creates a challenge in providing evidence on the causes and consequences of migration. Notwithstanding, in-migration has accounted for around half the increase in urban population and slightly over 70 per cent of the increase in population of Dar es Salaam between 1978 and 2012. Policy documents suggest that the perceived or actual lack of opportunities in rural areas continues to drive young Tanzanians to move to urban centres.

Given the present state of population dynamics, policy options need to promote access to reproductive health to accelerate decline in fertility, and to sustain the progress that has been made in the implementation of health sector strategic plans, including research on causes of death and geospatial differences in risk of death. To realize the potential demographic bonus, policy responses should i) promote employment-oriented economic growth and ii) strengthen the employability of young people. Although population dynamics may pose challenges, it can also provide important opportunities for more sustainable development pathways. It is recommended that the current population policies (national and Zanzibar) should be reviewed and an implementation strategy developed. In this regard, the general thesis should recognize that a population policy is nothing less than a social policy at large.

EXECUTIVE SUMMARY

Improvement in the well-being of current and future generations is not possible without economic development – an increase in the production of goods and services. Social, economic and environmental development affect and are affected by population dynamics, which includes changes in size, structure, and spatial distribution. Although the developmental challenges of population dynamics have been acknowledged, under the right circumstances, changes in population dynamics, structure and spatial distribution also provide important opportunities for sustainable development (World Bank, 2016).

This background paper builds on the conclusions of the Tanzania Human Development Report of 2014 in relation to opportunities for and potential constraints to the economic transformation of United Republic of Tanzania (ESRF, 2015). First, the pace of growth of the national population at 2.7% per annum, which translates to total of about 1.2 million births annually (ESRF, 2015, 18–19), may be a potential threat to social and economic development. Second, changes in the age structure of the population as a result of population dynamics (in particular, the youth bulge) may offer a window of opportunity for improved economic development (ESRF, 2015, 22). Third, changes in the spatial distribution of the population as a result of rural-to-urban migration have implications for the urban transition, as rapid urbanization presents a challenge for economic transformation (Agwanda and Amani, 2014; ESRF, 2015).

One of the fundamental features of economic transformation is the demographic transition from a high to low population growth rate. In the process urbanization, which occurs as part of the demographic transition, provides opportunity for social and economic transformation. This background paper provides an update on current population dynamics and their implications for social policy over the horizon for socioeconomic transformation.

The population of the United Republic of Tanzania is currently estimated to be about 47.4 million and growing at a rate of 2.7% per annum. About 30% of the population live in urban areas, but in Zanzibar nearly half of the population live in urban areas. Zanzibar is becoming highly urbanized, with a population density of 530 persons per square kilometre. For the past 50 years, the population has remained youthful. The continued high population growth rate is mainly due to rapidly declining death rates, continued high birth rates and negligible international migration.

A fundamental feature of population growth trends at the national level is the slow pace of fertility decline, with wide regional differentials. Nearly half of the 30 regions have pre-transition fertility levels of six or more births per woman. The unchanging fertility among the poor and those with no or low education, and high adolescent birth rates are the main factors behind the slow pace of decline. The THDR 2017 theme, 'Social Policy in the Context of Economic Transformation', recognizes the need to put in place a policy framework that nurtures the possibility of harnessing the demographic dividend; however, the demographic dividend cannot be attained unless the rate of fertility decline is faster than the present

rate. As indicated in the THDR 2014 (ESRF, 2015, 20), a right mix of policies must be in place to fully and positively exploit the demographic window of opportunity. Such policies must aim at further accelerating fertility decline. The regions with high fertility have high unmet need for family planning, high demand for large family sizes, low levels of education, especially among women, and in some cases low urbanization. The use of modern methods of contraception and by extension increased access to reproductive health is likely to accelerate decline in fertility. Further, policies need to create demand for smaller family size. This demand is largely determined by education, urbanization and mass media exposure. The demand for children and use of family planning services are related to social norms that influence fertility decision making. Critical factors in influencing social norms are: (i) the role of political leadership in discussing fertility and family size and (ii) use of media messages to alter behaviour. Urbanization is thought to have not only direct impact on fertility behaviour but also important influence on other major social and economic determinants of fertility change.

For economic transformation to take place and improve human well-being, the health needs of a population must be taken into account because health yields economic dividends. There has been a major decrease in mortality, which represents significant progress in regard to human well-being but which has impact on population growth. Progress in bridging the gap in childhood mortality between the poorest and wealthiest groups and between regions has been made. However, a notable feature is the higher mortality at all ages in urban areas compared to rural areas whereas the utilization of health services is much higher in urban areas compared to rural areas.

The improved life expectancy has been attributed to the progress that has been made in the implementation of health sector strategic plans. The key to implementation of the strategies are programmes on HIV/AIDS, tuberculosis and malaria, and sexual and reproductive health and rights, including strategies on the campaign to reduce maternal mortality. Most significant is the reduction in childhood mortality and new HIV infections in the last two decades. The achievements include the scaling up of integrated HIV services, an increased number of pregnant women being tested for HIV and AIDS and higher survival rates of ART patients, and increased use of insecticide-treated nets, among others. Despite these improvements, challenges remain with respect to further reduction of mortality and these include new researches on major causes of death and geospatial differences in risk of death. More importantly, further reductions in childhood mortality will require substantial declines in neonatal mortality.

While fertility is lower in urban compared to rural areas and urban residents enjoy better basic services than rural residents, evidence from recent data points to greater urban penalty in terms of survival at every age. The existence of the urban penalty requires investments in social policy to address the slow pace of mortality decline in urban areas and to improve existing infrastructure in service of the rapidly increasing urban population.

While presenting many opportunities, migration remains a considerable governance challenge at all levels. The paucity of migration data and information creates a challenge in determining the causes and consequences of migration. Tanzania, like many other countries in sub-Saharan Africa, does not have sufficient data on the determinants and consequences of migration, which is important for evidence-informed policy decisions. Notwithstanding

the lack of data, internal migration is also a demographic factor that significantly influences variations in spatial population growth rates and unemployment rates between rural and urban areas in the country. In-migration has accounted for around half the increase in the urban population between 1978 and 2012. Over 70% of the increase in population of Dar es Salaam, Tanzania's largest city, between 1978 and 2012 was due to in-migration. The perceived or actual lack of opportunities in rural areas may be the main push factor for young Tanzanians to move to urban centres, but to establish this fact requires tabulation of migration by age and sex, which was not done in the 2012 Population and Housing Census analytical volumes. Low agricultural productivity, shortage of basic needs and lack of employment and modern amenities in rural areas may have forced young people to migrate to urban areas in the hope of meeting their expectations. Although rural–urban migration is still important in the country it does not occur in all regions.

Population dynamics cover a range of demographic issues (high fertility and population growth, migration and urbanization) and are inseparably linked with a wide range of social and economic challenges (health, education, gender equality, women's empowerment, employment and social protection). Kohler and Behrman (2014) suggest that policy measures that ensure reduction in infant and child mortality; universal health coverage including access to sexual and reproductive health care information and services; elimination of child marriage; and strengthening of female labour force participation have either phenomenal or good benefit-cost ratios. Further, "population quality", in particular health and education, is an important aspect of population dynamics that is essential for addressing the challenges of future population changes and for realizing the benefits of population dynamics for social, economic and environmental development. The rationale for Kohler and Behrman's (2014) priorities with regard to high fertility and population growth is based on strengthened evidence that reduced fertility in high-fertility contexts results in improved child outcomes (better child health and more schooling), reduced maternal mortality and increased female human capital, and more rapid economic development. A key pathway to reduced fertility is the implementation of voluntary family planning programmes. However, in the process of the demographic transition, economic development, urbanization, increased education and labour force participation (particularly for women) are important drivers of fertility change (Kohler and Behrman, 2014). Herrmann (2014) suggests that population dynamics would need to be addressed in two principle ways: through policies that shape demographic trends through their determinants (health, education, empowerment, employment, social protection) and through planning for demographic changes that will unfold over the next few years, but these must be seen from a rights perspective.

The labour market provides an important link between population dynamics and economic and social development. The potential demographic bonus can only be seized if the country can create sufficient and sufficiently productive and remunerative employment opportunities for its labour force. The challenge lies in policy responses that i) promote employment-oriented economic growth and ii) strengthen the employability of people, which requires human capital investments and enhancement of social protections systems, particularly for youth. Young people (ages 15–24 years) experience the highest underemployment rate of 14% among the employed population. The 2014 ILFS revealed that eight out of every ten youths (82%) are in vulnerable employment. The proportion of youth in vulnerable employment is highest in rural areas (94%). Young people account for more than three-quarters of discouraged job seekers. Child labour, which perpetuates high fertility, is still

highly prevalent, especially in rural areas. These challenges require appropriate policy interventions aiming at skills development and human resource absorption strategy.

A number of policy documents including Vision 2025, MKUKUTA, the National Employment Policy, the National Youth Development Policy and Five-Year Development Plans have acknowledged the challenge of youth unemployment and its associated constraints. Two major factors will determine future economic growth prospects: growth in the working-age share of the population and the ability to create enough jobs to absorb the increasing labour force, including appropriate labour market polices. The capacity of an economy to cope with changes in population size and age structure is most directly influenced by the growth of the economy and the rate of employment creation. These issues further reinforce policy options, which must address high fertility if the labour market shall accommodate new entrants in the future.

In conclusion, studies suggest that although population dynamics may pose challenges, it can provide important opportunities for more sustainable development pathways. For Tanzania, a fall in fertility levels and slower population growth can enable it to reap the demographic dividend resulting from demographic transitions in order to jumpstart economic transformation. Migration can be an important enabler of social and economic transformation through integrated rural–urban planning and strengthening of urban–rural linkages. But the pace of urbanization can be reduced through policies that cause reductions in fertility rates in rural areas. The social policies that target demographic change have important links across sectors, namely health, education, fertility, work, production and trade. For these policies to produce their full impacts, and for behaviour and institutions to change takes time.

Based on the conclusions, it is recommended that the current National Population Policy (national and Zanzibar) be reviewed and an implementation strategy developed.

1. BACKGROUND

Improvement in the well-being of current and future generations is not possible without economic development – an increase in the production of goods and services (Royal Society, 2012). On the other hand economic development cannot be decoupled from environmental change, including the transformation, degradation and depletion of natural resources (Royal Society, 2012; UNDESA, 2012). There is now a wide consensus that whatever shapes the new development agenda must ensure a harmonious balance between social, economic and environmental development and also emphasize both sustainable consumption and sustainable production (Royal Society, 2012; UNDESA, 2012). Population dynamics have a critical influence on each of these three pillars (social, economic and environmental development) and consideration of them needs to be central to any future development agenda (Royal Society, 2012; World Bank, 2016).

Population dynamics, including changes in the size, structure, and spatial distribution, can have direct and indirect implications for economic development, labour markets, income distribution, poverty and social protection, and expansion of the care-giving sector (UNDESA, 2012; World Bank, 2016). Population dynamics also influence environmental sustainability, climate change, and water, and food and energy security (UNDESA, 2012; Royal Society, 2012). These in turn affect the country's ability and capacity to ensure universal access to essential services such as health and education, among others (UNDESA, 2012). Efforts to reduce poverty, raise living standards, and promote the well-being of a large and growing population places pressure on all natural resources, which include land, forests, water, oceans and the atmosphere (UNDESA, 2012). To be effective, policy responses aimed at promoting sustainable development pathways need to consider the challenges associated with this demographic change (UNDESA, 2012; UNECA, 2013; World Bank, 2016).

Although challenges of population dynamics have been acknowledged, under the right circumstances, changes in population dynamics, structure and spatial distribution also provide important opportunities for sustainable development (World Bank, 2016). Recent studies on age-structural transitions show that rapid and marked decline in fertility levels may temporarily lead to an increase in the number of people of working age relative to the number who are formally below or above working age, thereby creating a demographic dividend (World Bank, 2016). An increase in the number of metropolitan regions, cities and towns that implement policies for sustainable urban planning to respond effectively to the growth of urban populations can produce economic transformation (UNDESA, 2012). Recent international meetings and agreements indicate that irrespective of the challenges or benefits that may accrue, population dynamics must be addressed in the post-2015 development agenda because the main challenges of the twenty-first century are shaped by population trends (UNDESA, 2012; World Bank, 2016).

This background paper builds on the conclusions of the Tanzania Human Development Report of 2014 in relation to opportunities for and potential constraints to the economic transformation of United Republic of Tanzania (ESRF, 2015). First, the pace of national

population growth at 2.7% per annum, which translates to a total of about 1.2 million births annually, may constrain the country's ability to make investments in the productive sector,[1] according to the National Population Policy of 2006 (United Republic of Tanzania, 2006). Second, changes in the population's age structure as a result of population dynamics (in particular, the youth bulge) may offer a window of opportunity for improved economic development (ESRF, 2015, 22). Third, changes in the population's spatial distribution as a result of rural-to-urban migration have implications for the urban transition, as rapid urbanization presents a challenge for economic transformation (Agwanda and Amani, 2014; ESRF, 2015).

One of the fundamental features of economic transformation is the demographic transition from a high to low population growth rate. In the process, urbanization, which occurs as part of the demographic transition, provides opportunity for social and economic transformation. This background paper provides an update on current population dynamics and their implication for social policy related to socioeconomic transformation**.**

The overarching rationale of this paper rests on highlighting possible impacts of demographic change on the opportunities for improving human development through a transformation in the economy and social provisioning. Ever since the Rio Declaration in 1992, the human being has been placed at the centre of development and therefore policies and actions are expected to promote more sustainable patterns of production and consumption in order to promote human living standards in tandem with nature.

[1] This is essentially Coale and Hoover's (1958) hypothesis.

2. TRENDS POPULATION SIZE, GROWTH AND STRUCTURE

2.1 Introduction

Changes in population growth rates, age structures and spatial distribution are closely linked to national developmental challenges and their solutions (UNDESA, 2012). First, rapid population growth can magnify development challenges as the increase in the number of people requires more jobs, water, food and energy, clothing, housing and infrastructure, health and education. Policy responses aimed at promoting sustainable development need to consider the challenges associated with this demographic phenomenon, and therefore actions taken in the coming years will be crucial in shaping future population trends (UNDESA, 2012). This section presents information on the current status of population size, growth and structure and its implications for social policy.

2.2 Population Size, Growth and Density

Table 2.1 provides a summary of population size and changes and indicates unprecedented rapid population growth since the first post-independence census that was taken in 1967.[2] The population of the United Republic of Tanzania is currently estimated to be about 47.4 million.[3] An indication of the current population size and changes is reflected in the population density. Population density refers to the total population size divided by surface area and is often expressed as the population per square kilometre. The indicator measures the concentration of the human population in a reference space.

The population density in the republic is above that of Africa, which currently stands at 34 persons per square kilometre. Population density may not seem to be a problem for Tanzania Mainland, but it is critical for Tanzania Zanzibar given its size and growth rate and consequent pressure on resources.

Population density masks other concerns such as the potential of the land to provide resources for consumption. The resources required to meet basic needs such as food, land and water have important linkages with population change. As population increases, so does the demand for water. Food production depends on two critical inputs: cropland and water availability. Forest resources and their products are essential for human well-being because they contribute to development through preserving biodiversity, purifying water and air, providing raw materials, and offering opportunities for recreation. The major source of energy, particularly in rural areas, is wood (United Republic of Tanzania, 2015b), and as energy use increases so too does the demand for wood.

[2] A description of trends and implication on population momentum can be found in ESRF Discussion Paper Number 61 (Agwanda and Amani, 2014).

[3] Tanzania National Bureau of Statistics, http://www.nbs.go.tz, accessed 10.03.2016.

Table 2.1: Trends in population size, growth and density, 1967-2012[4]

Tanzania	Census year				
	1967	1978	1988	2002	2012
Total population	12,313,469.0	17,512,610.0	23,095,882.0	34,443,603.0	44,928,923.0
Intercensal increase		5,199,141.0	5,583,272.0	11,347,721.0	10,485,320.0
Size relative to 1967 (1967=100)		100.0	142.0	188.0	280.0
Average annual growth rate (% p.a.)		3.2	2.77.0	2.85	2.66
Doubling time (years)		21.7	25.0	24.3	26.1
Population density (persons per sq km)	14.0	20.0	26.0	39.0	51.0
Tanzania Mainland					
Total population	11,958,654.0	17,036,499.0	22,455,207.0	33,461,849.0	43,625,354.0
Intercensal increase		5,077,845.0	5,418,708.0	11,006,642.0	10,163,505.0
Size relative to 1967 (1967=100)		100.0	142.0	188.0	280.0
Average annual growth rate (% p.a.)		3.22	2.76	2.85	2.65
Doubling time (years)		21.5	25.1	24.3	26.1
Population density (persons per sq km)	14.0	19.0	25.0	38.0	50.0
Zanzibar					
Total population	354,815.0	476,111.0	640,675.0	981,754.0	1,303,569.0
Intercensal increase		121,296.0	164,564.0	341,079.0	321,815.0
Size relative to 1967 (1967=100)		100.0	134.0	181.0	277.0
Average annual growth rate (% p.a.)		2.7	3.0	3.1	2.8
Doubling time (years)		26.0	23.3	22.7	24.4
Population density (persons per sq km)	144.0	194.0	260.0	399.0	530.0

Source: United Republic of Tanzania, 2014.

Table 2.2 shows trends and projected key resources per capita since 1975. It is considered that if the renewable water per capita reaches 1667 cubic metres then it has reached stress level, while it is scarce if below 1000 cubic metres (Population Reference Bureau, 2013). If the cropland per capita is 0.21 hectares then the availability is considered to have reached a stress level, while 0.07 indicates scarcity level. A forest cover of is 0.1 hectares is considered to be low (Population Reference Bureau, 2013). Both cropland and renewable water resources are expected to reach stress levels by 2025 if the population continues to grow at current rates.

[4] This table is similar to Table 2.1 of ESRF Discussion Paper Number 61. Additions include population density.

Table 2.2: Trends in cropland, renewable water and forest cover per capita, 1975–2025

	1975	2005	2010	2025
Cropland per capita (hectares)	0.501	0.277	0.256	0.162
Renewable water per capita (cubic metres)	6,025.163	2,479.203	2,146.908	1,358.239
Forest area per capita (hectares)		0.913	0.745	0.396

Source: www.populationaction.org/data-and-maps/people-in-the-balance, accessed 10.03.2016.

2.2.1 Spatial Variations in Population Size and Growth

Table 2.3 shows the trends in the proportion of population by rural and urban residence. About 30% of Tanzanians now live in urban areas. However, nearly half of the population in Zanzibar lives in urban areas. Zanzibar is becoming highly urbanized, with high population density.

Table 2.3: Trends in proportion of the population by place of residence, 2012 census

	Tanzania		Tanzania Mainland		Tanzania Zanzibar	
Census year	Rural	Urban	Rural	Urban	Rural	Urban
1967	93.6	6.4	94.3	5.7	71.4	28.6
1978	86.2	13.8	87.0	13.0	67.5	32.5
1988	81.6	18.4	82.0	18.0	68.2	31.8
2002	76.9	23.1	77.4	22.6	60.4	39.6
2012	70.4	29.6	70.9	29.1	53.7	46.3

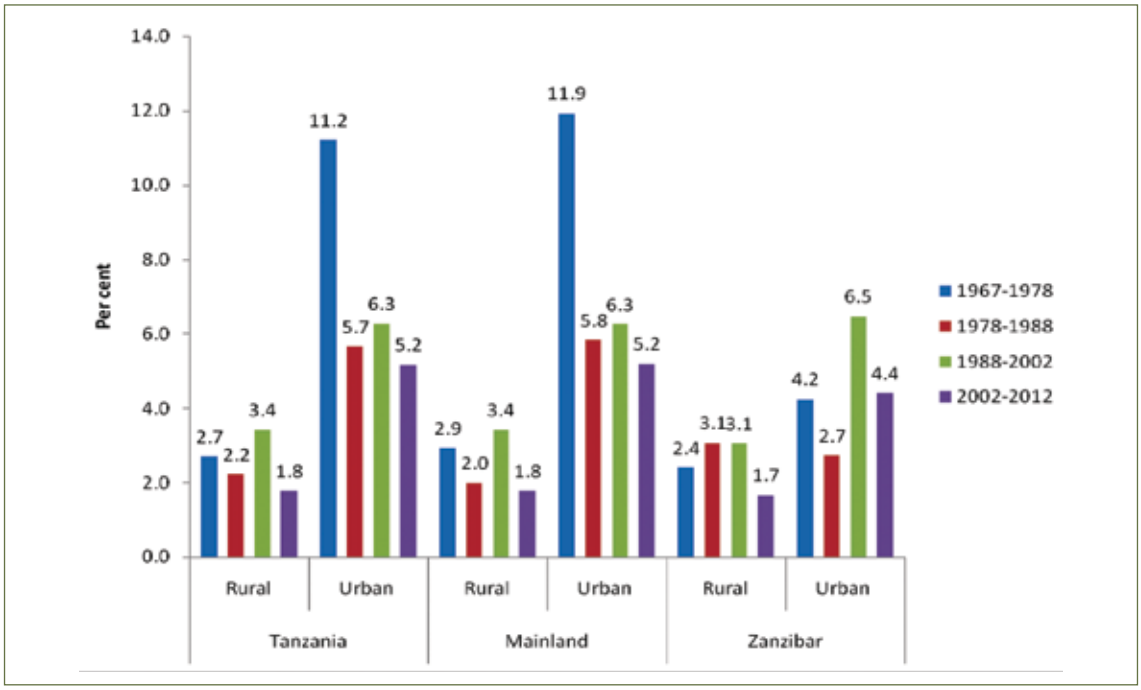
Source: United Republic of Tanzania, 2014.

Figure 2.1 shows trends in the intercensal growth rates by place of residence. Tanzania's rural population grew by about 1.8% per annum (same as Tanzania Mainland). The growth rate for the rural population in Zanzibar was, however, slightly lower (1.7%). The average intercensal growth rates for rural areas have been declining. The urban population growth rate has been declining since the 1967–1978 intercensal period; however, it is still substantially high. At the current pace of growth, the urban population in Tanzania and Tanzania Mainland will double by 2035, while the urban population of Zanzibar will double by 2028. Despite high fertility in rural areas and rapidly declining mortality, the slow growth in rural areas is due to high rural-to-urban migration.

The population growth rates by region are presented in Figure 2.2. The average annual intercensal growth rates for the period 2002–2012 vary greatly by region. The Dar es Salaam region has the highest growth rate, at 5.6% per annum, while the Njombe region has the lowest growth rate, at 0.8% per annum. Regions with the largest urban centres (Dar es Salaam and Mjini Magharibi) recorded the highest intercensal growth rate. The growth rate at the sub-national level is driven both by the natural growth rate as well as the net migration growth rate. As a result of high growth rate, the Dar es Salaam region, with a population of 4,364,541, has nearly one-tenth of the total Tanzania population and about 10% of the Tanzania Mainland population. Katavi, the newly created region with a population of 564,604, has the smallest proportion (1.3% of the Tanzania Mainland population). In

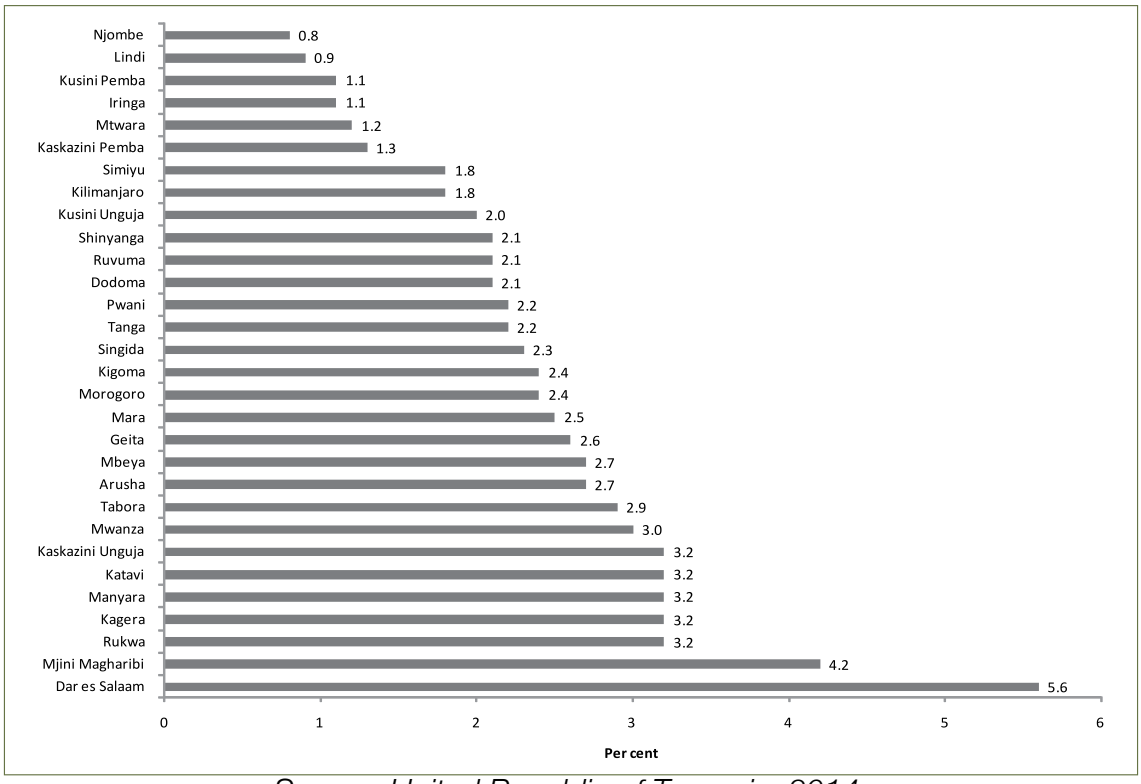
Tanzania Zanzibar, the Mjini Magharibi region has the highest proportion of population, at 45.5% (593,678 persons), and the Kusini Unguja region has the smallest proportion, at 8.9% (115,588 persons).

Figure 2.1: Trends in population growth rates (per cent per annum) by place of residence



Source: United Republic of Tanzania, 2014.

Figure 2.2: Population growth rate by region, 2002–2012



Source: United Republic of Tanzania, 2014.

When regional trends in the natural growth are compared, only two regions have growth rates above 3.5% per annum in the period 2002–2012 compared with seven regions in 1988–2002 (Table 2.4). Eight regions have growth rate below 2% compared with only 5 in 1988–2002. Kigoma has the largest decline in annual growth rate of about 2.4 percentage points (from 4.8% in the 1988–2002 intercensal period to 2.4% in the 2002–12 intercensal period), followed by Shinyanga, Arusha and Mjini Magharibi at 1.2 percentage points.

The largest change in annual growth rate is that for Dar es Salaam, whose annual growth rate increased from 4.3% per annum to 5.6% per annum. Dar es Salaam's population as a percentage of the Tanzania Mainland population grew from 6.1% in 1988, to 7.4% in 2002 and 10% in 2012. Likewise the share of Mjini Magharibi changed from about 33% in 1988 to about 40% in 2002 and 46% in 2012. These changes in regional growth rates reflect increased internal migration and reclassification of regions. The number of high growth rate regions has declined while low growth regions have increased despite the slightly high natural growth rate in most regions (Table 2.4). This change in regional growth rates has been mainly due to increased interregional migration (Wenban-Smith, 2014).

The growth rate of the urban population and regions hosting major urban centres has resulted in uneven population distribution. The Dar es Salaam, Mwanza and Kilimanjaro regions have the highest population density as per last census.

Table 2.4: Trends in regional population growth rates

Growth rate (% per annum)	Number of regions	
	1988–2002 (Total Number of regions=26)	2002–2012 (Total Number of regions=30)
3.5 and above	7	2
3.0 – 3.4	3	6
2.5 – 2.9	3	5
2.0 – 2.4	8	9
Below 2	5	8

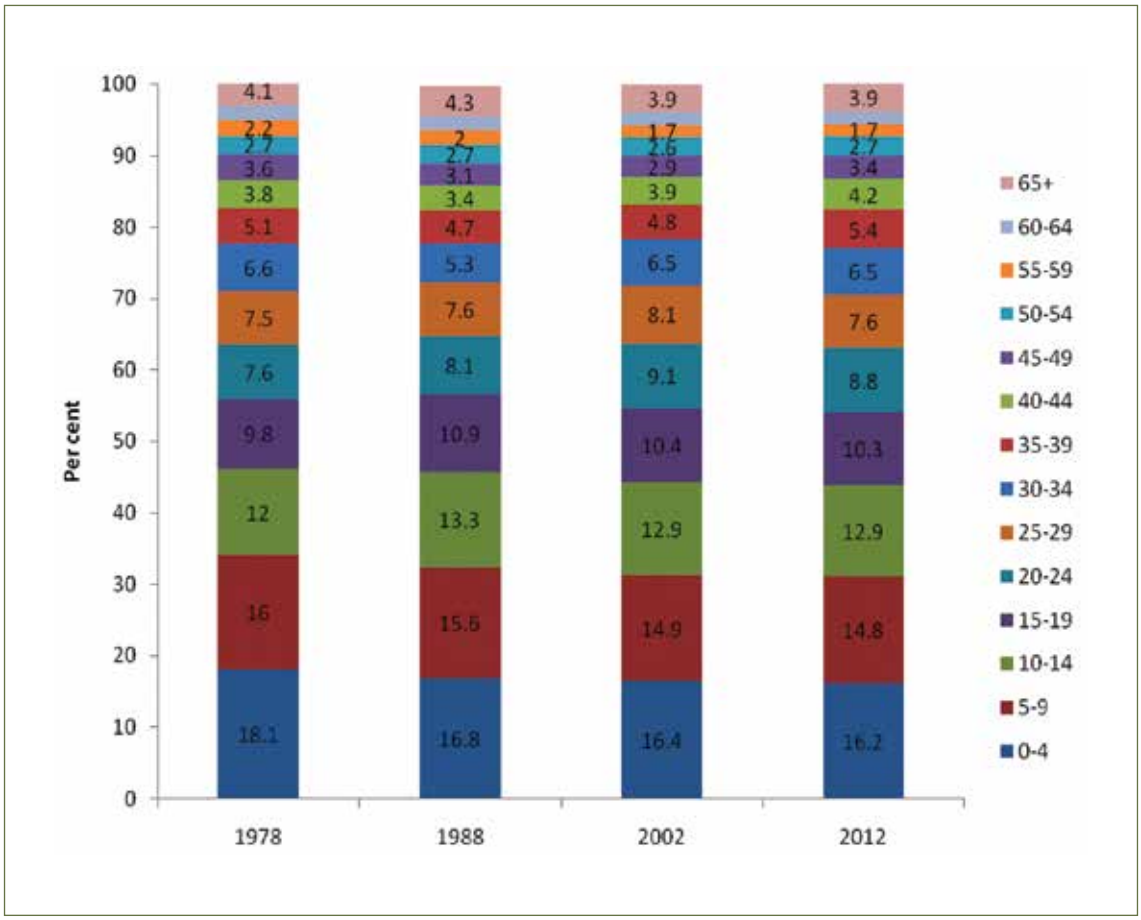
Source: United Republic of Tanzania, 2014.

2.3 Age Structure

One of the consequences of rapid population growth is the effect on age-sex structure. The results of past population change have led to a more youthful population, with half of the current population in Tanzania under age 17.5 years (United Republic of Tanzania, 2014). The trends in proportion of the population by age are provided in Figure 2.3. The proportion of children under age 5 has declined by only two percentage points since 1978 (Figure 2.3). There has been little or no change in other age groups. The proportion of children under age 15 declined by two percentage points, while the pre-labour force and those just at the beginning of working age (15–29) increased from about 25% in 1967 to about 26% in 2012. The youth population (ages 15–35 as defined by the national government) increased from about 37% 1978–88 to about 39% in 2012. The changes in age structure reflect the

result of slow pace of fertility decline and substantial increase in survival across all age groups, particularly children under age 5.

Figure 2.3: Trends in percentage distribution of population by 5-year age groups, 1978–2012

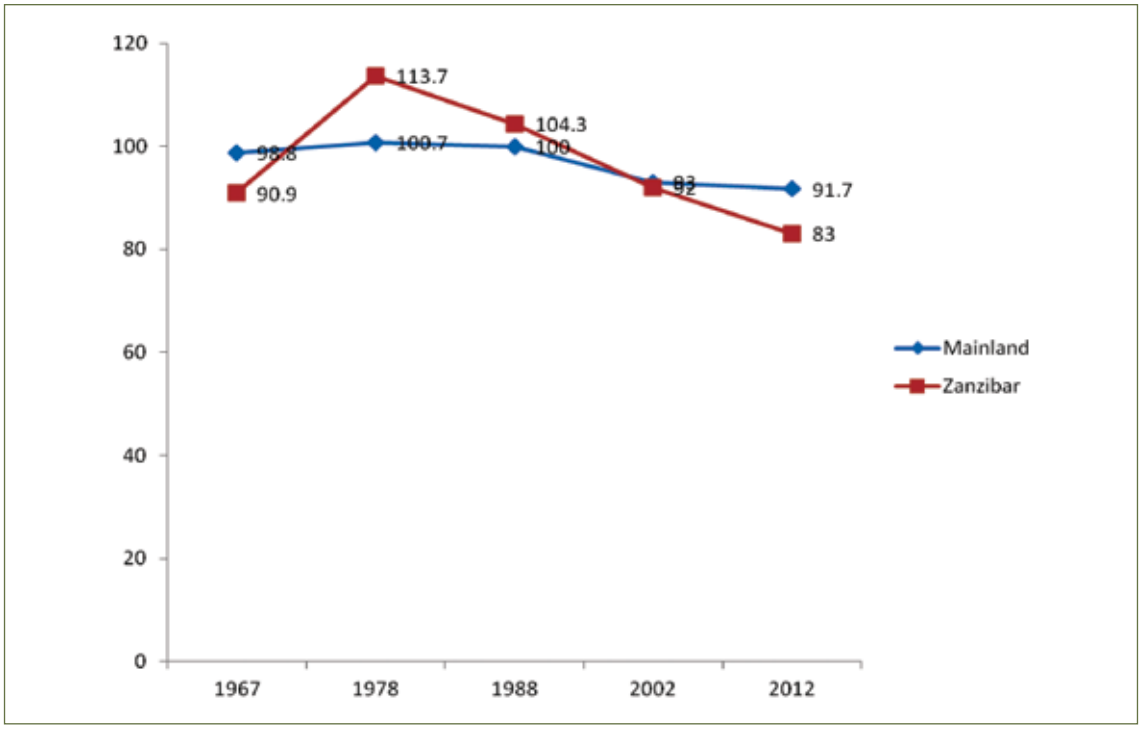


Source: United Republic of Tanzania, 2014.

Trends in the ratio of the working-age population (ages 15–64) relative to the non-working-age population (also called the age-dependency ratio) are shown in Figure 2.4. The ratio is expressed as the number of dependents per 100 people of working age. The dependency ratio summarizes the effect of changes in age distribution and can be used as a proxy indicator of the economic burden and responsibility borne by the working-age population. Age-dependency ratios of 100 and above are undesirable. The trend data indicate improvement in the potential burden for workers, particularly in Zanzibar. The declining dependency is an opportunity created by the increased proportion of the working-age population and the declining proportion of children in the population.

The trends in age-dependency ratios mimic trends in fertility change in both Tanzania Mainland and Zanzibar (see also Figure 3.2 in this paper). All regions experienced a rise in fertility between 1967 and 1988, but the rise was more prominent in Tanzania Zanzibar, which coincides with the greater increase in the dependency burden in Zanzibar at that time. Fertility has declined more in Zanzibar in the recent past, coinciding with lower dependency in Zanzibar as of the last census (2012).

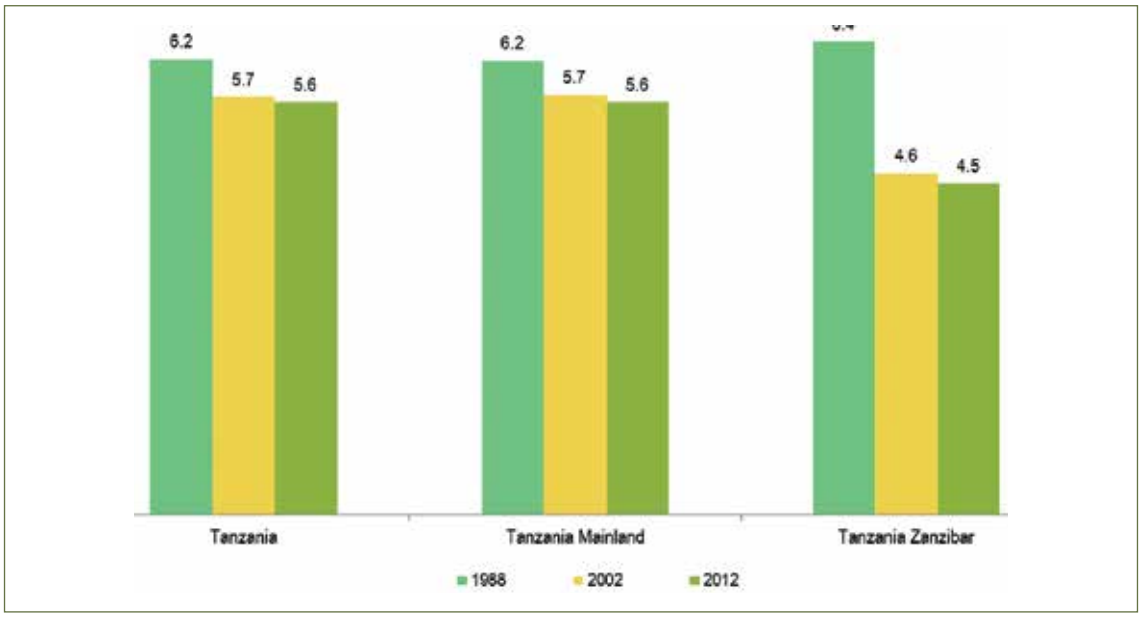
Figure 2.4: Trends in age-dependency ratio



Source: United Republic of Tanzania, 2014.

The proportion of persons aged 60 and above has been declining marginally in Tanzania; however, the decline in Zanzibar is substantial (Figure 2.5). The decline, however, masks the annual increase in absolute numbers and rate of growth. The 2012 Tanzania Population and Housing Census indicates that the population of those aged 60 and above is about 2.5 million, of which 1.2 million are males and 1.3 million females. Secondly, there are wide regional differentials in the proportion of the elderly population (Agwanda and Amani, 2014).

Figure 2.5: Trends in population aged 60 years and above as a percentage of total population, 1988–2012

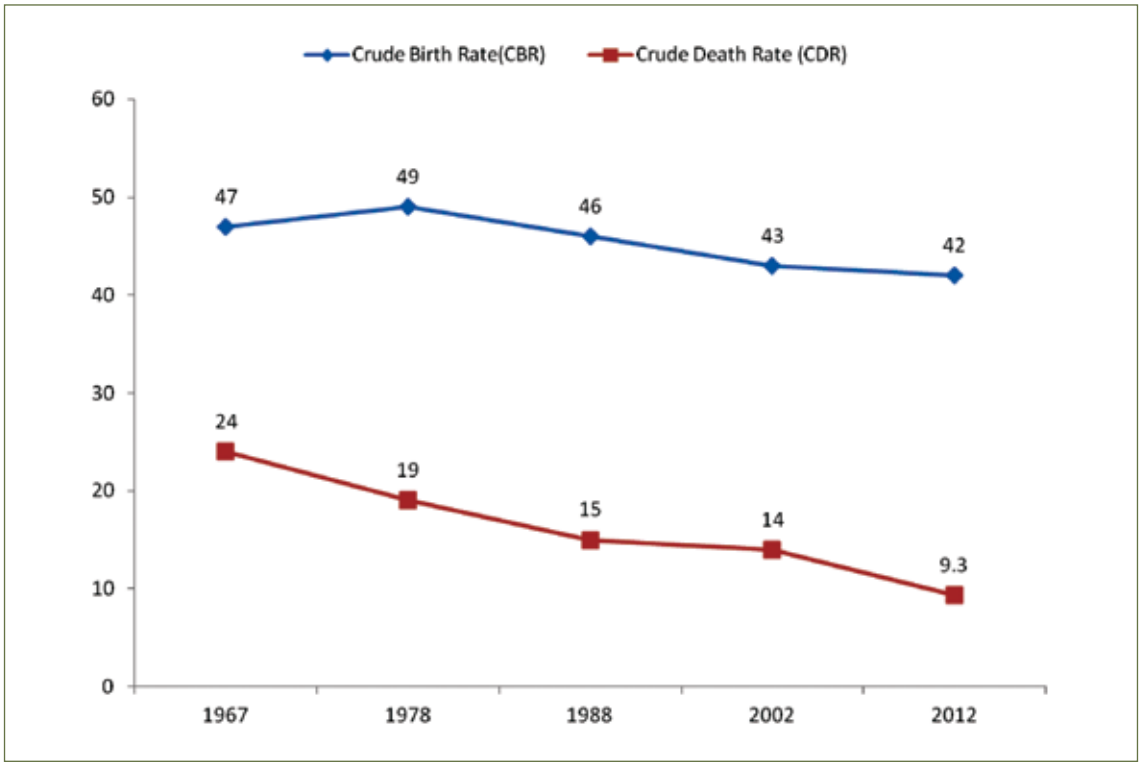


Source: United Republic of Tanzania, 2014.

2.4 Summary of Key Issues and Implications for Social Policy

In this section, two important conclusions can be drawn: first, continued high population growth rates due to declining death rates and continued high birth rates (see Figure 2.6), with negligible contribution of international migration (Agwanda and Amani, 2014); and secondly, the persistent young age structure. The high growth rate may have implications for natural resource availability – land for cropping and renewable water. These trends largely reflect past policy. Indeed, before 1992, the government policy position on population growth was that there was no need to intervene because there were plentiful resources available in the form of unused land. At the UN World Population Conference in 1974, the government underscored the need for a larger population, contending that "people ... were a development asset", and that the priority was "to ensure that the productive age group is constantly replenished by the children … born today" (cited in Oucho and Mtatifikolo, 2009).

Figure 2.6: Trends in crude birth rates and crude death rates, 1967–2012



Source: United Republic of Tanzania, 2014.

The impact of changes in population, social and economic development, and environment over time are mutually reinforcing (Zuberi and Thomas, 2012). There is the long-held opinion that high population growth can be a constraint to development (Preston, 1975; Cohen, 1995; Pebley 1998) and on environment (Royal Society, 2012). That is, rapid population growth not only affects the level of per-capita growth, but also the distribution of economic resources. A large and growing labour force can effectively hamper poverty-reduction efforts. A fast-growing population can impede poverty-reduction efforts by encouraging a constant subdivision of agricultural plots and land, which is associated with a decline in land and labour productivity (UNFPA, 2012).

On the other hand, Simon (1981) labelled population growth as providing labour as an

"ultimate resource", while Boserup (1965; 1981) reported a positive impact of population density on development in poor agrarian societies, and Johnson (2001) emphasized the significance to development of the increased knowledge that accompanies population growth. Simon's (1981), Boserup's (1965) and Johnson's (2001) arguments support the initial policy statement that high population growth may be beneficial.

While the challenges of rapid population growth have been acknowledged, Lam (2011) noted increasing well-being despite rapid population growth worldwide and which he attributed to the combined effect of three economic and three demographic factors (cf. Kohler and Behrman, 2014). These six factors include:

- market responses, such as farmers growing more food in response to higher food prices, or individuals finding substitutes for scarce resources whose prices increase in response to population pressure;

- innovation, where population growth increases the incentives and abilities to develop new technologies and knowledge – for example the green revolution – that use available resources more efficiently;

- globalization, having resulted in an increased economic integration of countries through international flows of goods and capital that improved efficiency of both production and distribution;

- urbanization, in which cities have absorbed a significant proportion of the population growth in recent decades, thereby contributing to innovation, economic growth and improvements in efficiency that helped to achieve increases in living standards despite growing populations;

- fertility decline, causing birth rates, with some lag, to follow declining mortality rates and reducing rates of population growth;

- investments in children and child health, resulting in large increases in school enrolment and human capital despite rapidly growing cohort sizes, that contributed to reduced fertility, improved health, increased productivity and economic growth.

The suggestions by Lam (2011) indicate that under the right circumstances, changes in population dynamics, structure and spatial distribution also provide important opportunities for sustainable development (ESRF, 2015).

Human life depends on the ecosystem, but improving human well-being necessitates a rise in production and consumption levels. The challenge now and in the future is how to improve the well-being of people while protecting nature, on which all life depends. Population factors, along with economic development and technological change, are considered the root causes of environmental degradation. Hommer-Dixon (1994) noted three kinds of challenges: first, environmental change due to human-induced decline in the quantity or quality of a renewable resource that occurs faster than it can be renewed by natural processes; secondly, population growth that reduces a resource's per-capita availability by dividing it among more and more people; and finally, social organization which concentrates

resource among a few people and subjects the rest to greater scarcity. Hommer-Dixon (1994) indicates that population change alone may not be the only drawback and that other factors need to be taken into account.

The relationship between population, consumption and the environment is complex. Addressing this complexity requires social policy that takes cognizance of the interactions between consumption, demographic change and environmental impact. Consumption plays a key role in enhancing individual well-being, acting as a multiplier of the impacts of people on the environment and also as the engine for economic activity (Royal Society, 2012). The Royal Society (2012) contends that demographic changes and the influences on them should be factored into economic and environmental policy and planning. The policy agenda for economic transformation must not only ensure a harmonious balance between social, economic and environmental development but also emphasize both sustainable consumption and sustainable production.

Changes in age structure reflect the continued dominance of children. As a result, the 2006 National Population Policy is premised on the fact that this rapid population growth and the continued high dependency burden is one of the key factors undermining socioeconomic development in Tanzania (United Republic of Tanzania, 2006). The policy emphasis is that the country experiences increased consumption in education and health services, which draws resources away from savings for productive investment (Coale and Hoover, 1958). However, the population age structure is such that the country can gain from the demographic transition given the right economic and social policy, commonly referred to as the demographic dividend (Bloom et al., 2003; Mason, 2008). Such policy options should be able to reduce the population growth rate, improve the health status of the population and labour force, fast-track education reforms to create a skilled and innovative labour force, and enhance economic productivity and job creation (Bloom et al., 2003; Bloom et al., 2007a; Mason, 2008; World Bank, 2016).

3. POPULATION DYNAMICS

3.1 Introduction

This section provides information on the population dynamics of Tanzania, which is largely governed by the changing population size and age structure through mortality, fertility, and migration. These three fundamental factors are, in turn, closely tied to development progress (World Bank, 2016). There is an increasing global call to address population dynamics and their components in designing new development strategies, policies and programmes (World Bank, 2016; UNECA, 2013; UNDESA, 2012). This section of the report considers the question, "What are the population dynamics issues and how can social policies be tailored to achieve the best outcome for human development in order to reap from the demographic dividend"? This is in line with Lee and Mason's (2006) statement that as fertility rates decline, developing countries such as Tanzania are presented with the opportunity to reap from the demographic dividend (cf. World Bank, 2016) – that is, the possibilities of the growing labour force to support fewer children both at the household level and the country level (World Bank, 2016).

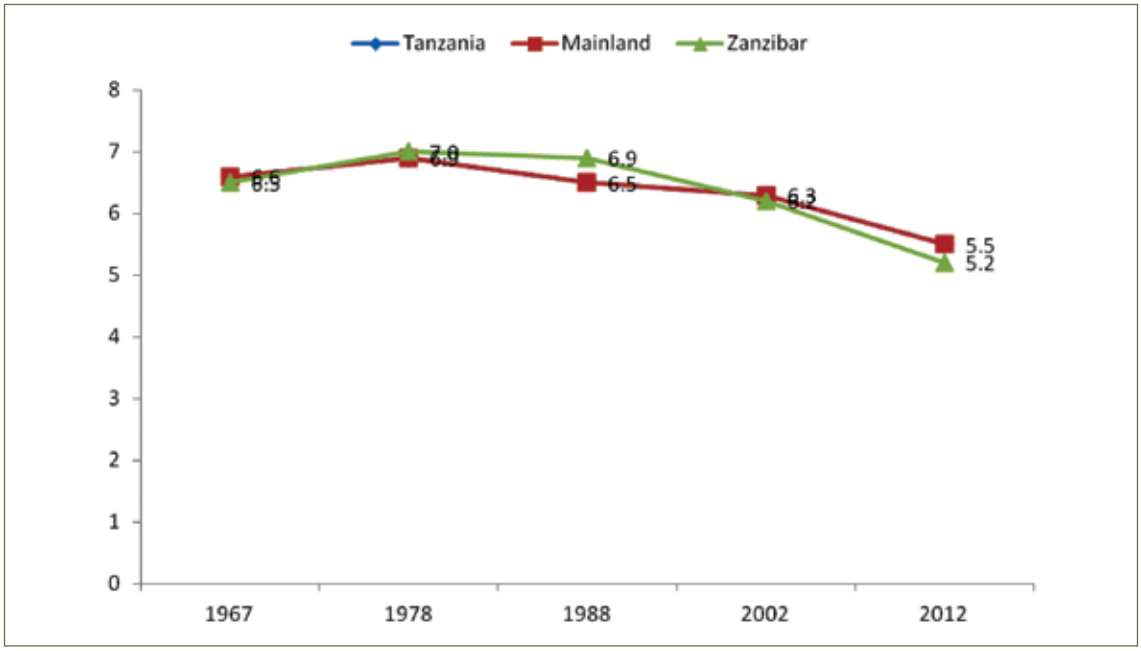
3.2 Fertility

A central factor driving population dynamics in developing countries is fertility transition. Fertility in turn is influenced by government policy, contraceptive availability, education, ideation and culture. But in many societies, the central underlying cause of the fertility transition is the mortality transition that precedes it – fertility decline always follows the decline in mortality. Fertility analysis is important for understanding past, current and future trends in population size, composition and growth.

3.2.1 Trends in Fertility Rates

Figure 3.1 shows trends in fertility since 1967. From the 1960s to the 1980s fertility rose to a peak before it started to fall in both Tanzania Mainland and Tanzania Zanzibar. In the recent past, decline has been slightly faster in Tanzania Zanzibar. Data from various Tanzania demographic and health surveys also show that total fertility rates (TFR) has continuously declined from 6.5 between 1985 and 1990 to about to 5.5 in 2012 (Agwanda and Amani, 2014). Between 2000 and 2012, fertility declined by about 1.3% per annum (Agwanda and Amani, 2014). Although there was a remarkable decline between 1991 and 2000, this decline plateaued between 2000 and 2004, especially in rural areas (Garenne, 2011). After 2005, there was a marginal decline of about 5.3%. A fundamental feature of trends in fertility at the national level is the slow pace of fertility decline.

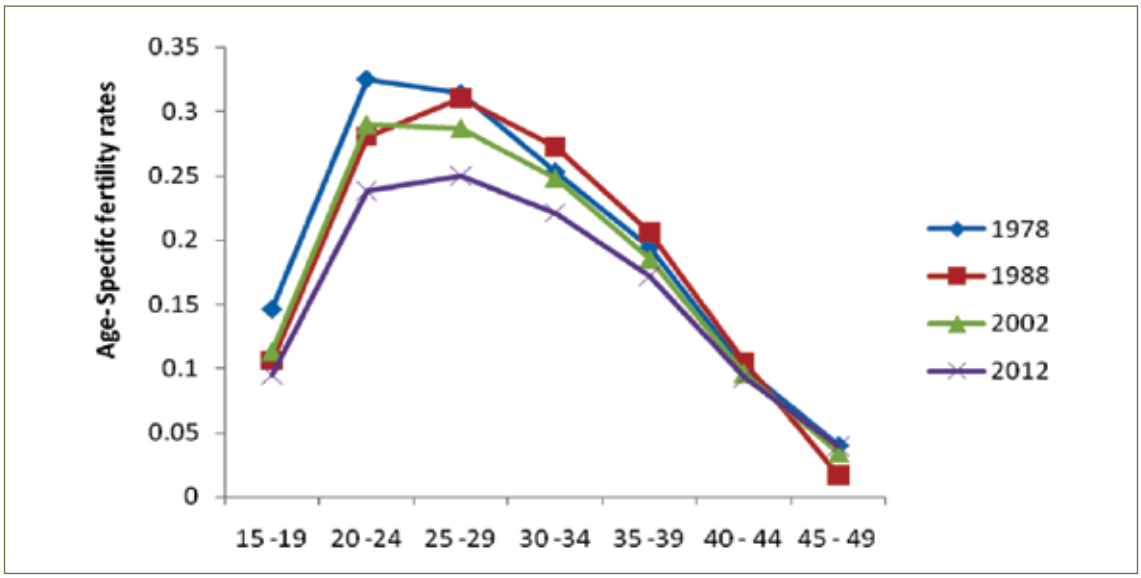
Figure 3.1: Trends in total fertility rate (Births per woman), 1967–2012



Source: United Republic of Tanzania, 2015c.

Trends in age patterns of fertility since 1978 are presented in Figure 3.2. Fertility has declined at all ages except among the oldest age group (40–49). Between 2002 and 2012 the largest fertility decline occurred among women aged 15–24 (a decline of 16–17%). Fertility among women age 45–49 increased during the intercensal period by about 12%.

Figure 3.2: Trends in age patterns of fertility, 1978–2012, all Tanzania



Source: United Republic of Tanzania January, 2015c.

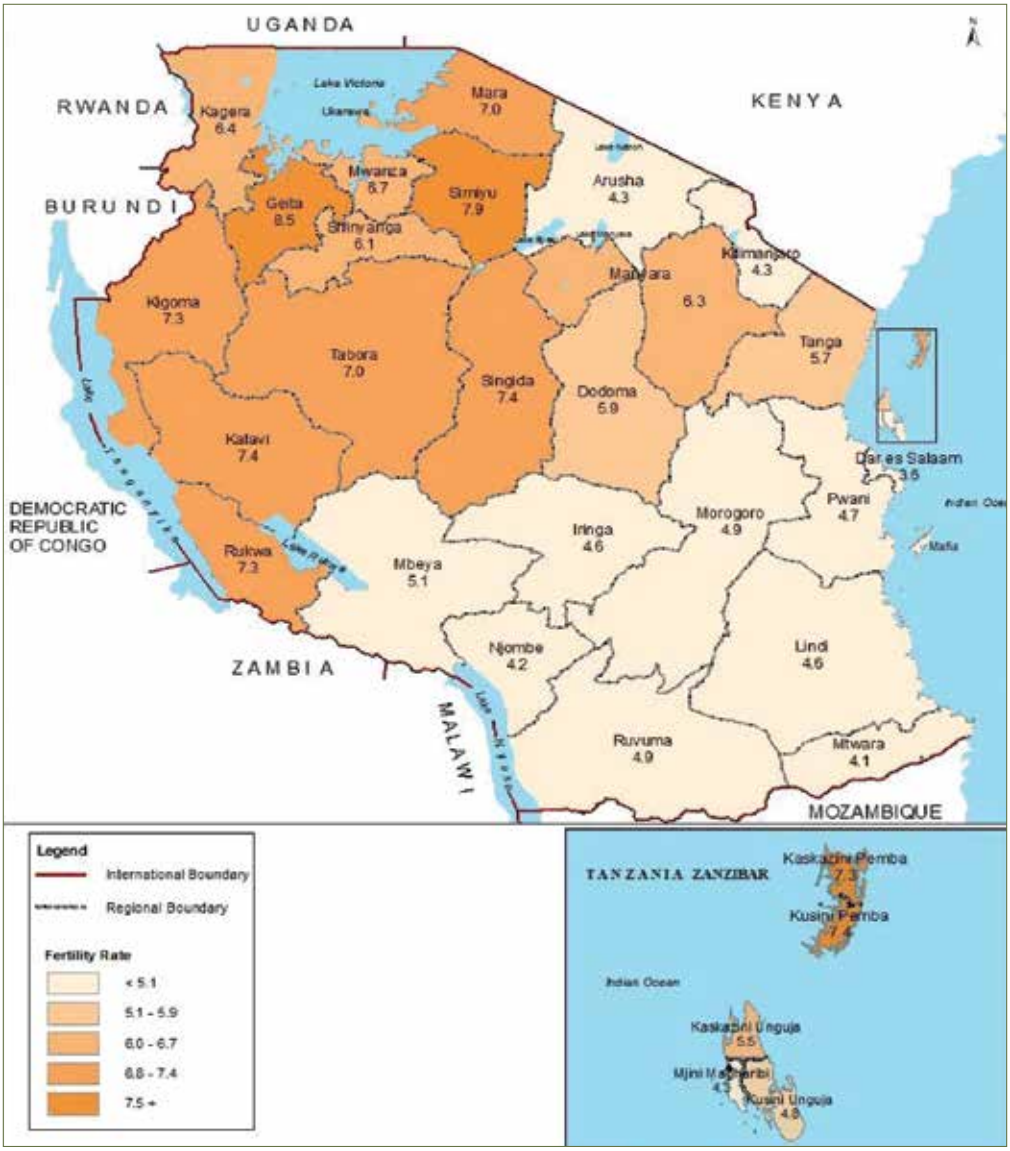
3.2.2 Spatial Differentials in Fertility Levels

In many sub-Saharan African countries, urban fertility is almost 30% lower than rural fertility (Kirk and Pillet, 1998; Shapiro and Gebreselassie, 2000), a pattern that has been observed for Tanzania (United Republic of Tanzania, 2015c). The TFR in rural areas of 6.5 children per woman

is about two births fewer than that of urban areas (urban TFR is 4.1 children per woman). The argument for high birth rates in rural areas is that rural households desire large family sizes (Caldwell and Caldwell, 1987; Bongaarts and Casterline, 2013) because in agricultural societies where families work their own land, children can add to household production from an early age (Schultz, 1997). But in urban areas, the separation between the home and the workplace is greater, and there are fewer opportunities for children to engage in productive activities for the benefit of the household (Canning et al., 2015, 13), in addition to higher cost of living in cities. These factors may explain the lower fertility rates in urban settings.

Figure 3.3 shows the regional fertility levels according to the 2012 Population and Housing Census. The regions with highest fertility are Geita (TFR 8.5), Simiyu (TFR 7.9), Singida, Katavi, and Kusini Pemba (TFR 7.4), which are essentially pre-transition fertility levels. The lowest fertility is found in highly urbanized regions (Dar es Salaam and Mjini Maghrabi), Mtwara on the southern coast, Njombe in the southern part and Arusha and Kilimanjaro in the northern part. The western and lake regions continue to show high fertility.

Figure 3.3: Total Fertility Rates by region, Tanzania, 2012 Census

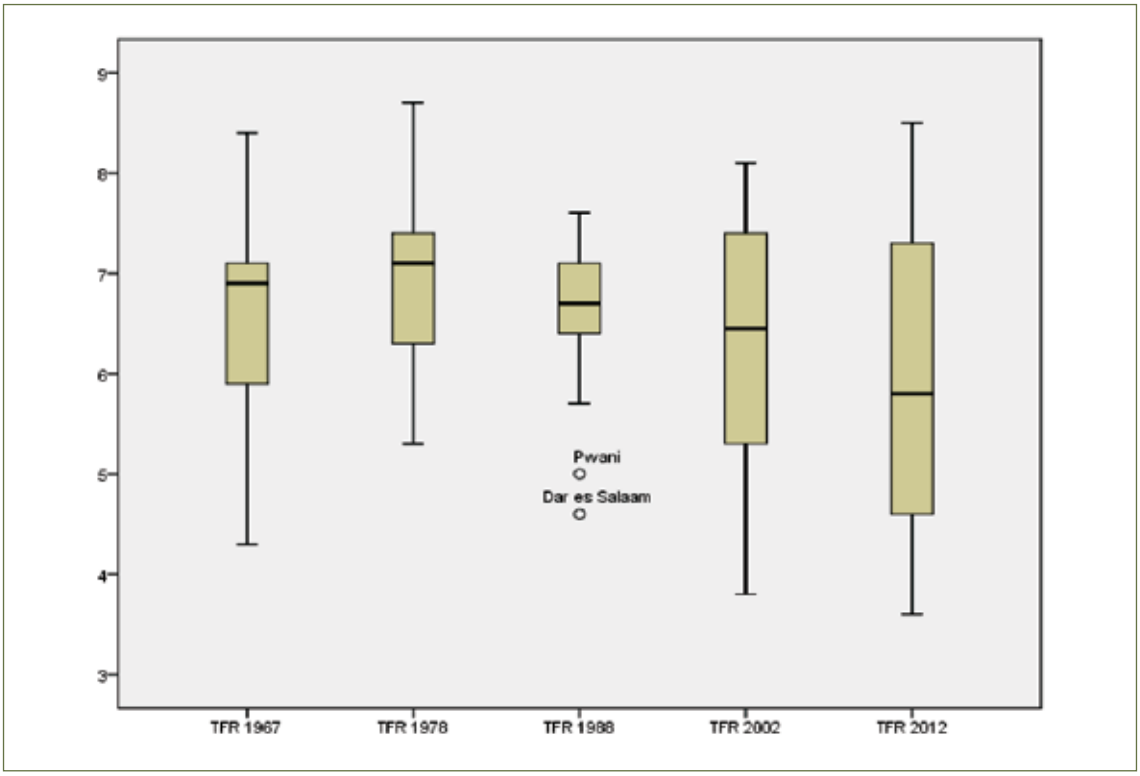


Source: United Republic of Tanzania January, 2015c.

3.2.3 Trends in Spatial Variation in Fertility

Trends in spatial variation in fertility are shown in Figure 3.4 and Table 3.1. Regions with high fertility continue to exhibit similar levels as in 1967 – that is, high-fertility regions show little change over the last four decades. The range (difference between the largest and lowest levels) declined in 1988 when regions with high fertility experienced slight decline while those with lowest fertility experienced an increase. It is difficult to explain why fertility slightly declined in high-fertility regions and increased within the low fertility regions; however, it may have been an effect of economic crisis during the structural adjustment programmes. Since 1990, there has been an increase in the extent of variation, indicating greater heterogeneity. The range increased from about three births per woman to about 4.9 births per woman in 2012. This implies an unchanging level of fertility in regions with high fertility, particularly in the western and lake regions of the country. The impact of unchanging high fertility in the western and lake regions on national-level fertility is to slow the pace of fertility decline compared to mortality decline.

Figure 3.4: Box plots[5] of regional fertility levels (1967–2012 census data)



Source: computed from United Republic of Tanzania, 2015c.

Table 3.1: Trends in variation in TFR

	TFR 1967	TFR 1978	TFR 1988	TFR 2002	TFR 2012
Number of regions	18	25	25	26	30
Maximum	8.40	8.70	7.60	8.10	8.50
Minimum	4.30	5.30	4.60	3.80	3.60

[5] A box plot summarizes the distribution of a variable. The box is a rectangle, the top and bottom of which mark the 75th and 25th percentiles, respectively, with the median observation (in this case, the median county) as a cross-bar within the box. The "whiskers" for each box are the lines protruding above and below, and indicate the range of the data above and below the upper and lower quartiles.

Median	6.9	7.1	6.7	6.45	5.8
Range	4.1	3.4	3.0	4.3	4.9

Source: computed from United Republic of Tanzania, 2015c.

The emerging regional patterns of fertility change in the past decade as summarized in Table 3.2 are:

1) Slow pace of change though low fertility, as in Dar es Salaam.
2) Initially high fertility with steady fertility decline, as in Kilimanjaro, Arusha.
3) Rise in initial level of fertility in the late sixties and seventies followed by slow decline.
4) Unchanging or increasing fertility levels – Kaskazini Pemba have high and unchanging fertility levels while Mara and Singida have high and increasing fertility levels.
5) Relatively low fertility with slow pace of decline, as in Kusini Unguja in Zanzibar, and Pwani, Mtwara, Ruvuma, Morogoro in Tanzania Mainland.

Table 3.2: Trends in fertility by region, 2002–2012

Range of TFR 2012	**Below 4**	**4.1–4.9**	**5.0–5.9**	**6.0–6.9**	**7.0–7.9**	**8 and above**
	Dar es Salaam (3.6)	Mtwara (4.1) Njombe (4.2) Arusha (4.3) Kilimanjaro (4.3) Mjini Magharibi (4.3) Lindi (4.6) Iringa(4.6) Pwani (4.7) Kusini Unguja (4.8) Morogoro (4.9) Ruvuma (4.9)	Mbeya (5.1) Kaskazini Unguja (5.5) Tanga (5.7) Dodoma (5.9)	Shinyanga (6.1) Manyara (6.3) Kagera (6.4) Mwanza (6.7)	Tabora (7.0) Mara (7.0) Rukwa (7.3) Kigoma (7.3) Kaskazini Pemba (7.3) Kusini Pemba (7.4) Singida (7.4) Katavi (7.4) Simiyu (7.9)	Geita (8.5)
Number of regions	1	11	4	4	9	1
2002	Dar es Salaam (3.8)		Arusha (5.0) Mjini Magharibi (5.1) Lindi (5.1) Kilimanjaro (5.2) Mtwara (5.3) Pwani (5.3) Kusini Unguja (5.7) Iringa (5.7) Mbeya (5.9) Morogoro (5.9) Ruvuma (5.9)	Tanga (6.1) Dodoma (6.8) Singida (6.8) Mara (6.9)	Kaskazini Unguja(7.2) Manyara (7.2) Mwanza (7.2) Kaskazini Pemba (7.4) Tabora (7.7) Kagera (7.9) Rukwa (7.9) Kigoma (7.9)	Shinyanga (8.1) Kusini Pemba (8.1)
Number of regions	1	0	11	4	8	2

Source: United Republic of Tanzania, 2015c.

3.2.4 What Explains the Regional Variations in Fertility Levels?

As indicated at the beginning of this section, government policy, contraceptive availability, education, ideation and culture greatly influence fertility levels and differentials. This is in addition to the fact that in many societies, the central underlying cause of the fertility change is the mortality transition that precedes it. These factors influence one or more of the intermediate-level factors which Westoff et al. (2013) suggest are important in sub-Saharan Africa. These factors are: reductions in the desired number of children, increases in the use of modern contraception and age at first marriage.

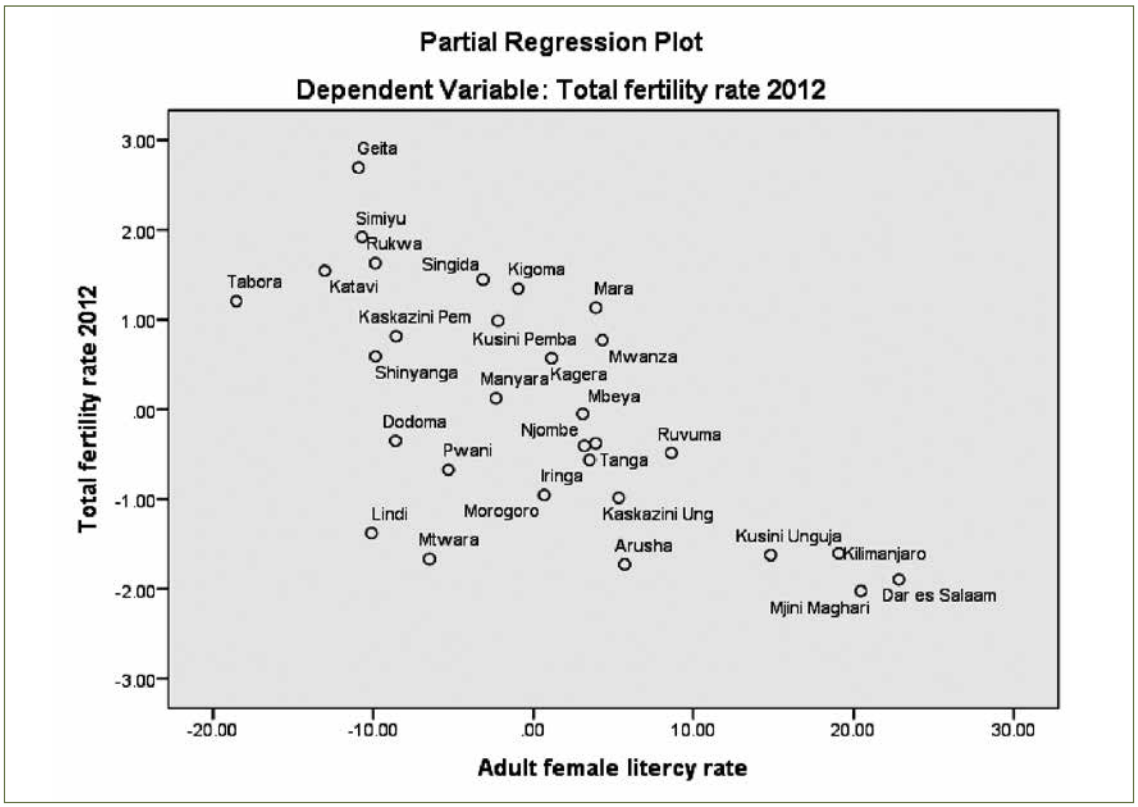
Table 3.3 presents linear regression results on selected factors thought to be associated with regional differentials in total fertility rate. Partial regression plots with the most important factors are presented in Figures 3.4a and 3.4b. The spatial variation in fertility levels is most influenced by adult female literacy rates, which corresponds the fact that higher education is associated with low fertility in Tanzania (Agwanda and Amani, 2014). HIV prevalence among women is weakly associated with regional fertility levels. The association between per cent urban, childhood mortality and regional fertility levels is apparently not supported by data once other factors are controlled for.

Table 3.3: Results of linear regression between total fertility rates and female literacy, female HIV prevalence, per cent urban and under-5 mortality

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
Constant*	12.407	1.347	
Adult female literacy r*	-.084	.019	-.626
HIV prevalence (women)***	-.105	.055	-.264
Per cent urban 2012ns	-.009	.012	-.124
Under-5 mortality 2012ns	.007	.015	.073
Adjusted R square	0.449		

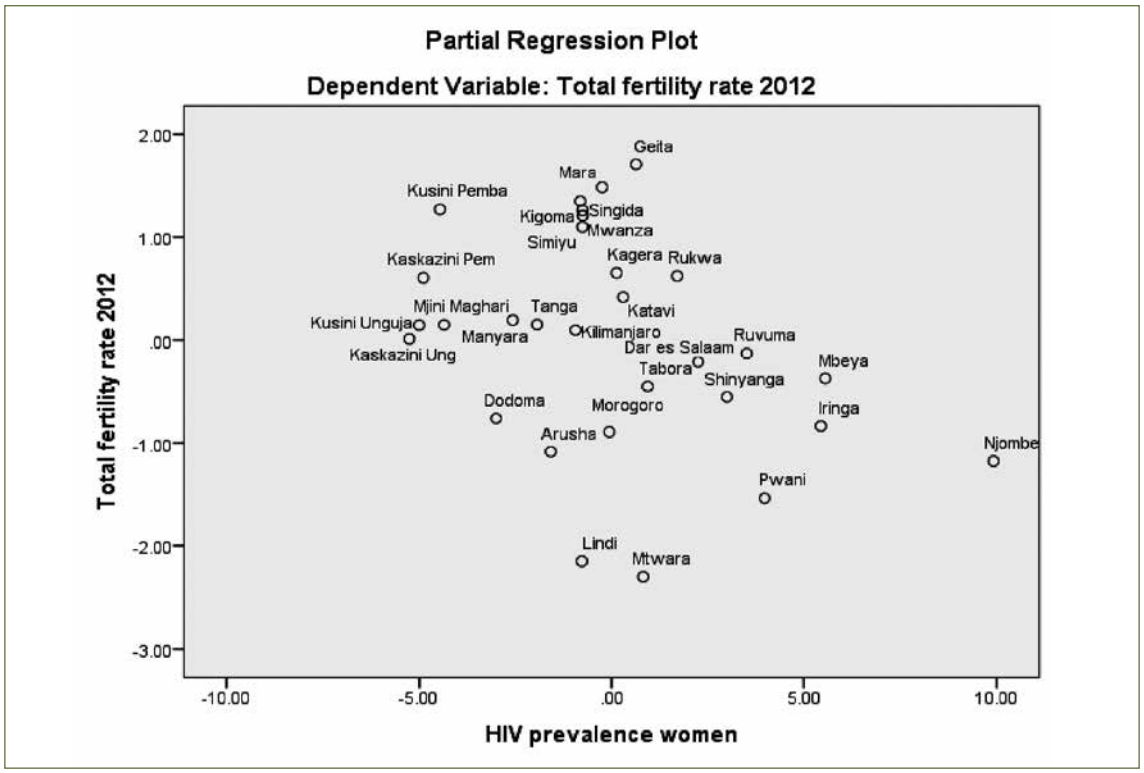
**p<0.01, ** p<0.05, *** p<0.1, ns- not significant.*

Figure 3.4a: Relationship between Adult female literacy rate and total fertility rate



Source: computed from United Republic of Tanzania, 2015c.

Figure 3.4b: Relationship between HIV prevalence among women and total fertility rate



Source: computed from United Republic of Tanzania, 2015c.

Lack of association between regional fertility levels and urbanization may be due to the existence of bias arising from possible selection effects, since more educated women in rural areas are more likely to move to urban areas. The association with female HIV prevalence is rather complex. HIV/AIDS and fertility may share common causes that induce an association between the two (Magadi and Agwanda, 2010) and may operate both at the individual level and at the aggregate levels. Seropositive status is thought to be associated with lower fertility, mainly through reduced likelihood of conceiving – biological effects. Other possible effects are: delayed onset of sexual relations and age at first union; reduced premarital sexual relations and remarriage; increased marital dissolution and spousal separation and increased condom use (Magadi and Agwanda, 2010). Perceived risk of HIV and knowledge may influence desired fertility either directly or through child mortality (Magadi and Agwanda, 2010). Desired fertility in turn influences actual fertility through behavioural proximate determinants of fertility, mainly contraception (Magadi and Agwanda, 2010). The lack of association with child mortality may be due to reverse causation – child mortality is also influenced by the level of fertility.

Adolescent Fertility

The Programme of Action of the 1994 International Conference on Population and Development (ICPD), on which the National Population Policy of 2006 is based, highlighted the importance of reducing adolescent pregnancy and the multiple factors underlying adolescent fertility (United Nations 1994). The programme of action further recommended that governments take actions to substantially reduce adolescent pregnancy.

The adolescent fertility rate (AFR) for Tanzania is 81 births per 1000 women age 15–19 (United Republic of Tanzania, 2015c), which is considered relatively high. The AFR for Tanzania Mainland is 83 while that for Tanzania Zanzibar is 36 (United Republic of Tanzania, 2015c). Generally, high adolescent fertility is found in regions in Tanzania Mainland and all of them are characterized by high fertility rates (Table 3.4). Low AFRs are mainly in low-fertility regions of Tanzania Mainland and Tanzania Zanzibar. High adolescent fertility in Tanzania Mainland compared to Zanzibar has been attributed to differences in the schooling system (United Republic of Tanzania, 2015c). However, it can also be due to religious differences and ethnic cultures that tolerate premarital fertility.

Table 3.4: Adolescent fertility rates (births per 1000 women aged 15–19)

Over 100 (very High)	Between 90 and 99 (High)	Between 50 and 89 (Medium)	Under 50 (Low)
Katavi (140)	Mtwara 99.6	Mwanza 87.6 Kigoma 82	Kaskazini Pemba 47
Tabora (127)	Lindi 98.9	Pwani 80	Arusha 46
Rukwa 127	Morogoro 98	Kagera 78	Kilimanjaro 43
Geita (125)	Shinyanga 97	Tanga 77	Kusini Unguja 48
Mara (119)	Dodoma 94	Manyara 70	Dar es Salaam 38
Simiyu (101)	Ruvuma 93.7	Kusini Pemba 59	Kaskazini Unguja 29
	Mbeya 90	Iringa 53	Mjini Magharibi 26
	Singida 90	Njombe 50	

Source: United Republic of Tanzania, 2015c.

3.2.5 Summary of Key Issues on Fertility Levels and Differentials

i). The regions that had initially high fertility in the 1970s and 1980s with steady fertility decline, as in Kilimanjaro, Arusha, and Dar es Salaam, have seen a steady rise in use of contraception (NBS and ICF Macro, 2011), although fertility has not declined substantially due to a rapid decline in traditional fertility-inhibiting factors (NBS and ICF Macro, 2011).

ii). The regions with unchanging or increasing fertility levels, such as Kaskazini Pemba, Mara and Singida, have seen a decline in traditional methods of inhibiting fertility such as abstinence and breastfeeding that has not been compensated by use of contraception (NBS and ICF Macro, 2011). These regions (Mara, Mwanza, Pemba North and Pemba South) also exhibit high unmet need for family planning.[6] Kigoma region has the highest unmet need (41%) (NBS and ICF Macro, 2011). The possible policy implications are: the high fertility may be due to failure of programmes to meet their needs or alternatively, the high fertility may be sustained by a desire for large families.

iii). The coastal regions (Pwani and Mtwara) and parts of Zanzibar are characterized by relatively low fertility, with a slow pace of decline. The Mtwara region is unique because the major fertility-inhibiting factors are breastfeeding duration and long duration of post-partum abstinence (NBS and ICF Macro, 2011).

iv). Although Mwanza and Shinyanga are highly urbanized, the level of fertility is still very high, which is rather inconsistent, but Geita and Simiyu, which have the highest fertility levels, are also the least urbanized regions. The inconsistencies may be explained by fact that *the lack of strong correlations between the urban and fertility transitions in aggregate analyses speaks to the great variety of situations that govern the interactions between these two variables, rather than to an outright lack of interrelations* (Martine et al., 2013, 36).

v). Between 1996 and 2008, fertility decline stalled in Tanzanian rural areas (Garenne, 2011), and this could explain the stall in decline between 2000 and 2004 and the modest decline at the national level after 2004.

vi). In terms of fertility change, the largest decline in fertility occurred among women living in urban areas with secondary education and women living in higher wealth quintile households. However, women with lower education levels (primary education incomplete) and in second quintile households had a rise in fertility levels (Agwanda and Amani, 2014).

vii). The annual rate of decline in fertility level is higher for those in the highest socioeconomic positions, but fertility rates increased among those in the lower socioeconomic strata. The largest gap occurs by wealth quintile, which has been unchanging in the last decade. There is growing inequality in level of education, which may explain the rising heterogeneity in fertility levels (Agwanda et al., 2015).

[6] Unmet need for family planning refers to the proportion of women of reproductive age who would like to use contraception but are not currently doing so.

3.2.6 Summary of Key Issues and Implications for Social Policy

Social policies are perceived as the outcomes of national and local decisions in response to human development requirements. They consist of formal and informal rules which are embedded in the organized efforts of society to meet identified personal needs as well as within the wider context (Gil, 1993). The ultimate aim of such organized efforts is to enhance the well-being of societal members in their respective environments. Historical perspectives of social policy in Tanzania since independence are discussed in more detail in Background Paper Number 6 (Aikaeli and Moshi, 2016).

Since independence in 1961, the government of Tanzania has been preoccupied with combating poverty and improving the living standards of its people. National efforts to tackle the problem of poverty and living standards were initially channelled through centrally directed, medium- and long-term development plans, and resulted in a significant improvement in per-capita income and access to education, health and other social services until the 1970s. Thereafter, these gains could not be sustained because of various domestic and external shocks and policy weaknesses. Indeed, despite sustained efforts since the mid-1990s to address the country's economic and social problems, poverty has persisted.

All these policy-related factors indirectly determine the levels, trends and differentials in fertility. Between independence and the 1980s, social policy has focused on reducing poverty and increasing access to education and health, and any effect on fertility may have been indirect. However, the trend data do indicate that fertility actually rose during this period and peaked around 1988.[7] The rise in fertility during this period is not unusual as this period marked an era in the implementation of the "Arusha Declaration", with policy emphasis on agriculture. It has been hypothesized that in low-income agricultural societies, parents tend to want relatively large numbers of children (Caldwell and Caldwell, 1987; 1988; Bongaarts and Casterline, 2013) because children provide labour to agricultural farms and also to old-age social security (Bongaarts and Casterline, 2013). It could be that as modernization became entrenched through increases in education and urbanization, the traditional restraints[8] on high fertility declined and were not compensated adequately by use of modern contraceptive methods. Another possible factor is probably the stagnation of provision of education services associated with the economic recession of 1976 to 1997, during which income per capita declined by some 20%, and probably reduced investments in the education sector (Garenne, 2012).

Prior to 1992, there was no explicit policy on fertility. The government's position at the time was that a high population growth rate was good for national development[9] (cited in Oucho and Mtatifikolo, 2009). A government statement to the African Population Conference in 1971 reported that there would be no explicit policy to reduce population size because of the plentiful resources available in the form of unused land. A similar sentiment was also expressed at the UN World Population Conference in 1974, where the government underscored the need for a larger population, contending that "people... were a development asset", and that the priority

[7] Nag (1980), Dyson and Murphy (1985) found a similar situation at the onset of a sustained fertility decline in historical as well as contemporary populations. This was an almost universal relatively short but still noticeable rise in birth rates before the fertility transition actually took off.

[8] These practices include social and cultural behaviours to do with the timing of marriage/sexual activity, the length of infant breastfeeding, which acts as a natural contraceptive up to a point, and norms about the temporary cessation of sexual activity at several life cycle stages, such as post-partum abstinence, and norms about widow remarriage.

[9] In 1965, the official stand of the government was the "belief" that Tanzania could benefit from a larger population (UN, 1978, 12).

was "to ensure that the productive age group is constantly replenished by the children … born today" (cited in Oucho and Mtatifikolo, 2009). Despite the above, some sectoral ministries, such as education, health, and agriculture, did express concern about the need to explicitly address the population question in relation to the delivery of supplies and services (Oucho and Mtatifikolo, 2009). For example, the programme on maternal and child health and family planning (MCH/FP) under the Ministry of Health has a long history of explicitly addressing the dangers of unchecked (high) fertility, but from mainly from the perspective of maternal and child health.[10]

The National Population Policy first implemented in 1992 and revised in 2006, together with the 2003 Zanzibar Population Policy, have the overarching theme of reducing fertility levels through various objectives[11]. While education-related policies have long-term effects, those on reproductive health are designated to have both short-term and long-term effects. Both the National Population Policy and the Zanzibar Population Policy, including the national policies on reproductive health, recognize one fundamental right – the right to sexual and reproductive health and unrestricted and universal access to sexual and reproductive health care information and services, including family planning programmes. Family planning programmes are seen as not only reducing fertility but also as improving the health of women and encouraging individual choice as outlined in the ICPD plan of action of 1994. This perspective is anchored in the change from family planning (*uzazi wa mpango*) to reproductive and child health (*afya ya uzazi na mtoto*) (Richey, 2008).

The Tanzania Development Vision 2025, whose major aims are to achieve a high-quality livelihood for the people, attain good governance through the rule of law and develop a strong and competitive economy, is still concerned with major issues on the immediate post-independence agenda – fighting ignorance, disease and poverty. Two major objectives in the Vision that are likely to be associated with fertility levels and differentials are the provision of quality primary health care for all (including quality reproductive health services) and education (universal primary education) as a fundamental goal. Education is seen as a path to poverty reduction and the improvement of human capabilities and consequently the government of Tanzania abolished primary school fees in 2000 to increase access. Given the relationship between education and fertility, this a major policy instrument likely to lower fertility levels.

In the recent world database (maintained by UNDESA) on national population policies, the government has since 2001 indicated that current fertility levels (the key driver of population growth rates) is too high. The government has also since 2005 expressed major concern about the level of adolescent fertility. The continued high population growth rate in the country is driven largely by high fertility due early initiation of parenthood. The present situation raises critical but interrelated concerns: the slow pace of fertility decline; large regional differentials, with nearly half the regions having pre-transition fertility levels (TFR of 6 and above); unchanging

[10] Richey (2008) indicates that Tanzania has an ambivalent history concerning family planning. Although one of the first countries in sub-Saharan Africa to introduce family planning services through the 1959 establishment of what would become the Family Planning Association of Tanzania (UMATI), it was one of the last countries in Africa to prepare a comprehensive national population policy.

[11] The current population policy indicates five underlying factors contributing towards high fertility, which is rooted in the socio-cultural value system. These include: the value of children as a source of domestic and agricultural labour and old-age economic and social security for parents; male child preference; low social and educational status of women in society, which prevents them from taking decisions on their fertility and using family planning services; large age differentials between spouses, which constrain communication on issues related to reproductive health; socioeconomic and gender roles, including early and nearly universal marriage for women (United Republic of Tanzania, 2006).

fertility among the poor and those with no or low education; and high adolescent birth rates. Although the THDR 2017 theme, 'Social Policy in the Context of Economic Transformation, recognizes the need for a policy framework that nurtures the possibility of harnessing the demographic dividend, the impetus of these challenges is that the demographic dividend cannot be attained unless the rate of fertility decline is faster than the present rate. For example, the low level of labour force participation is probably due to high birth rates. Newhouse and Wolff (2013) show that the birth of a child contributes to a decline in women's employment in Tanzania (cf. Canning et al., 2015). As indicated in the THDR 2014 (ESRF, 2015, 20), a proper mix of policies must be in place to fully and positively exploit the demographic window of opportunity, but such policies must consider accelerating fertility decline in all regions.

A fundamental determinant of fertility in Tanzania is education, especially that of women. In Tanzania the rapid increase in the proportion of women with secondary and above levels of education since 2000 has been the main driver of differences in fertility (Agwanda et al., 2015). Thus a major policy instrument to reduce fertility levels in the country is increasing the proportion of women who complete secondary education, which is also one of the main policy thrusts articulated in the National Population Policy of 2006. The use of modern methods of contraception and by extension increasing access to reproductive health is likely to accelerate the decline in fertility. However, intervention programmes need to be targeted because fertility among the poor or those with no or low education is unchanging. Secondly, a number of regions (about 15 out of 30) with persistently high fertility have either unchanging levels or change that is too slow. The major reasons behind high fertility in these regions are high unmet need for family planning, preference for large families, low levels of education, especially among women, and in some cases low urbanization.

Currently, the level of unmet need for all methods is 25% while unmet need for modern contraception is 32%. If all those who want to use any family planning method were to use, then contraceptive prevalence (CPR) would be 58% and CPR for modern methods would be 46% (Agwanda and Amani, pp. 17–18).That is, if all women who would like to use any method of contraception were able to do so then the TFR for the country would be about 3.2[12] instead of the current TFR of 5.4. A study by Weinberger and Coast (2011) also suggests that meeting the existing unmet need could result in TFRs as low as 2.5 in urban areas and 4.0 in rural areas. Meeting unmet need for contraception is likely to increase the use of contraception and hence accelerate fertility decline (Bongaarts, 2011). The government target is to raise CPR to 60% by 2030, which would bring about near replacement fertility (United Republic of Tanzania, 2006). But the national-level measures of CPR and TFR mask important, policy-relevant differential patterns. The continued wide and growing regional differences suggest the importance of targeting programmes and resources to underserved rural communities and regions to address the unmet need for family planning.

To change fertility levels is complex because it involves changes in the demand for children (Bongaarts and Casterline, 2013), the diffusion of new attitudes about family planning and greater accessibility to contraception provided by family planning programmes (Cleland and Wilson, 1987; Potts, 1997). Ross and Stover (2001) have shown that family planning programmes make an important contribution to contraceptive practice, which in turn causes fertility change irrespective of social setting. From the perspective of Coale's 1973 hypothesis, adoption of fertility limitation practices must be "within the calculus of conscious

[12] This estimate is obtained from simulations based on Ross and Frankenberg's (1993) regression equation relating CPR and expected level of fertility, that is, TFR = 7.2931-0.07CPR.

choice" and the technical means must be available and acceptable. The primary factor that is likely to be responsible for further fertility declines is the unconstrained access to fertility regulating technologies (Potts, 1997).

Westof et al. (2013) show two main predictors of decline in the number of children desired by couples, namely, increase in years of schooling and decrease in the percentage of the population residing in rural areas. They suggest that other than education and urbanization, the other important factor that is likely to influence demand for children is mass media exposure. The current National Population Policy does not explicitly emphasize interventions aimed at reducing desired family size (Agwanda and Amani, 2014). The demand for children and use of family planning services are also related to social norms in fertility decision making, which Bongaarts and Watkins (1996) highlight the need to design policies and programmes to address. Relevant targeted information, communication and education strategies are important instruments to alter determinants of high fertility and low uptake of contraception. Critical factors are: (1) the role of political leadership in discussing fertility and family size and (2) the use of media messages to alter behaviour (Westoff and Koffman, 2011).

Urbanization is thought to have not only a direct impact on fertility behaviour but also an important influence on other major social and economic determinants of fertility transition (Martine et al., 2013). Martine et al. (2013) further argue that from a policy standpoint, urbanization's indirect contribution to fertility decline is ultimately very important, although the influence of urbanization processes on fertility may be different in different contexts.

The level of unmet need for contraception reflects growth in demand for family planning services in the face of service delivery constraints that may also include, among other factors, poor quality of care. Within the context of service delivery, quality of care is particularly important since services must be appropriate according to both health standards and client expectation. Increase in uptake of contraceptive methods is also dependent on the availability of methods through public and private investments in family planning service delivery. Currently, government outlets are still the major source of supply of contraceptives, as indicated in the various demographic and health surveys for Tanzania (Agwanda and Amani, 2014). It is therefore important to lobby for the inclusion of the private sector in contraceptive supply in line with the National Population Policy of 2006. The policy proposes inclusion of private sector and nongovernmental actors in the provision of reproductive health services and in particular, family planning services.

3.3 Health and Mortality

For economic transformation to take place and improve human well-being, the health needs of a population must be taken into account because health yields economic dividends. First, healthy people are more productive, and healthy infants and children can develop better and become productive adults. A healthy population can also contribute to a country's economic growth. This section examines trends and patterns of mortality and morbidity in the country.

Mortality refers to deaths that occur within a population. The likelihood of dying during a given time period is linked to many factors such as age, sex, race or ethnicity, occupation, and social class. However, the incidence of death can reveal much about a population's

standard of living and quality of health care. Therefore, several indicators used to assess human development relate to mortality, and indicators of mortality often act as inverse measurements for the health of populations. Poor health poses significant threat to the economy, as untimely and unnecessary death, particularly during adulthood, results in a loss of any social and economic investment made in the deceased.

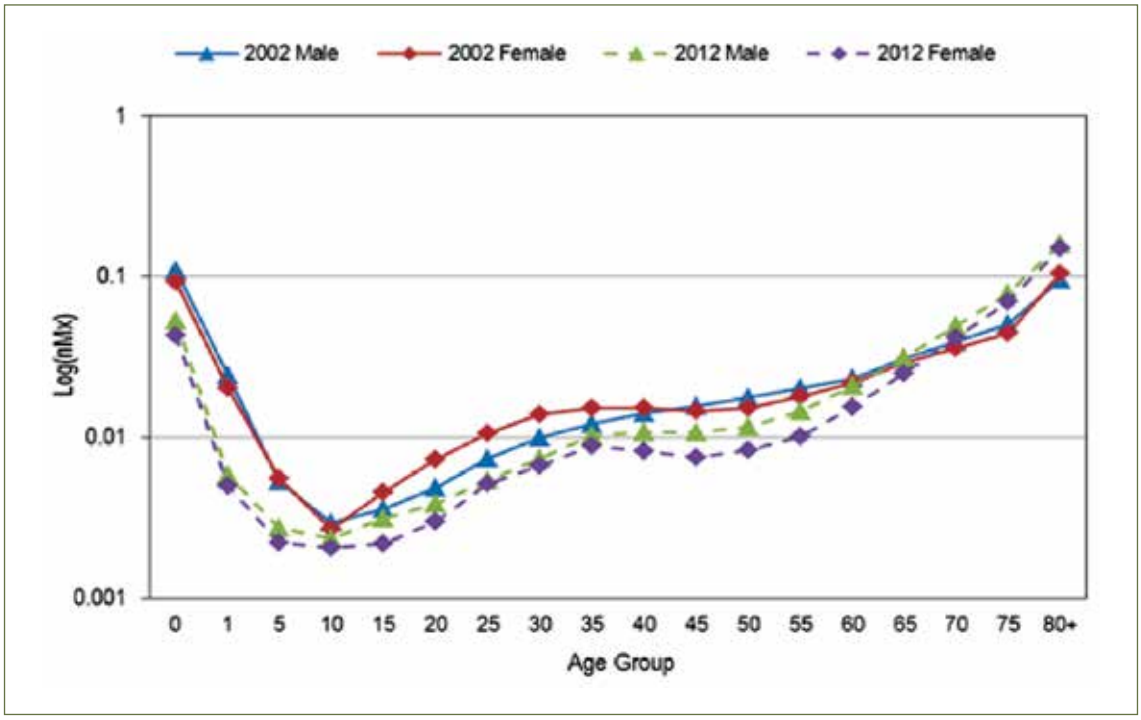
Childhood mortality is a key indicator of a country's socioeconomic well-being, as well as of the quality of its medical services in general and its public health services in particular. An increase in childhood mortality is, therefore, not only undesirable, but an indicator of a decline in general living standards. Infant and under-5 mortality rates are useful indicators for assessing progress in overall national development. Moreover, mortality is one of the factors that influence population change. Demographic transition theory, supported by a number of studies, indicates that fertility declines only after mortality has declined.

Mortality is the result of a complex web of determinants at many levels and because determinants of mortality vary by age, no single framework has been used to describe trends and determinants.

3.3.1 Overall Mortality

Figure 3.5 shows trends in age-specific mortality rates by sex and therefore summarizes the mortality situation that prevails across all age groups, from children to the elderly. Trends in age-specific mortality rates show general improvement in mortality for both sexes at all ages except at age 70 and beyond. Female mortality was lower at all ages in 2012, unlike in 2002 when the female mortality rate was higher between ages 10 and 40 – the peak childbearing ages.

Figure 3.5: Trends in age-specific mortality rates



Source: United Republic of Tanzania, 2015d.

3.3.2 Life Expectancy at Birth

Life expectancy at birth is a useful summary measure of overall mortality since it summarizes the mortality situation that prevails across all age groups. There has been a steady increase in expectation of life over the decade. Life expectancy at birth has increased by about 10 years since the mid-2000s to an average of 60 years for men and 64 years for women (Table 3.5). The increase was slightly higher for women, whose life expectancy has increased by about 25%. For Tanzania as a whole, there has been a marginal increase in life expectancy; however, this masks the rural–urban change. In Tanzania Mainland, the change in life expectancy is higher in rural areas (27%) compared with urban (6%) for both sexes. In Zanzibar, the largest change was in the urban areas.

Life expectancy is substantially higher in Tanzania Zanzibar compared with Tanzania Mainland. In all areas, rural areas have higher life expectancy than urban areas. The rural advantage began much earlier in Zanzibar (2002); however, in 2012, the rural advantage was pronounced for males but not females in Tanzania Zanzibar. For Tanzania Mainland, the rural advantage occurred in 2012 but not in 2002 for both sexes. The increase in life expectancy especially at birth reflects improved nutrition, better hygiene, access to safe drinking water, effective birth control, and immunization and other medical interventions (Clark, 1990).

Table 3.5: Trends in life expectancy at birth, 2002–2012

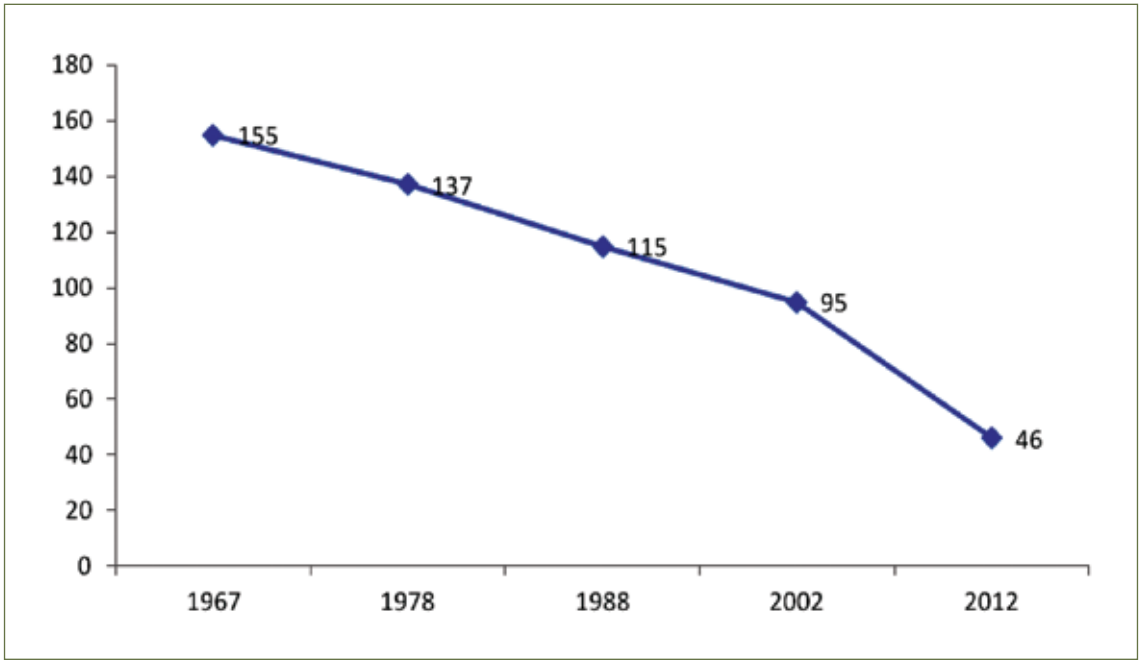
	Life Expectancy at Birth, 2002			Life Expectancy at Birth, 2012		
	Total	Male	Female	Total	Male	Female
Tanzania	50.9	51.0	51.0	61.8	59.8	63.8
Rural	50.0	49.9	50.4	62.4	60.3	64.4
Urban	56.8	55.8	58.8	59.7	57.7	61.7
Tanzania Mainland	50.4	50.8	51.0	61.7	59.7	63.7
Rural	49.4	49.4	51.2	62.6	60.6	64.6
Urban	56.4	55.5	58.8	59.9	58.0	61.8
Tanzania Zanzibar	59.0	59.7	60.3	65.2	63.3	67.1
Rural	58.7	58.0	59.9	65.5	64.0	66.9
Urban	56.8	55.5	57.8	64.9	62.2	67.6

Source: United Republic of Tanzania, 2015d.

3.3.3 Childhood Mortality

Childhood mortality is the death of children between birth and fifth birthday. Since factors influencing childhood mortality depend on age, it is important to distinguish mortality before age 1 and mortality across other age groups. Infant mortality refers to the death of children born alive before their first birthday. Under-5 mortality refers to deaths of children born alive before their fifth birthday. Mortality during childhood is an important indicator of children's well-being and, more broadly, of socioeconomic development (United Nations, 2012). While mortality stagnated in the early part of the last decade, the country has made impressive gains in child survival in the last decade (Figure 3.6). For example, infant mortality rates declined by about 52% between 2002 and 2012, compared with 17% between 1988 and 2002.

Figure 3.6: Trends in infant mortality rates (IMR)



Source: United Republic of Tanzania, 2015d.

A notable feature of the most recent period is that infant mortality has been higher in urban areas compared to rural since 2010 (Table 3.8). The per cent decline was higher in rural compared urban areas. Thus the high observed childhood mortality decline in the country was due to decline in rural areas.

Table 3.6: Trends in infant and under-5 mortality rates by rural and urban areas, Tanzania, 2002 and 2012 Censuses Administrative Area

	Infant mortality rate			Under-5 mortality rate		
	2002	2012	% change	2002	2012	% change
Tanzania	95	46	52	153	67	56
Rural	99	46	54	162	66	59
Urban	78	49	37	123	71	42
Tanzania Mainland	95	46	52	154	67	56
Rural	99	45	55	162	65	60
Urban	78	48	38	123	70	43
Tanzania Zanzibar	89	46	48	141	67	52
Rural	98	46	53	159	67	58
Urban	67	48	28	105	71	32

Source: United Republic of Tanzania, 2015d.

Spatial Variation in Childhood Mortality

The summary presentation of four decades of changes in childhood mortality obscures important secular trends that have occurred across different groups. Infant mortality rate

(IMR) continues to be lower in the northern regions of Arusha and Kilimanjaro (Table 3.9), whose IMR is below 30 per 1000. The regions with highest IMR in Tanzania Mainland continue to be Kagera (61.8), Iringa (59.8), Katavi (58.2), Rukwa (54.8), Njombe (54.5), Pwani 51.3) and Mara (50.7). IMR in Kagera is slightly more than two times higher than that of Arusha. In Zanzibar, there is, however, less variation. Mortality is highest in Kusini Unguja (56.8) and is only 1.3 times that of the lowest, Kaskazini Unguja with an IMR of 42. Although IMR is lower in Zanzibar compared with Mainland, the main reason stems from larger regional variation in Mainland. Despite these variations, all regions have had substantial reductions in infant and under-5 mortality.

In all regions, IMR accounts for over two-thirds of under-5 mortality. In places with low under-5 mortality such as Arusha and Kilimanjaro, IMR accounts for slightly over three-quarters of under-5 mortality. Tanzania, unlike neighbouring countries, has managed to display small variations in mortality and in particular IMR despite regional differences in socioeconomic development. Further declines in childhood mortality shall only occur with further declines in IMR and by extension neonatal mortality (Agwanda and Amani, 2014). This can be achieved with enhanced maternal and child health programmes, especially during antenatal and intra-partum delivery. As noted in Background Paper Number 7, infant mortality for children of women with lower education rose in the 1990s and then declined (Agwanda and Amani, 2014). However, the difference in mortality by level of education of the mother has narrowed considerably, but differences by household wealth quintile have persisted (Agwanda and Amani, 2014).

Early studies by Henin (1978) indicated that the prevalence of malaria determined regional differences in childhood mortality. It is still probable that spatial variations in mortality may be due to ecological differences, particularly that of malarial infections. However, Jones et al. (2003) indicated that primary health care programmes can eliminate up to 65% of childhood deaths. A key question that needs to be pursued further is whether the changes in childhood mortality are due to improved child survival programmes.

Mujinja and Kida (2014) report that rapid declines in childhood mortality can be attributed to the health sector reforms over the past decade and in particular, improvements in child nutrition, prevention and treatment of malaria, high immunization coverage and improvements in prevention of HIV incidence. Their conclusion is supported by Mboera et al. (2015), who examined the performance of the strategic plan for health in 2009–2015. They reported that the implementation of the strategy was encouraging, with major progress made in child mortality and nutrition and coverage of interventions to improve child health and control HIV, tuberculosis and malaria, but only minor improvements in maternal and neonatal health. They also noted geographical variations in the performance of health services. Health services in western regions were relatively weak and those in eastern and northern regions relatively strong. A key finding from the study is that some regions performed markedly better than might have been predicted from their level of socioeconomic development (Mboera et al., 2015).

Table 3.8: Trends in infant mortality rate by region (census data)

	1978		1988		2002		2012	
Region	**IMR**	**Rank**	**IMR**	**Rank**	**IMR**	**Rank**	**IMR**	**Rank**
Kilimanjaro	76	1	67	1	41	1	25.8	1
Arusha	108	2	75	2	46	2	27.3	2
Dares Salaam	108	3	96	3	69	3	28.9	3
Tanga	112	4	101	4	70	4	29.2	4
Urban/West	112	5	105	5	79	5	36.5	5
South Unguja	120	6	106	6	82	6	36.9	6
Pwani	121	7	110	7	83	7	37.0	7
South Pemba	123	8	113	8	87	8	37.2	8
North Pemba	128	9	113	9	87	9	37.7	9
North Unguja	132	10	113	10	92	10	38.0	10
Dodoma	133	11	115	11	92	11	40.3	11
Kagera	133	12	115	12	95	12	40.4	12
Singida	137	13	119	13	98	13	40.7	13
Mwanza	139	14	120	14	100	14	40.8	14
Morogoro	140	15	123	15	101	15	40.8	15
Tabora	140	16	124	16	101	16	41.5	16
Mara	140	17	125	17	101	17	42.4	17
Ruvuma	145	18	125	18	102	18	42.6	18
Shinyanga	150	19	130	19	103	19	43.4	19
Lindi	151	20	130	20	104	20	43.4	20
Iringa	152	21	130	21	106	21	44.2	21
Mtwara	161	22	131	22	110	22	45.5	22
Mbeya	161	23	132	23	113	23	45.6	23
Kigoma	163	24	138	24	114	24	46.2	24
Rukwa	170	25	140	25	126	25	49.0	25
Manyara	N/A		N/A	N/A	129	26	49.5	26
Kusini Unguja	N/A		N/A	N/A	N/A	N/A	50.1	27
Katavi	N/A		N/A	N/A	N/A	N/A	52.0	28
Iringa	N/A		N/A	N/A	N/A	N/A	52.7	29
Kagera	*N/A*		*N/A*	*N/A*	*N/A*	*N/A*	*56.4*	*30*

Source: United Republic of Tanzania, 2015d.

Major Causes of Childhood Mortality

The WHO[13] (2015) reported that six conditions account for about 70% of all child deaths. Acute lower respiratory infections, mostly pneumonia, account for 19%; diarrhoea, 18%; malaria, 8%; measles, 4%; HIV/AIDS, 3%; and neonatal conditions, mainly pre-term birth, birth asphyxia, and infections, 37%. The relative contribution of HIV/AIDS to the total mortality of children under 5, especially in sub-Saharan Africa, has also been increasing steadily. Malnutrition is a factor in more than half of the children who die after the first month of life.

[13] http://www.who.int/pmnch/media/press_materials/fs/fs_mdg4_childmortality/en/.

According to World Health Statistics 2015,[14] neonatal deaths account for 40% of under-5 deaths in Tanzania (WHO, 2015), of which birth asphyxia accounts for 29% (Agwanda and Amani, 2014). The leading cause of under-5 deaths is still malaria (19%) followed by pneumonia (13%).

3.3.4 Adult Mortality

The disease burden from non-communicable diseases among adults – the most economically productive age span – is rapidly increasing in developing countries due to aging and health transitions. Therefore, the level of adult mortality is becoming an important indicator for the comprehensive assessment of the mortality pattern in a population.

Adult and in particular maternal mortality rates are key indicators of the health status of a population. Adult mortality is also highly correlated with the level of development, just as infant mortality is (UN, 2012). Adult mortality is often measured by the probability of dying between the ages of 15 and 60 and captures the risks of mortality affecting young and middle-aged adults – that is, the probability of a 15-year-old dying before celebrating the 60th birthday (denoted by ${}_{45}q_{15}$). According to world mortality reports of 2011, the male-to-female ratio of ${}_{45}q_{15}$ of say 1.5 means that men are 50% more likely to die between the ages of 15 and 60 than are women (UN, 2012). Most deaths during this period are considered preventable, such as through changes in risk behaviours (e.g., tobacco use) or through medical intervention (e.g., early detection and treatment of cervical cancer) (Salomon et al., 2013).

Table 3.10 presents the probability of dying between ages 15 and 60. For every 1000 males reaching age 15, 322 do not reach the 60th birthday; however, among females reaching age 15, 259 do not reach the 60th birthday. Data from Tanzania Zanzibar shows higher survival chances than Tanzania Mainland. The adult mortality indicators also show higher survival chances among rural communities than in urban areas. Again female advantage is shown everywhere; in all Tanzania, men are 25% more likely to die compared with women, but female advantage is more pronounced in rural areas and in Tanzania Zanzibar.

Table 3.9: Probability of dying between age 15 and 60 (${}_{45}q_{15}$)

	All			Urban			Rural		
	Male	Female	M/F ratio	Male	Female	M/F ratio	Male	Female	M/F ratio
Tanzania	0.322	0.259	1.25	0.361	0.298	1.21	0.311	0.244	1.28
Tanzania Mainland	0.325	0.261	1.24	0.357	0.296	1.20	0.307	0.243	1.27
Tanzania Zanzibar	0.234	0.179	1.31	0.240	0.172	1.40	0.224	0.170	1.32

Source: Computed from United Republic of Tanzania 2015d, health and mortality monograph.

3.3.5 Maternal Mortality

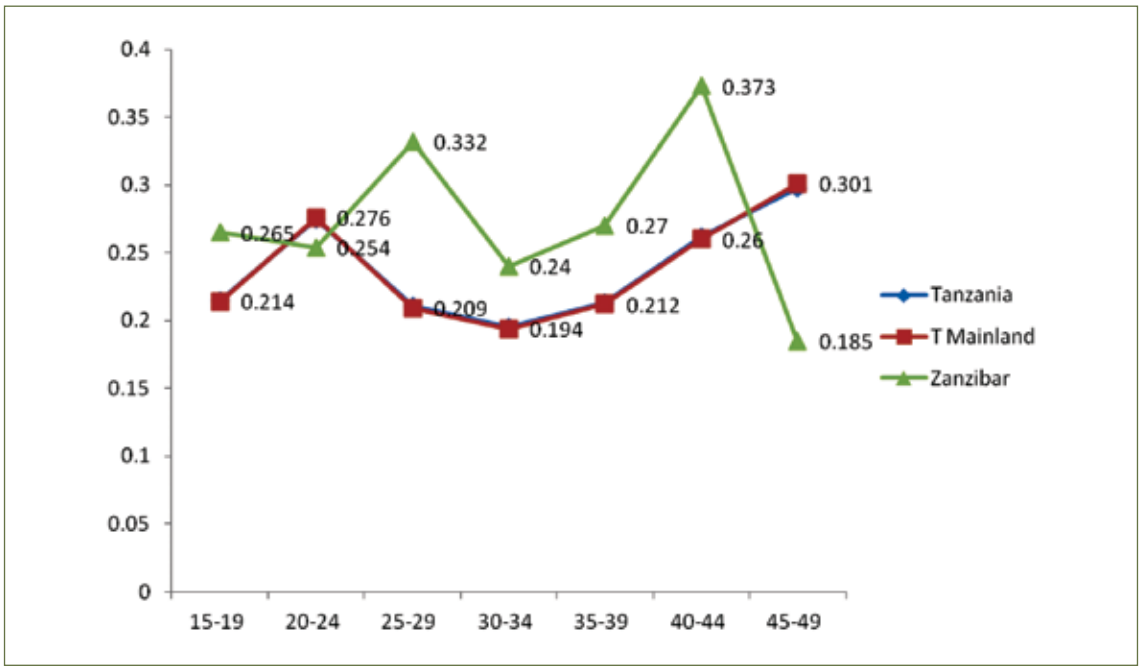
The reduction of maternal deaths is a core issue with regard to reproductive health rights. Maternal death is one of life's most tragic outcomes because the irony of this cruel death is that almost all is entirely preventable given proper medical surveillance and interventions.

[14] http://www.who.int/gho/publications/world_health_statistics/2015/en/, accessed 17.03.2016.

According to recent census estimates, pregnancy-related deaths account for about 27[15]% of female deaths in age bracket 15–49 at the national level (United Republic of Tanzania, 2015d). The maternal mortality ratio (MMR) for all of Tanzania was estimated at 432 maternal deaths per 100,000 live births. The MMR for Tanzania Mainland is 434 deaths per 100,000 live births and is significantly higher than the estimate for Tanzania Zanzibar (350 deaths per 100,000 live births).

Tanzania Mainland accounts for 98% of total maternal deaths in the country[16]. However, when maternal deaths are compared to total deaths for women of reproductive age, the proportion of maternal deaths relative to total deaths is much higher in Zanzibar (see Figure 3.7). This implies that maternal mortality, though low in Zanzibar, accounts for a substantial proportion of female deaths among the women of reproductive age.

Figure 3.7: Proportion of maternal deaths to total adult female deaths by age



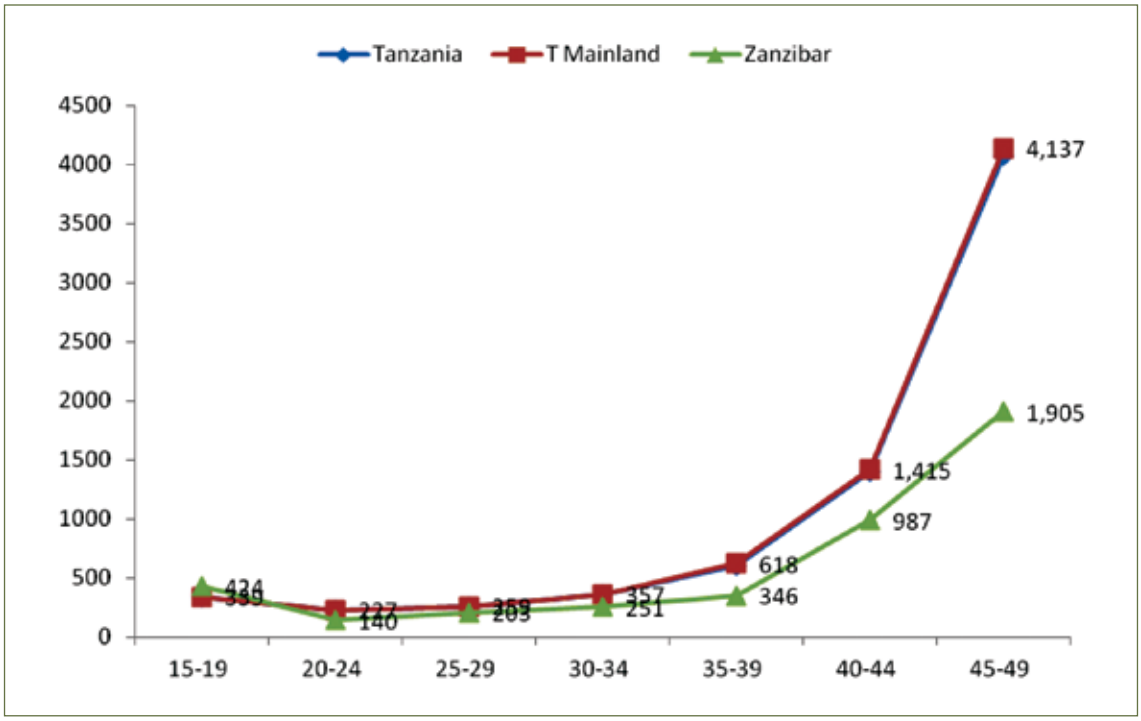
Source: United Republic of Tanzania 2015d.

Figure 3.8 shows the age-specific maternal mortality ratios. Risk of maternal mortality is much higher at older ages, as expected. The major difference between estimates for Tanzania Mainland and Tanzania Zanzibar is mortality at older ages (beyond age 30).

[15] There are contradictory estimates from the 2012 Population and Housing Census analytical volume on mortality and health. In one table, pregnancy-related deaths as a percentage of the total death rate is recorded as 27% while maternal deaths as a percentage of the total female deaths in the age range is reported as about 24% in another table. It is difficult to distinguish between the two from census data if no follow-up through the use of verbal autopsies was done to ascertain that the deaths were actually maternal. The number of deaths reported as pregnancy-related in censuses and surveys is often taken as an approximation of the number of true maternal deaths unless deaths reported in the households are followed by verbal autopsies.

[16] It was estimated that 8271 maternal deaths occurred in the one-year period before the census date.

Figure 3.8: Age-specific maternal mortality ratios



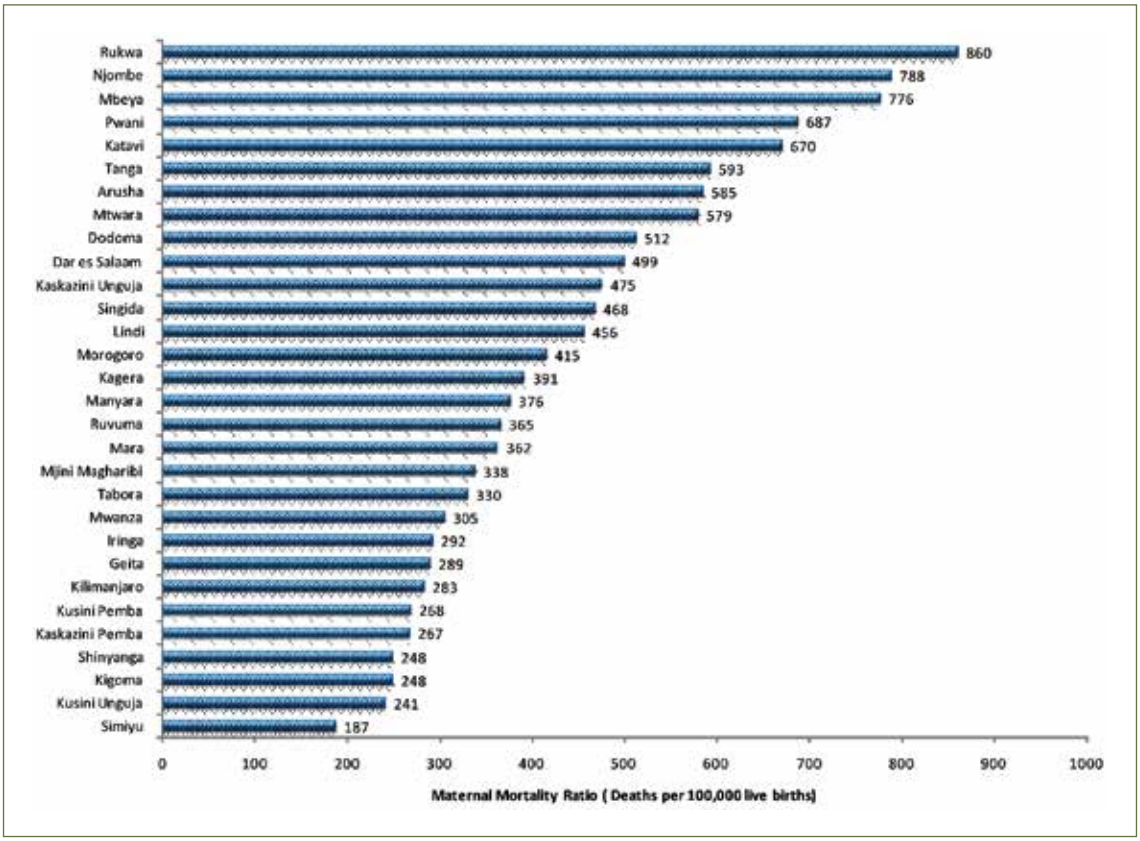
Source: United Republic of Tanzania, 2015d.

The urban MMR is about 443 deaths per 100,000 live births and is much higher than the rural MMR of about 336 deaths per 100,000 live births. This further indicates increased urban penalty with regard to survival chances. The national estimates are within the range estimated from the 2010 TDHS maternal mortality rate (454 per 100,000 live births) with 95% confidence intervals being 353 to 556 deaths per 100,000 live births. These recent estimates suggest that some progress is being made towards reducing maternal mortality in the country but that the targets set for the United Nations Millennium Development Goals (MDGs) are still far from being achieved.

3.3.6 Spatial Variations in Maternal Morality

Figure 3.9 shows the spatial variations in maternal mortality by region. Wide variations exist, with mortality in the Rukwa region being 4.6 times higher than that of Simiyu. The ten regions with the highest burden of maternal mortality are Rukwa, Njombe, Mbeya, Pwani, Katavi, Tanga, Arusha, Mtwara, Dodoma and Dar es Salaam. According to estimated MMRs, maternal deaths in these regions account for 52% of total maternal deaths in the country. Simiyu has the lowest MMR, which is expected; however, the low MMR of other regions, notably Kigoma, Shinyanga and Kaskazini Pemba, is surprising. These regions have high IMR and high TFR, which is often associated with high maternal death.

Figure 3.9: Maternal mortality ratio by region 2012



3.3.7 HIV/AIDS

The AIDS epidemic is one of the world's most significant current public health and development crises, particularly for countries in sub-Saharan Africa. HIV and AIDS also have significant effects on maternal and child health. The epidemiological profile of HIV/AIDS is unique compared to other infectious diseases. First, HIV has a very long incubation period, during which an HIV-positive person is mostly symptom-free yet still infectious. Secondly, in the absence of treatment, it is almost always fatal; thus the level of incidence and prevalence today shall determine the future mortality impact of the epidemic. Third, while most infectious diseases affect the very young or the very old disproportionately, HIV infections and AIDS deaths are concentrated among adults of reproductive and working age.

HIV infection is more aggressive among children than adults, and almost half of infected children die by 2 years (UNAIDS, 2010). Mortality for children born to HIV+ mothers is higher than among children born to HIV- mothers (UNAIDS, 2010). In the period 2010–2015, slightly over 50% of risk of adult mortality in Tanzania was expected to relate to AIDS. Though small, AIDS prevalence is also likely to depress longevity in childhood and it is expected that without AIDS, life expectancy at birth would be four years higher than currently.

Current adult HIV prevalence is about 5% and prevalence is higher among women than among men (6% and 4%, respectively), according to the 2011–12 THMIS (TACAIDS et al., 2013). The HIV prevalence estimate for the age group 15–19 has not changed between the 2007–08 THMIS and the 2011–12 THMIS, and is about 1%. According to TACAIDS et al. (2013), HIV prevalence is markedly higher in Tanzania Mainland than in Zanzibar (5% versus

1%). Regional differences in HIV prevalence are large. Njombe has the highest prevalence estimate (15%), followed by Iringa and Mbeya (9%); Manyara and Tanga have the lowest prevalence (2%). In Zanzibar, all five regions have HIV prevalence estimates at 1% or below. HIV prevalence is higher among women than men in all regions. Prevalence is also higher in urban compared to rural areas for both men and women.

3.3.8 Summary of Key Issues and Implications for Social Policy

The main conclusion from the available data is that there has been a major decrease in mortality, which represents significant progress in regard to human well-being although with an impact on population growth. Tanzania has made progress in bridging the gap in childhood mortality between the poorest and wealthiest groups and between urban and rural areas (Agwanda and Amani, 2014; Mboera et al., 2015). Regions with the lowest childhood mortality rates are also those with the lowest fertility levels, indicating that it is important to bring down the level of childhood mortality before initiating rapid fertility decline (Agwanda and Amani, 2014).

The change in childhood mortality indicators has met and even surpassed targets set by the Ministry of Health and Social Welfare (Mainland) through its Health Sector Strategic Plan II (HSSP II), Zanzibar's target in the 2010 Mpango wa Kupunguza Umaskini na Kukuza Uchumi Zanzibar – (2010 MKUZA II) (United Republic of Tanzania, 2015d). The gains in life expectancy at birth observed over time reflect changes in mortality rates that have occurred across the various age ranges. The gains in life expectancy in Tanzania may be due to improvements in survival of children under 5 years and the survival chances of those who are HIV-positive, and declines in new cases.

Despite these changes, indicators on utilization of maternal and health services from the most recent demographic and health survey (2010 TDHS) show only modest changes. Only half of pregnant women make the mandatory four or more antenatal cares visits, and less than one-fifth of pregnant women make a visit in the first trimester (on-time start of use of antenatal care services). Trends in use of a skilled attendant during delivery did not change between 2004 and 2010. Immunizing children against vaccine-preventable diseases can greatly reduce childhood morbidity and mortality, but vaccination coverage among children aged 12–23 months improved by only four percentage points (71% to 75%) between 2004/5 to 2010.

A notable feature is higher mortality at all ages in urban areas compared to rural areas whereas the utilization of health services is much higher in urban areas compared to rural areas. For example, according to 2010TDHS, 86% of urban children were fully immunized compared with 73% of rural children, and urban women were almost two times as likely as rural women to receive a postnatal check-up less than four hours after birth. A plausible explanation could be the extent of HIV and AIDS infection. Similarly high HIV prevalence may explain high mortality in Tanzania Mainland compared to Zanzibar.

At the national level, the government spends about 7% of its GDP on health, which is still below the Abuja Declaration target of 15%. The cost of health burden on families is still high. The out-of-pocket expenditure on health as a percentage of total health expenditure has been estimated at 32% (UNDP, 2015 – Human Development Report 2014 database).

In general, progress has been made in the implementation of programmes on HIV/AIDS, tuberculosis and malaria; sexual and reproductive health and rights and strategies and the campaign on the reduction of maternal mortality (Mboera et al., 2015). Most significant is the progress in reducing child mortality and new HIV infections over the last two decades. Reports from surveys on malaria and HIV show remarkable progress in the diagnosis, treatment and prevention of both HIV and related infections and malaria (TACAIDS et al., 2013; Mboera et al., 2015). These achievements include scaling up integrated HIV services, an increased number of pregnant women being tested for HIV and AIDS and higher survival rates of ART patients, and the use of insecticide-treated nets, among others (TACAIDS et al., 2013; Mboera et al., 2015). But challenges still remain, as shown by new research on major causes of death and geospatial differences in risk of death. Since more children are now more likely to survive to adulthood, calls have been made for health policy to pay greater attention to the prevention of young adult deaths (Bhat, 2004). Illness and deaths from non-communicable diseases are occurring at earlier ages and affecting adults in their prime income-generating years. A much greater proportion of deaths related to non-communicable diseases occur among people younger than 60 and the poor are more likely to die prematurely than those who are better off. The changes in health transition for most African countries, as in Tanzania, are the conditions where there is high prevalence of communicable diseases amid rising incidence of non-communicable disease.

3.4 INTERNAL MIGRATION

Migration influences the population structure, composition and size within a country. At the national level, international migration is a key component of national population change. Besides being a key component of population change, migration has risen to the top of the political and social agenda across all of Africa, and researchers on migration have advocated for the greater inclusion of migration issues in development planning. The African Union Strategic Policy Framework on Migration in Africa encouraged member states to integrate migration and development policies, particularly poverty-reduction strategies, in their national development plans.

3.4.1 Internal Migration Patterns

Internal migration during pre-independence was largely determined by colonial policies and practices. These included tax systems that required cash payments and therefore necessitated wage work, and cash-crop production largely monopolized by settler farmers (Eicher and Baker, 1984; DFID, 2004). As a result migrations patterns were highly regulated. In the post-colonial era, these movements have been supplemented by increasing rural–urban migration within countries for employment or to earn a livelihood (DFID, 2004). According to the 2012 Population and Housing Census (PHC) analytical report on migration and urbanization, about 7.8 million Tanzanians were living outside their place of birth. Arusha, Morogoro, Dar es Salaam, Mbeya, Tabora, Manyara and Mjini Magharibi in Zanzibar were the regions that continued to maintain positive net migration in both the 2002 and 2012 censuses. These regions, particularly Dar es Salaam City and Mjini Magharibi in Zanzibar, manage to pull more migrants because of strong economic activity. Dar es Salaam had more than two million migrants, representing about 31% of total migrants, because of its strong industrial and commercial base. Similarly, Mjini Magharibi attracted about three-quarters of the total migrants within Zanzibar.

Arusha, Morogoro, Mbeya, Tabora, Manyara and new regions like Katavi and Geita attracted migrants because of their commercial, large-scale plantations, land available for settlement and mining activities. The western regions of Rukwa, Kigoma and Kagera lost a sizeable proportion of their population due to the repatriation of refugees. Out-migration is concentrated mainly in the southern corridor – Lindi, Mtwara, Ruvuma and regions in semi-arid areas such as Dodoma and Singida – and is due to lack of employment opportunities or land for settlement, or an increase in population pressure (high density as in Kilimanjaro, Tanga, Mwanza and Mara). Other regions which experience net out-migration include the periphery areas like Kigoma and Iringa. In Zanzibar, all regions showed net migration loss except for Mjini Magharibi. A summary measure of internal migration is the index of relative representation (IRR[17]) shown in Table 3.10. The dominance of Dar es Salaam and Mwanza, the major urban centres, is clear. The IRR for in-migration shows dominance of Dar es Salaam, Katavi, Mjini Magharibi, Geita, Kusini Unguja, Arusha and Morogoro while Kusini Unguja and Kusini in Zanzibar and Kilimanjaro in Mainland are dominant out-migration areas.

Table 3.10: Index of relative representation (IRR)

Region	Population (number)	Per cent share	Per cent share		IRR	
			In	Out	In	Out
Tanzania	44,928,923	100.0	100.0	100.0	100.0	100.0
Dodoma	2,083,588	4.6	2.2	6.9	47.9	148.5
Arusha	1,694,310	3.8	4.2	3.3	111.7	87.2
Kilimanjaro	1,640,087	3.7	2.1	7.6	57.9	208.5
Tanga	2,045,205	4.6	2.2	6.3	49.4	138.2
Morogoro	2,218,492	4.9	5.4	5.1	109.5	102.5
Pwani	1,098,668	2.4	3.8	4.7	154.0	190.5
Dar es Salaam	4,364,541	9.7	30.8	3.7	317.2	37.7
Lindi	864,652	1.9	1.1	3.1	57.5	162.0
Mtwara	1,270,854	2.8	0.8	3.2	28.3	114.3
Ruvuma	1,376,891	3.1	1.1	2.0	36.7	64.3
Iringa	941,238	2.1	1.3	3.3	61.7	156.5
Mbeya	2,707,410	6.0	3.7	3.1	61.3	51.0
Singida	1,370,637	3.1	2.0	3.6	66.7	116.7
Tabora	2,291,623	5.1	6.4	4.1	125.0	79.7
Rukwa	1,004,539	2.2	1.3	1.4	57.0	63.0
Kigoma	2,127,930	4.7	1.3	4.6	28.3	97.0
Shinyanga	1,534,808	3.4	3.6	7.2	105.6	212.0
Kagera	2,458,023	5.5	2.5	3.0	46.5	55.3
Mwanza	2,772,509	6.2	5.2	7.2	84.7	116.5
Mara	1,743,830	3.9	1.4	3.9	36.6	99.8
Manyara	1,425,131	3.2	2.9	1.6	91.6	49.0
Njombe	702,097	1.6	0.6	2.1	41.1	131.6
Katavi	564,604	1.3	2.7	0.5	214.3	38.9

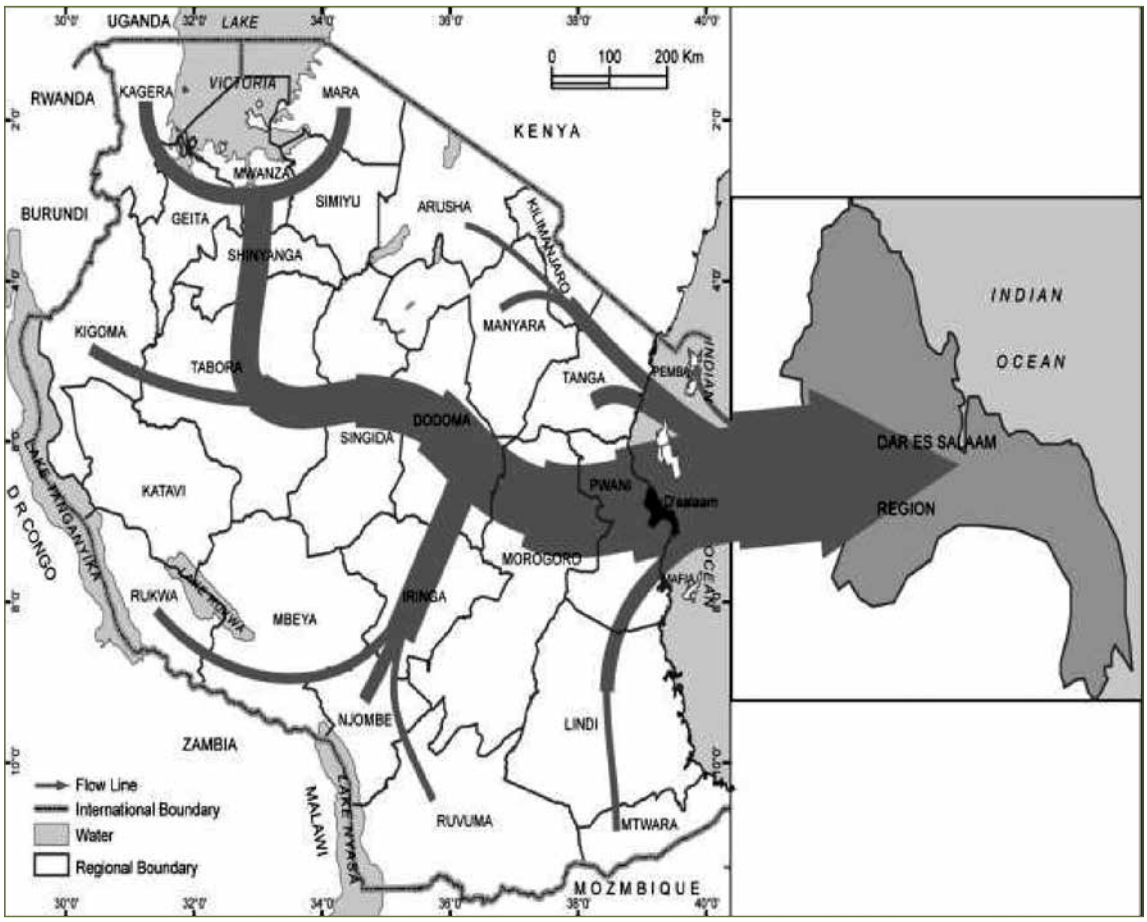
[17] The index of relative representation (IRR) for a region is defined as the ratio of the per cent share of in-migration or out-migration of the region to the per cent share of population of the region, multiplied by 100. The measure is used to estimate the share of migration to the total population size of the region, which controls for the relative population size of the regions while at the same time examining their share of inter-regional in- and out-migration. IRR ranges from 0 to the infinity, but IRR greater 100 shows that the relative share of in- or out-migration of a region is higher than that its share in the country's population or vice versa. For more details see Shyrock and Seigel 1976.

Region	Population (number)	Per cent share	Per cent share		IRR	
			In	Out	In	Out
Simiyu	1,584,157	3.5	1.4	3.0	38.3	84.6
Geita	1,739,530	3.9	5.9	2.1	152.1	53.1
Kaskazini Unguja	187,455	0.4	0.3	0.8	63.9	189.8
Kusini Unguja	115,588	0.3	0.4	0.6	137.4	242.7
Mjini Margaribi	593,678	1.3	2.9	0.5	220.9	37.2
Kaskazini Pemba	211,732	0.5	0.2	0.9	40.6	191.0
Kusini Pemba	195,116	0.4	0.2	1.0	39.7	222.8

Source: United Republic of Tanzania January, 2015e.

As in the case of 2002 census, at the regional level rural-to-urban mobility is still an important driving force of internal migration, though not in all regions. The business headquarters Dar es Salaam is the main pole of attraction for urban migration (Figure 3.14). The migration and urbanization monograph report of the 2012 census by the National Bureau of Statistics indicated that other than movements within regions and to adjacent regions, long-distance migration streams still persist. These movements appear to be caused by mining, settlements and other economic developments such as employment, trade and education, among others.

Figure 3.10: Mobility patterns, 2012



Source: United Republic of Tanzania January, 2015e.

3.4.2 Key Issues on Internal Migration

There is still a challenge in establishing evidence on the causes of rural–urban migration and its consequences for employment. Internal migration is also a demographic factor that significantly influences variations in population growth and unemployment between rural and urban areas in the country. In-migration has accounted for around half the increase in the urban population between 1978 and 2012 in most regions (Wenban-Smith, 2014). Over 70% of the increase in the population of Dar es Salaam between 1978 and 2012 was due to in-migration (Wenban-Smith, 2014). While rural–urban migration is still important in Tanzania, this does not occur in all regions (Wenban-Smith, 2014).

The perceived or actual lack of opportunities in rural areas may be the main push factor for young Tanzanians to move urban centres, but to establish this fact requires tabulation of migration by age and sex, which has not been done in the analytical volumes. The National Population Policy of 2006 recognizes that "Low agricultural productivity, shortage of basic needs and lack of employment and modern amenities in rural areas have forced young people to migrate to urban areas in the hope of meeting their expectations; but the majority of their expectations end in frustration when they fail to realize their dreams" (United Republic of Tanzania, 2006). One consequence of the high rate of urban population growth due to rural-to-urban migration is the rise of unplanned settlements (squatters/slums), which place pressure on available basic services such as housing with secure tenure, safe and reliable water supply, sanitation, access roads, drainage and waste-collection management.

3.5 Urbanization

The transition from a rural to a more urban society reflects an increasing proportion of the population living in settlements defined as urban. The level of urbanization is the percentage of the total population living in towns and cities while the rate of urbanization is the rate at which the population in areas designated as urban grows.

The coastal regions of Tanzania and Zanzibar have a much longer history of urbanization. Urbanization was given impetus due to the caravan trade of the Arabs along the east coast of Africa dating back to the fifteenth century. As early as the sixteenth century, Zanzibar was already recognized as a seaport where merchant ships from Europe called in during voyages to and from the East. The town of Zanzibar, then the centre of the regime on the coast and administered by the sultan of Muscat, is recorded to have been organized in collecting all revenues and dues for submission to the sultan as early as the eighteenth century. It is reported that by 1859, the town was bigger than Mombasa in Kenya.

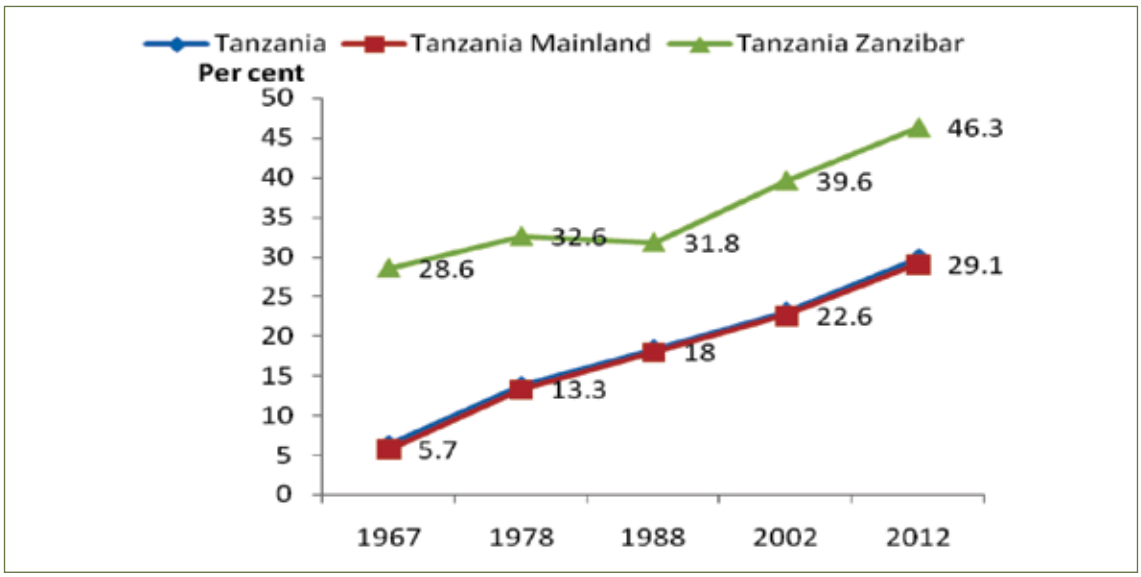
There were few small trading centres during the Arab trade. Kilwa and Bagamoyo towns are also of comparatively long history. Bagamoyo is recorded to have been a major nineteenth-century caravan centre, port and the most important market town on the coast, second only to Zanzibar. During this period, retail trade and other commercial activities were established with the arrival of an Indian community. During the nineteenth century, Tabora, Mpwapwa and Ujiji came to prominence as urban centres partly as a result of the westward penetration of Arab trading activities in East Africa. The coastal parts of the country have a longer history of urbanization than the western part of the country.

3.5.1 Urbanization Dynamics, Trends and Patterns

Globally, 52% of the population live in urban areas, which is a historic milestone. In 2010, sub-Saharan Africa was mainly rural, with a little more than a third of the population (36%) living in urban areas. Much of the policy interest in internal migration has been with respect to rural–urban migration and the rate of growth of urban populations and that of larger cities. Internal migration is a key driver of urbanization in Africa is also becoming increasingly dynamic and complex. A commonly used measure of urbanization is the fraction of the population living in urban areas[18]. The growth rate in the urban–rural population ratio, which is the difference in the growth rates of urban and rural populations, is the same as the proportion of urban population to the total population. If rural and urban populations grow at the same pace, total population increases without affecting the relative share of people residing in rural and urban areas. However, urban populations nearly always grow faster than rural ones due to natural population growth as well as rural–urban migration.

The growth of the urban population in Tanzania is largely caused by rural-to-urban migration; however, some aspects are also due to reclassification of new urban areas. Urban natural increase occurs when there are more births than deaths, while *in-situ* urbanization is the absorption of rural and peri-urban settlements in the spatial growth of a larger adjacent city. Figure 3.11a shows the proportion of the population living in urban areas since 1967. Immediately after independence, Tanzania Mainland had low level of urbanization; however, the rate of urbanization has been more rapid since then. The trends show that in Zanzibar nearly half the population is currently living in urban areas. Between 1967 and 1988 urbanization in Zanzibar was relatively slow and the rate of urbanization almost constant.

Figure 3.11a: Trends in persons living in urban areas as a percentage of total population



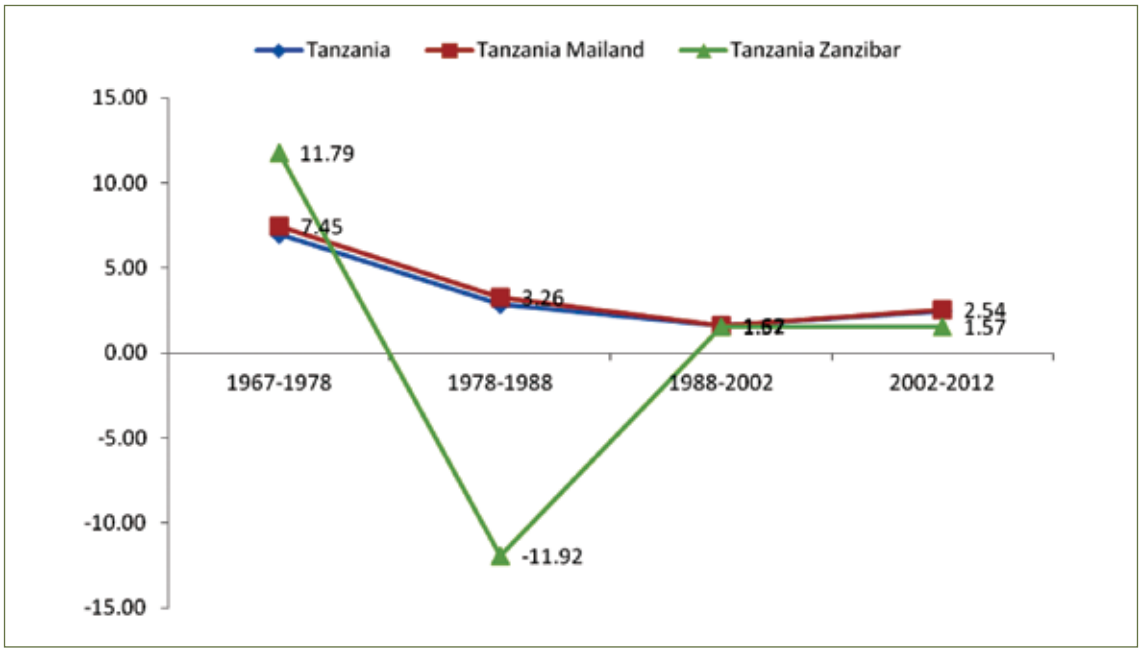
Tanzania 1967, 1978, 1988, 2002 and 2012 Censuses.
Source: United Republic of Tanzania January, 2015e.

[18] Denoting the fraction of population living in urban areas at any time t as PUt; the fraction of population living in the rural areas as PRt, and the urban–rural population ratio represented as URRt. Then, URRt = PUt/PRt, and urban population at any time t, is given by Urbant = PUt /(PUt + PRt). Dividing the numerator and denominator by PRt results in Urbant = URRt /(1+ URRt). The growth rate in the urban–rural population ratio can then be used as a proxy indicator for urban share of population. The growth rate in the urban–rural population ratio, gurr between time t and t+1 expressed as gurr = ln(URRt+1/ URRt) = ln[(PUt+1/ PRt+1)/ (PUt/PRt)]. Simplifying the expression we have gurr = ln(PUt+1/ PUt) –ln([(PRt+1/ PRt).

The rapid growth rate occurred in the 1967–1978 period, with much of the growth being contributed by the urban growth rate in Tanzania Mainland. This growth rate has, however, subsided to about 5% in recent decades, with Zanzibar having slightly lower growth rate. Muzzini and Linderboom (2008) observed that the urban population of Tanzania during the colonial period from 1948–1957 was very low because of the colonial policy of barring Africans from residing in urban areas. After the independence period, the urban population almost quadrupled between 1967 and 2012. The high growth of urbanization in 1978 was the result of political reclassification of rural as urban areas between 1972 and 1978.

Figure 3.11b shows trends in the urban–rural population ratio. Tanzania Mainland has a slowly declining urban–rural population ratio, indicating decline in urban population growth rates. Zanzibar, however, has an erratic pattern. The 1978–1988 intercensal period showed sudden decline and this coincided with a period when the urban growth rate declined from about 3.8% per annum to 2.7% per annum.

Figure 3.11b: Trends in urban–rural population ratio

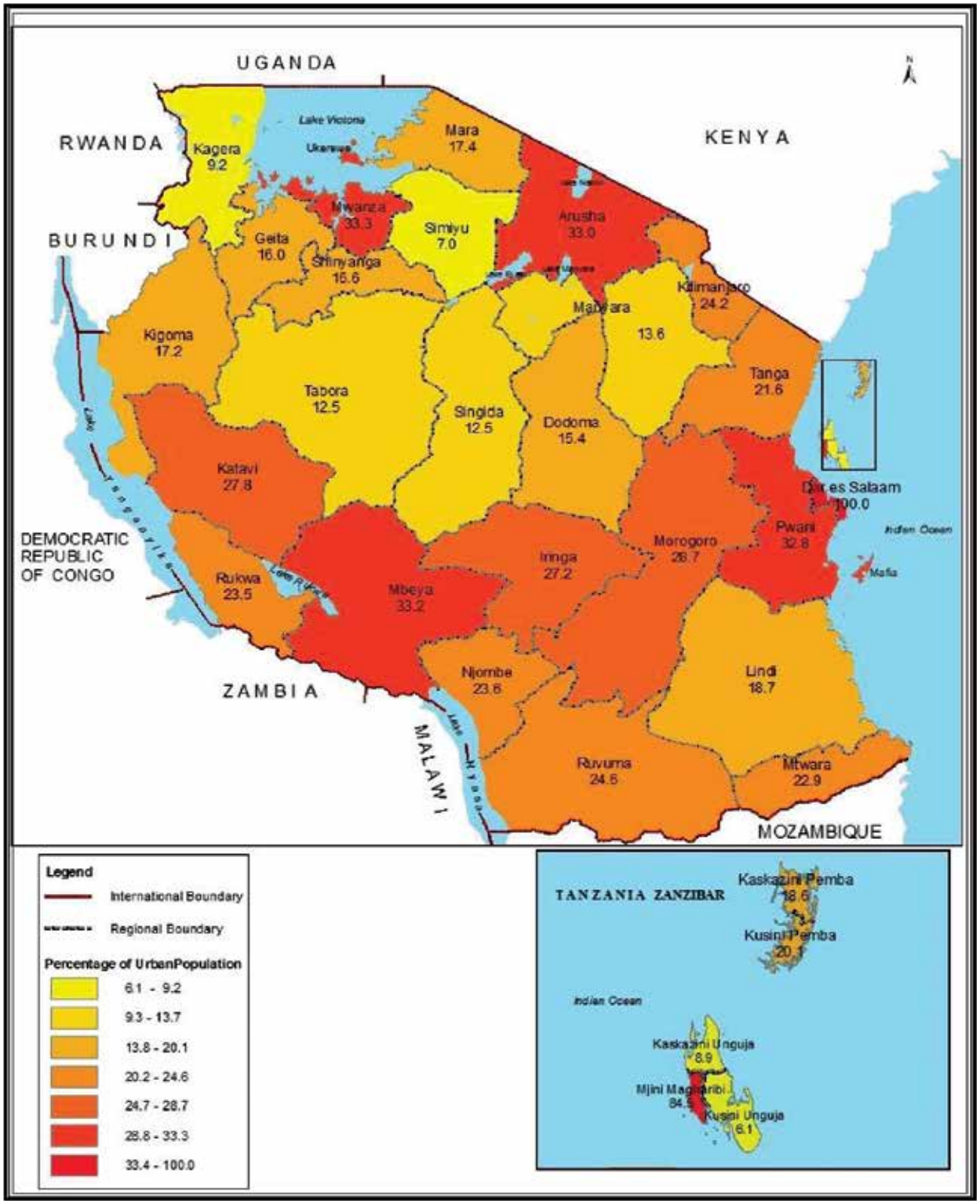


Source: computed from United Republic of Tanzania, 2015e.

3.5.2 Regional Variations in Urbanization

Demographic, social, economic and political variables impact greatly on the urbanization process, resulting in varied urbanization levels, trends and patterns. Being a commercial city, Dar es Salaam is the most urbanized, with its entire population being urban (Figure 3.12). Mjini Magharibi has the next-highest proportion of persons residing in urban areas (84.5%). The lowest proportions were recorded in Kusini Unguja (6.1%) and Simiyu (7.0%). The most urbanized regions after Dar es Salaam in Tanzania Mainland are Mwanza, Arusha, Mbeya and Pwani, at about 33% respectively. The urban centres in these regions have opportunities for further growth. Dar es Salaam contains 10% of the total Tanzania Mainland population and 34% of the total urban population living in Tanzania Mainland. Mjini Magharibi, however, hosts 83% of the total urban population in Zanzibar and 45% of the total population of Zanzibar.

Figure 3.12: Persons living in urban areas as a percentage of total population, 2012



Source: United Republic of Tanzania January, 2015e.

3.5.3 Concluding Issues on Urbanization

Urbanization is considered a powerful force for structural change and income growth (World Bank, 2009), but in countries like Tanzania, the trends appear to fail to realize this potential (Fay and Opal, 2000; Cohen, 2004; Bryceson and Potts, 2006). Economic

growth and the development transformations necessary to support it and enhance the quality of urban life are not occurring at the same rate (Bocquier et al., 2009). This trend of urbanization without growth has been termed perverse urbanization, as it seems to contradict accepted economic models (Bradshaw, 1987). But it can also be argued that shifts in migration patterns are important indicators of urban economic change, and migration flows reveal a great deal about economic patterns since the outcomes of individual decisions made by migrants are strongly shaped by the rural–urban real income gap and the availability and nature of work in both the formal and informal sectors. Migration patterns need to be factored into the understanding of urbanization more often because they signal a very different take on the economic potential and functioning of current urban economies than might be deduced from a scenario of rapid and permanent in-migration.

Urbanization is still a key demographic process for regions that are still largely rural (UNFPA, 2010). Urbanization is part of the demographic transition and transformation of a society to from high to low birth and death rates – a major determinant of sustainable development. In short, the urbanization process in Tanzania can be said to be growing primarily as a result of demographic pressure, of which a major challenge is unprecedented demands on urban services.

A key feature in analysis of urbanization is the definition. In this paper the measurement of urbanization is that adopted by the National Bureau of Statistics. However, Wenbum-Smith (2014) indicates that the definition of urbanization has changed according to different censuses. In the 1967 census, the definition of urban was based on administrative criteria, but this probably coincided pretty well with the larger, denser settlements at that time (many of which were nevertheless quite small). The published Volume X of the 2002 census (NBS 2006) defines urban areas as the localities that are identified as urban areas by the district authority, but Wenbum-Smith (2014) notes that no uniform definition is applied by the various districts in the country. For the purpose of the 2012 PHC, urban population consists of people living in areas legally recognized (gazetted) as urban and all areas recognized by Local Government Authorities as urban. Wenbum-Smith (2014) argues that some of the recorded changes may reflect changing definitions of areas designated as ‘urban’.

3.6 Summary of Key Issues and Implications for Social Policy

Much of the policy interest in internal migration has been with respect to rural–urban migration and the rate of growth in urban populations. Fundamental to social policy are the implications of rural–urban migration trends in relation to social policy. A question critical to future options may also be how migration patterns have been addressed in social policy making in Tanzania over time.

The urban population of Tanzania during the colonial period from 1948–1957 was very low because of the colonial policy of barring Africans from residing in urban areas (Muzzini and Linderboom, 2008). Internal migration during pre-independence was largely determined by colonial tax systems that required cash payments and therefore necessitated wage work, while cash-crop production was largely monopolized by settler farmers (Eicher and Baker, 1984; DFID, 2004), which then defined the nature of mobility. After independence, the explicit focus of the government policy on population matters was the spatial redistribution

of population that began in mid-1960s following the World Bank-sponsored settlement schemes that preceded the massive resettlement of the rural population in registered villages under *ujamaa vijijini* and the *villagization* schemes of the late 1960s to mid-1970s (Oucho and Mtatifikolo, 2009). The government also had a policy on establishing urban growth poles in the late 1960s (United Republic of Tanzania, 2015e). Explicit policies and programmes have also been tried, though with limited success, such as resettling people from high-density areas such as the Kilimanjaro region to low-density areas such as Rukwa and Morogoro in order to ease population pressure in some parts of the country while opening others for productive use (Oucho and Mtatifikolo, 2009).

In recent times, the Land Act of 1999 and its subsequent amendment in 2004, the National Environmental Policy of 1997, the Environmental Management Act of 2004 and the National Population Policy of 2006 have been seen to encourage migration as a tool for reducing land degradation, although there are doubts about the implications at destination areas (United Republic of Tanzania, 2015e). The National Population Policy of 2006 recognizes the increased rural-to-urban migration and its contribution to high urbanization rates. Its major focus is the increased burden on already overburdened public services and social infrastructure and regional variations in population pressure over resources due to the unprecedented migration of people from rural to urban areas.

In past decade, migration has drawn little attention in the national policy framework (Oucho and Mtatifikolo, 2009). The National Population Policy that was adopted in 1992 and revised in 2006 does not explicitly address migration and urbanization, which have reshaped population patterns in the country. These forms of migration as well as urbanization have far-reaching implications for poverty reduction but in a manner unknown given the lack of appropriate migration and urbanization studies. Bloom et al. (2007b) conclude that "as much as urbanization can be a natural by-product of a country's economic development path; it can become a major economic and social problem if effective institutional and policy frameworks are not in place" (Bloom et al., 2007b, 27). This conclusion apparently supports the notions highlighted in the National Population Policy of 2006.

The management of migration is still a critical challenge facing states because it presents one of the most complex inter-relationships of policy concerns for governments. The migration factor brings together a multitude of questions on development. This implies that informed policy decisions require an understanding of both the determinants as well as consequences of migration. But the paucity of migration data and information creates a challenge in collecting evidence. Tanzania, like many other countries in sub-Saharan Africa, does not have sufficient data on migration, particularly data that can support studies on the determinants and consequences of migration. Whether urbanization as a result of migration is positive for development requires further investigation.

Fertility is lower in urban compared to rural areas, and people living in urban residences enjoy better basic services. But the slow pace of mortality decline in urban areas together with the fact that mortality is higher in urban areas compared to rural areas reflects an earlier statement by Gould (1998) that an urban penalty exists in Tanzania. Tanzania can be said to be at an early stage of urban transition, but the extent to which the urban penalty will last is unknown because there is no known evidence on the causes of higher urban mortality rates.

Benciveng and Smith (1997) have argued that rural–urban migration and urban underemployment can create development traps, including severe recessions that may be extremely difficult to escape. They suggest that a key focus should be how policies such as agricultural subsidies or provision of urban services affect migration, urban underemployment and capital formation. On the other hand, in countries with low initial levels of urbanization, rural–urban migration plays a major role in transforming the distribution of the population, as people move to urban centres where new economic opportunities are concentrated. Portes (2002) also cautions that the positive relationship between migration and development is not automatic and requires proactive intervention of the state to create productive infrastructure in rural areas and scientific/technological institutions capable of providing necessary conditions for the developmental potential of migration flows to materialize. Nevertheless, Dyson (2011) indicates that these are commonly held beliefs based on observations of historical changes in Europe and America, which saw urbanization resulting chiefly from shifts in employment that occurred as a result of economic growth. Using data from Sweden and Sri Lanka, Dyson (2011, 50) argues that "there is probably at least as much reason to see sustained economic growth as resulting from urbanization". In other words, shifts in the structure of employment are perhaps better seen as resulting from the demographic processes that bring about urbanization, rather than urbanization being seen as resulting from shifts in the structure of employment as a result of economic growth.

Managing urban growth as part of national development planning should address the challenges and harness opportunities linked to efficiency in provision of needs and lowering of resource-scarcity threats. There is no doubt that the present rate of urbanization not only has the potential to lead to development traps but also presents development opportunities. The mechanisms that underlie increases in the level of and pace of urbanization have policy implications that require further research to clarify.

First, the mere existence of the urban penalty requires investments in social policy to address the slow pace of mortality decline. Policy options must address urban services, including improvements in existing infrastructure in the face of rapid increases in the urban population. A key challenge is resources to provide the services. Major urban centres are dominated by large informal economies that are difficult to tax. The informality is often a natural outcome of accommodating rapid population growth in cities which therefore undermines myriad elements of traditional local finance such as land taxation, recorded real estate transactions, and transparent market-based land valuations.

Secondly, rapid urbanization is fuelled by rapid rural population growth as a result of very high fertility rates and rapidly declining mortality in rural areas. Although in the long run urban environments generally induce lower fertility, the pace of fertility decline in urban areas is often slowed by rural immigrants with high fertility rates that increase the urban population (Bloom et al., 2007b). Investing in programmes that reduces fertility levels in rural areas is imperative. As argued by Chen et al. (1998), reducing fertility may be a better policy response to high urban population growth than reducing migration (Chen et al., 1998).

Thirdly, a shift in employment structures is important because urban populations that grow faster than employment opportunities are likely to lead to increased urban sprawl often characterized by extreme poverty (Bloom et al., 2007b). Martine and McGranahan (2010) further add that if left to its own devices, massive urban growth in impoverished and highly

stratified countries leads to the perpetuation of avoidable poverty, enormous slum growth and considerable ecological deterioration. However, they also note that the continued negative attitudes towards urbanization, especially in the countries currently experiencing the fastest growth rates, reflect misapprehensions about the challenges and opportunities. It is often the case that situations that contribute to the urban sprawl may be due to taking remedial actions that are much more costly to poor city-dwellers and the city itself rather than planning for the required land and services beforehand. The message is that policy options and interventions need to anticipate and plan for the expected urban change beforehand. Finally, policies need to facilitate growth of urban centres other than the main cities of Dar es Salaam, Mwanza, Arusha and Mjini Magharibi in Zanzibar, among others.

4. YOUTH POPULATION, LABOUR FORCE PARTICIPATION AND SOCIAL POLICY

4.1 Introduction

An important and direct link between population dynamics and economic and social development is the labour market (UNFPA, 2010). The rapidly growing youthful population of Tanzania entails the need to create sufficient and sufficiently productive and remunerative employment opportunities for the labour force (UNFPA, 2010) in order to seize the potential demographic bonus. The challenge lies in policy responses that i) promote employment-oriented economic growth and ii) strengthen the employability of people, which requires human capital investments and enhancement of social protection systems.

Explaining youths' transition into employment requires accounting for, first, demographic developments and economic growth; second, the interplay between these dynamics and long-standing institutional patterns, in particular, the regulatory provisions influencing the supply of flexible or permanent jobs as well as education and training policies; and third, labour market and social protection policies that help the poor gain access to better employment opportunities and ensure that the gains from the growth process are equitably distributed among the population.

According to Hagen-Zanker and McCord (2010) there are three main components of labour market policies: (i) employment protection legislation, which includes laws on minimum wage, procedural requirements for redundancies and dismissals, and employment contracts; (ii) passive policies which offer temporary income security, such as unemployment insurance and severance pay; and (iii) policies which support the unemployed and underemployed in making transitions to new jobs, including direct employment generation schemes (e.g., public works programmes), skill development programmes, promotion of self-employment, job search assistance, and wage subsidies. These policies require adequate scale and coverage to be effective, as well as adaptation to specific contexts and circumstances.

The proportion of youth (15–24 years) in the population of Tanzania has remained between 19 and 20% between 1988 and 2012 (United Republic of Tanzania, 2014). But this masks the unprecedented growth in absolute numbers which is important for planning for employment creation. As of the 2012 census, the youth population stood at 8,562,875 and was growing at a rate of 2.3% per annum. It is estimated that by end of 2015 the youth population stood at 9,198,678. This number provides the potential group for training to enter the labour force.

4.2 Labour Participation Rates with Special Focus on Youth

Tanzania's labour force is defined as economically active persons between the ages of 15 to 64. The Integrated Labour Force Survey (ILFS) of 2014 indicated that the active labour

force was 25.8 million, with approximately 87% economically active and 13% economically inactive. About 66% of those employed are engaged in traditional agriculture, 22% in the informal sector, 8% in the private formal sector, 1% in domestic work, and 4% in the public sector (United Republic of Tanzania, 2015a). The total population aged 15–35[19] years is 14.8 million of whom 12.5 million (84.5%) are economically active and 2.3 million (15.5%) are economically inactive. The group aged 15–24 years has a labour force participation rate of 76.8%, with a slightly higher rate among males (males 78%, females 76%). Participation is higher in rural areas (85%), followed by other urban areas at 70% and Dar es Salaam at 52%.

About two-thirds (66%) of employed youth are in the agriculture, forestry and fishing industries, with a slightly higher proportion of females (67% females and 65% males). The majority of employed youth work as unpaid family helpers in agriculture (46%) and the proportion of females is substantially higher (56%) than that of males (35%).

The difference between the total labour force (25.8 million persons) and employed labour is 3.4 million people (unemployed people), out of which 2.1 million are women and 1.3 million are men. About half (48%) of the unemployed live in urban areas. Unemployment for the city of Dar es Salaam is estimated at 22% while it is 13% in other urban areas and 8% in rural areas. The ILFS finding reveals that unemployment is a serious problem among youth, and young women are more vulnerable (United republic of Tanzania, 2015a).

Table 4.1: Labour force participation and unemployment rate (%)

Region	Labour force participation rate		Unemployment rate	
	NPS 1	NPS 2	NPS 1	NPS 2
Tanzania Mainland	78.0	83.6	2.3	3.0
Dar es Salaam	68.0	72.6	16.0	13.0
Other urban	68.3	74.7	4.1	4.9
Rural	81.4	87.1	0.6	1.5

Source: National Bureau of Statistics (NBS), 2014a.

4.2.1 Youth Unemployment and Underemployment

According to the 2014 ILFS, Tanzania's overall youth (15–35 years of age) unemployment was 11.7%, decreasing from 13.2% in 2006. The 2014 ILFS estimated unemployment among this age group at 8.9% for males and 14.5% for females. In Dar es Salaam the rate was 28.8% in 2014 compared to 36.0 in 2006. Youth unemployment among females in Dar es Salaam decreased slightly from 43.0% in 2006 to 39.4% in 2014 (United Republic of Tanzania, 2015a).

Unemployment that lasts one year or more is referred to as long-term unemployment. It is measured as a ratio of the long-term unemployed to the total unemployed population. The long-term youth unemployment rate for Tanzania is presented in Table 4.3.

[19] This is the government's official age bracket for youth.

Table 4.2: Youth long-term unemployment rates by sex and area, Tanzania, 2014

Sex	Area			
	Dar es Salaam %	Other Urban %	Rural %	Total %
Male	63.0	39.9	15.3	31.2
Female	67.7	52.4	25.4	47.1
Total	66.4	48.5	19.5	41.2

Source: United Republic of Tanzania, 2015a.

Sixty-six per cent of the total labour force is employed in traditional agriculture and 22% in the informal sector, and other sectors are in many cases not productively engaged to full capacity and many of them are therefore considered as underemployed. Underemployment is particularly high in the agricultural sector, as well as in the informal sector. In general the underemployment rate according to the 2014 ILFS was 10% in 2014, down from 12% in 2006 (United Republic of Tanzania, 2015a). It worsened from about 8% to about 12% between 2006 and 2014, especially in rural areas (13%) compared to urban areas (6% in Dar es Salaam and 10% in other urban areas).

The main occupation for the most affected among rural dwellers is farming and/or rain-fed agriculture, which is very seasonal. Youth aged 15–24 years' experience the highest underemployment rate, 14% among the employed population. This is the abundant idle labour which is not only underemployed, but in some cases unemployed. It therefore forms an important unutilized capacity in the agricultural sector. This is obviously an area that requires appropriate policy interventions aimed at skills development and human resource absorption.

4.2.2 Other Indicators of Youth Employment

a) Youth in vulnerable employment: These include own account and contributing family workers who are more likely to lack decent working conditions such as social security, adequate earnings and other conducive working conditions. The 2014 ILFS revealed that eight out of every ten youths (82%) are in vulnerable employment. The proportion of youth in vulnerable employment is highest in rural areas (94%) followed by other urban (70%) and Dar es Salaam (40%). The proportion of youth in vulnerable employment decreases steadily from 95% for those who never attended school to 12% for those who have university education (United Republic of Tanzania, 2015a).

b) Discouraged job seekers: These are the proportion of unemployed persons who have despaired of finding jobs because they feel they lack suitable qualifications, do not know how or where to look for a job, or there are no suitable jobs available. In Tanzania, youth account for more than three-quarters of such people (about 140,000), as revealed by the 2014 ILFS (United Republic of Tanzania, 2015a).

c) Child work and child labour: Youth aged 5–17 years who work can be considered to be exposed to child labour. Out of about 2.5 million youths aged 5–17 years, 33% are employed, 2.8% are unemployed and 63.9% are inactive, as revealed by 2014 ILFS. The highest proportions of employed children are in rural and other urban areas. There are

about 2.4 million such children in house-keeping activities. Child labour perpetuates high fertility since they contribute income to the household (United Republic of Tanzania, 2015a).

d) Youths Not in Employment and Not in Education or Training (NEET): These include those who are unemployed and those who are inactive. They are at risk of being socially excluded due to dependency or easily attraction to social vices. Such youths comprise of 17% of the total youth population (about 2.5 million). Their distribution by sex and area is presented in Table 4.3. It is evident that female youth are more disadvantaged, particularly in the urban areas (United Republic of Tanzania, 2015a).

Table 4.3: Youth NEET by sex and area, Mainland Tanzania, 2014

Sex	Area							
	Dar es Salaam		Other Urban		Rural		Total	
	%	Number	%	Number	%	Number	%	Number
Male	18.7	171,423	9.7	182,632	10.7	456,870	11.5	810,925
Female	44.1	497,997	21.6	484,121	15.3	659,321	21.4	1,641,440
Total	32.7	669,420	16.1	666,753	13.0	1,116,192	16.6	2,452,364

Source: United Republic of Tanzania, 2015a.

4.2.3 Challenges and Opportunities for Youth Employment

The youth employment agenda is promoted through policy frameworks at international and national levels. These policy frameworks provide a window of opportunity for youth development in general and employment in particular. A number of interventions have been set up to implement the policy aspirations. Nonetheless, sometimes the aspirations are not met due to strategic, technical and financial constraints. A number of studies and government policy document that the constraints that hinder youth employment include:

- Lack of relevant skills such basic technical skills, communication skills, functional illiteracy, daring skills, innovative skills, entrepreneurship skills and organizational skills.

- Lack of positive and progressive attitudes and habits such as reading skills, soft skills (customer care, maintenance, trustworthiness, commitment, and professionalism).

- Lack of factors of production such as working tools and equipment, working premises and facilities, poor technology and access to capital.

- Lack of employment security due to poor access to markets, low productivity, low earnings, low wages and benefits, along with working in the informal sector, social insecurity, poor technologies, poor working conditions and poor linkages with the formal sector.

On the other hand, a number of policy documents, including Vision 2025, MKUKUTA, the National Employment Policy, the National Youth Development Policy and the Five-Year Development Plans have acknowledged the challenge of youth unemployment and its associated constraints. Several policy statements have been made and interventions on the ground have been set and implemented.

These include:

- The national youth fund.
- A plan of action to implement a declaration by regional commissioners to provide youth with job and entrepreneurship skills; land for agro-business; capital, equipment and working tools; employment promotion and labour force utilization systems; and labour market information.
- National skills development programmes – apprenticeship, internship, recognition of prior (informal) learning.
- Formalization of youth informal sector activities.
- Several youth programme implemented by nongovernmental organizations with support from the ILO and other development partners.
- Reviewing the education where life, integrity, entrepreneurial and self-reliance skills will be imparted at every level of education.

4.3 Formal Sector Employment

In terms of sources of employment, the formal sector is quite small and unable to increase employment as fast as the increase in the labour force. This sector absorbs only people with certain levels of education and skill. Between 2010 and 2014, for example, the formal sector was able to increase its employment by about 68% (see Table 4.4). Casual employees comprised an average of about 17% of all employees in the period 2010–2014. Youth (ages 10–24) employees comprised an average of about 2% of all employees in the formal sector in the period 2012–2014. Casual youth employees comprised an average of about 31% of all youth employed in the formal sector in the period 2012–2014. Half of youth employed were casual, which makes their employment status vulnerable.

Table 4.4: Sector employment

Source of employment	2010	2011	2012	2013	2014	Percentage change
Formal Sector employment (numbers)	1,276,559.0	1,362,982.0	1,550,018.0	1,858,969.0	2,141,351.0	67.7
Private sector (%)	63.7	63.1	64.2	66.3	66.9	6.2
Regular employees (%)	79.8	80.9	85.4	83.2	83.2	
Casual employees (%)	20.2	19.1	14.6	16.8	16.8	
Youth employees (%)			2.45	3.37	3.16	
Youth regular employees (%)			67.9	64.6	73.3	
Youth casual employees (%)			32.1	35.4	26.7	

Source: National Bureau of Statistics (NBS), 2014b.

The private sector, which is considered the main engine of economic growth, is still small in Tanzania, and while it is growing, the rate of growth is slower relative to the growth of the labour force. On average the private sector absorbs 65% of the employed. According

to the Employment and Earnings Survey reports 2010–2011,[20] the private sector share of employment increased by about 6% between 2010 and 2014 (NBS 2014b).

4.4 Summary of Key Issues and Implications for Social Policy

The present population profile of young people and its dynamics have far-reaching implications for development in Tanzania. Future economic growth prospects will be determined by growth in the working-age share of the population and the ability to create jobs needed to absorb increasing labour force, including appropriate labour market polices. The capacity of an economy to cope with changes in population size and age structures is most directly influenced by the growth of the economy and the rate of employment creation.

Economic growth and employment creation, as well as economic diversification and upgrading, crucially depend on capital accumulation, technological progress and structural change. The Ministry of Planning in 2006 noted that persistently high fertility would require annual new jobs to increase from 531,000 in 2005 to 1,048,000 in 2025 and 1,468,000 in 2035 (Ministry of Planning, 2006). However, with declining fertility, annual new job requirements would be 822,000 in 2025 and 812,000 in 2035 (Ministry of Planning, 2006). Policy options must address high fertility if the labour market shall accommodate new entrants in the future.

Some shortfalls in labour market policies include the fact that though the minimum wage legislation covers all workers in the private sector, the large informal economy means that many workers are not covered, primarily youth, who are over-represented in the informal sector. Furthermore, the policies cover the risk of old age, disability and death, but do not provide for unemployment benefits. Hagen-Zanker and McCord's (2010) review of these policies for a number of countries in sub-Saharan Africa suggests that Tanzania seems to provide stronger employment security than labour market security, even if the level of compliance and enforcement of employment laws may be low due to widespread informal employment. Investments in social protection systems in the country are a key policy instrument.

In Tanzania, public expenditure on social protection as a percentage of GDP is just 0.15% of GDP, or US $2 per capita, as compared to Ethiopia (0.7% of GDP), Malawi (0.4), Kenya (0.3), and Mozambique and Uganda (0.1) (Hagen-Zanker and McCord, 2010). Furthermore, social protection interventions are often fragmented and cover only a small proportion of the poor. The key constraints to extensive social protection coverage include limited financial resources, poor coordination and the lack of clear policy and leadership (Hagen-Zanker and McCord, 2010).

Often employment issues seem to be treated in a narrow way, with exclusive focus on one sector (e.g., formal manufacturing enterprises) or one set of policy instruments (e.g., labour market policies). To address the challenges facing youth in the labour market there is need for a more comprehensive approach to better understand the drivers of employment

[20] The Employment and Earnings Survey (EES) report is the only source of regional information showing the distribution of income, new workers recruited, current job vacancies and number of employees in the formal sector of employment. Therefore, the compilation of this report reflected the appreciation of the information gap that persisted on employment and earnings. However, due to lack of financial resources, this series was discontinued for sixteen years before being resumed in 2001. The report referred to above is the fourth since 2001.

creation and its role in reducing poverty, including challenges. These issues are not static but dynamic, especially given changing population dynamics and globalization. The key to gaining from the demographic dividend rests in reducing birth rates in addition to expanding employment opportunities for the labour force entrants – the country's youth.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The main objectives of this paper were to provide an update on the status of the population and its dynamics in Tanzania and analyse and account for the interaction between population dynamics – growth, composition and momentum – and the changing nature of social provisioning over the planning horizon for socioeconomic transformation. Paradigms of new development agenda suggest the need to ensure a harmonious balance between social, economic and environmental development with emphasis both on sustainable consumption and sustainable production. Population dynamics, including changes in the size, structure and spatial distribution, have direct and indirect implications for development.

The World Bank reports that demographic dynamics can support development if governments implement demography-informed policies (2016). This statement follows the focus of post-2015 development debates which suggest that the success and sustainability of development strategies require that countries proactively address, rather than react to, population trends (UNDESA, 2013).

These statements imply that in order to meet the needs of current and future generations, knowledge of how many people live in the country and how many will be added in the next decades is important.[21] However, such knowledge alone is insufficient, as studies and data also show the need to know the current and future age and spatial distributions, among other features. The systematic consideration of population dynamics is essential for the formulation of sustainable development strategies, goals, targets, policies and programmes, which is in line with the National Population Policy objective of integrating population issues into national development planning.

5.2 Summary on Status of Population Dynamics and Social Policy

Tanzania's total population is now estimated to be about 47.4 million. About 30% live in urban areas, but nearly half of the population of Tanzania Zanzibar live in urban areas. The current growth rate can be considered high and rapid. In the intercensal period between 2002 and 2012, the rural population grew by about 1.8% per annum in Tanzania (the same as in Tanzania Mainland) while the rural population in Zanzibar grew at 1.7% per annum. Within same period, the urban population grew 5% per annum for Tanzania Mainland and about 4% per annum for Tanzania Zanzibar. At the regional level, Dar es Salaam had the highest growth rate at 5.6% per annum while Njombe region had the lowest, at 0.8% per annum. As a result of the high growth rate, the Dar es Salaam region, with a population of 4,364,541, had nearly one-tenth of the total population of United Republic of Tanzania. The growth rate at the sub-national level is driven both by natural growth as well as net

[21] This is a simplification of the concern first raised at the Mexico conference in 1984 and further reaffirmed in the 1994 ICPD plan of action on the need for countries to integrate population issues into national development agendas.

intercensal migration growth.
A key driver of population dynamics is the high and slowly changing fertility levels along with rapid mortality decline. The key features of the current fertility situation are: the slow pace of fertility decline; large regional differentials, with nearly half the regions having pre-transition fertility levels; unchanging fertility among the poor and those with no or low education; and high adolescent birth rates. If the country is to harness the demographic dividend the rate of fertility decline must be faster than the present rate. Thus the need to accelerate fertility decline becomes a key policy challenge. Such policies may include the need to expand family planning programmes, increase schooling and foster urbanization. A key opportunity is the reductions in childhood mortality in nearly all regions, which in general provides an important step to achieving reduction in fertility levels (Bongaarts and Casterline, 2013).

The rate of decline in mortality represents significant progress with regard to human well-being. Progress has been made not only with regard to achieving targets in the reduction of childhood mortality but also in bridging the gap in childhood mortality between the poor and the wealthiest groups. However, a notable feature is the observed higher mortality at all ages in urban areas compared to rural areas, despite the fact that utilization of health services is much better in urban areas. Maternal mortality and neonatal mortality have not changed significantly over the decade. Neonatal mortality still accounts for a sizeable proportion of under-5 mortality. Further reductions in childhood mortality shall occur if neonatal deaths are reduced. This calls for scaling up maternal and neonatal programmes (MNCH).

About 7.8 million Tanzanians were living outside the place of birth according to the 2012 Tanzania Population and Housing Census. Arusha, Morogoro, Dar es Salaam, Mbeya, Tabora, Manyara and Mjini Magharibi in Zanzibar are regions with high net in-migration because of strong economic activities that pull migrants into the regions. Dar es Salaam had more than two million migrants, representing about 31% of total migrants, because of its strong industrial and commercial base. Similarly, Mjini Magharibi attracted about three-quarters of the total migrants within Zanzibar. Other sources of net in-migration include people seeking work on large-scale plantations and in settlements and mining areas, particularly in Arusha, Morogoro, Mbeya, Tabora, and Manyara and new regions like Katavi and Geita.

Rukwa, Kigoma and Kagera lost a sizeable proportion of their population because of the repatriation of refugees. Lindi, Mtwara, Ruvuma and regions in semi-arid areas such as Dodoma and Singida are the major out-migration areas due to lack of employment opportunities or land for settlement. An increase in population pressure is also a major contributor to out-migration in Kilimanjaro, Tanga, Mwanza and Mara. Other regions which experience net out-migration include the periphery areas like Kigoma and Iringa. In Zanzibar, all regions showed net migration loss except Mjini Magharibi.

High rural-to-urban migration has been one of the major sources of urbanization in the country, but the trend of urbanization is perverse because the urban population is growing very fast while the economic growth and development transformations necessary to support it and enhance the quality of urban life are not occurring at the same rate. The high rural–urban migration rate may have some pitfalls, especially urban underemployment, which can

create development traps that may be extremely difficult to escape. Thus policies should also consider agricultural subsidies and technological improvements and the provision of urban services that affect migration, urban underemployment and capital formation.
There are debates that migration may influence poverty, but there is need to determine whether currently, people in Tanzania migrate out of poverty or into poverty. The positive relationship between migration and development is not automatic and requires proactive intervention of the state to create productive infrastructure in rural areas and scientific/ technological institutions capable of providing necessary conditions for the developmental potential of migration flows to materialize.

Population dynamics cover a very large range of demographic issues (high fertility and population growth, migration and urbanization) and are said to be intricately linked with a large range of social and economic challenges such as health, education, gender equality, women's empowerment, employment and social protection (Herrmann, 2014). Kohler and Behrman (2014) suggest that reducing infant and child mortality; ensuring universal health coverage, including access to sexual and reproductive health care information and services; eliminating child marriage[22] and strengthening female labour force participation will have either phenomenal or good benefit-cost ratios. An important aspect of population dynamics that is essential for addressing the challenges of future population changes and for realizing the benefits of population dynamics for social, economic and environmental development is "population quality" that includes investments in health and education (Kohler and Behrman, 2014).

The rationale for the priorities suggested by Kohler and Behrman (2014) with regard to high fertility and population growth is based on strengthened evidence that reduced fertility in high-fertility contexts is beneficial because it results in improved child outcomes (better child health and more schooling), reduced maternal mortality and increased female human capital, and more rapid economic development (Kohler and Behrman, 2014). A key pathway to reduced fertility is the implementation of voluntary family planning programmes.[23] However, in the process of demographic transition, economic development, urbanization, and increased education and labour force participation (particularly for women) are important drivers of fertility change (Kohler and Behrman, 2014[24]).

Herrmann (2014), while agreeing with Kohler and Behrman, suggests that population dynamics would need to be addressed in two principle ways: via policies that shape

[22] Child marriage increases the propensity for teenage motherhood, with serious health risks such as obstetric fistula, limited educational attainment, limited labour force participation and persisting inequalities, which add up to real economic costs for girls and women (Herrmann, 2014). Herman argues that eliminating child marriage can significantly reduce teenage pregnancy, thereby delaying childbearing, and if support is provided to girls in attainment of higher education can lead to women into better jobs. Such efforts can have strong positive effects which can contribute to the empowerment and equality of women, as well as to a rise in household income and lower poverty levels.

[23] Contemporary literature arguing for a renewed interest in voluntary family planning programmes does not view population growth as a "problem" in itself but sees it as a major threat to social and economic development. The often mentioned potential adverse effects attributed to rapid population growth include: poor health among women and children, slow economic growth and poverty, overcrowded schools and clinics and an overburdened infrastructure, as well as the depletion of environmental resources (Birdsall and Sinding, 2001). Voluntary family planning programmes have broader focus on reproductive and child health outcomes. Studies also point to the broader impacts of family planning programmes beyond their effect on fertility.

[24] The importance of strengthening human capital to address population dynamics as highlighted in the study by Kohler and Behrman 2014, as well as the report on "Population Dynamics in the Post-2015 Development Agenda" (UNDESA, 2012) which identifies investment in human development throughout the life course as an overarching objective.

demographic trends through their determinants such as health, education, empowerment, employment, and social protection, and through planning for demographic changes that will unfold over the next several years. Herrmann (2014) sees these policies from a rights perspective rather than solely in terms of cost and benefit.

5.3 Conclusions

The United Republic of Tanzania, like several other developing countries, is experiencing high fertility and low mortality rates at the same time, thus causing a 'population boom'. This creates unprecedentedly large youthful populations which in turn have a number of implications for growth and development. The expected large numbers of youthful workers joining the labour force can present an opportunity or a challenge. The surging youth population will not automatically benefit a country economically without the active commitment of the government to design and implement appropriate policies and programmes that promote: (i) a high-quality base of human resources, (ii) growth of employment, and (iii) high saving and investment rates.

The past and present state of population dynamics reflects the historical effects of social policy. In the two decades after political independence, government involvement in social policy development and implementation targeted three key areas: ignorance, disease and poverty. Social programmes, whose implementation was viewed more from a narrow, sectoralist and often 'managerialist' perspective, focused on the administration of social services related to education, health, water supply, employment and social security. For nearly three decades after independence, the crucial role of addressing population dynamics was largely ignored. It was only after 1992 that the government began to pay attention to population dynamics, especially the reduction of high fertility and population growth. The revised policy framework of 2006 focused on the ICPD 1994 plan of action and emphasized rights-based and gender-responsive policies to address and harness population dynamics (United Nations 1994). To date, it can be said that actions to reduce mortality have been successful, but the pace of fertility change has been dismally slow.

5.4 Recommendations

In light of historical experiences from countries that have gained from the demographic dividend, there is need to address high fertility by expanding access to family planning programmes and creating demand for smaller families. Education, especially of women, is paramount in fertility transition, and policies that expand opportunities for higher education, particularly for women and in rural areas, are inevitable. However, the opportunities derived from investments in education require critical review. These include the quality of education, vocational skills essential for technological change as well as ensuring that educational provision is aligned with and tailored to the needs of both the local and global economy to address the employment needs of the young and growing population.

Urbanization is inevitable and managing its trends and patterns constitutes a major challenge and opportunity. The slow pace of change in mortality levels in urban areas and the fact that mortality is higher at all ages in urban areas suggests increasing an urban

penalty that requires a critical review in order to harness opportunities for economic and social development. Planning and managing urban growth as part of national development planning can enable the country to address the challenges and harness opportunities linked to efficiency in provision of needs and lowering of resource-scarcity threats associated with rapid population growth.

Nevertheless, it takes time for social policies that target demographic change to produce their full impact and for behaviour and institutions to change. But such policies have important links across sectors, namely health, education, fertility, work, production and trade (World Bank, 2016). This highlights the need to review the National Population Policy and put in place an implementation strategy[25] such as 'The National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania' (United Republic of Tanzania, (2008). This need has arisen because first, at the time the Tanzania 2006 National Population Policy was launched the issues of demographic dividend[26] and economic transformation[27] had not been mainstreamed in the political agenda for development. Second, the issue of the pace of urbanization and its implications and now the urban penalty require further investigation for inclusion in the policy framework. Third, critiques of demographic dividend theory suggest that the conditions and factors that explain its occurrence in the East Asian economic 'miracle' may not be easily replicated elsewhere.

[25] Oucho and Mtatifikolo (2009) noted that at the time of their report, the National Population Policy of 2006 had not yet been operationalized and the structures for implementation as stipulated in the document were not officially in place.

[26] The Addis Ababa Declaration on Population and Development in Africa Beyond 2014 adopted by the Council of Ministers in September 2013 and later endorsed by the African Union's (AU) Executive Council consists of 88 commitments that set out concrete actions and Africa's priorities on population in the development agenda post- 2015. This declaration, which Tanzania as a country also endorsed, has as its main vision 'Harnessing the Demographic Dividend' (UNECA, AUC and UNFPA, 2014).

[27] In the first pillar of the Common African Position (CAP) on The Post 2015 Development Agenda, the African governments recognized the need to promote an integrated economy that nurtures inter-sectoral synergies, linkages and job growth, including increased awareness of the potential role that structural transformation can play in creating resilient economies and decent employment opportunities, minimizing income and wealth disparities, and eradicating poverty (African Union, 2014).

GLOSSARY

Adolescent fertility rate (AFR): The number of births per 1000 women ages 15 to 19. Having children this early in life exposes **adolescent** women to unnecessary risks. Their chance of dying is twice as high as that of a woman who waited until her 20s to begin childbearing.

Adult mortality: The probability that those who have reached age 15 will die before reaching age 60.

Age-specific mortality rate: Specific mortality rates show general improvement in mortality for both sexes at all ages except at age 70 years and beyond.

Age-dependency ratio: The ratio of persons in the ages defined as dependent (under 15 years and over 64 years) to persons in the ages defined as economically productive (15–64 years) in a population.

Age-sex structure: The composition of a population as determined by the number or proportion of males and females in each age category. The age-sex structure of a population is the cumulative result of past trends in fertility, mortality and migration. Information on age-sex composition is essential for the description and analysis of many other types of demographic data. See also population pyramid.

Age-structural transition: A process and a consequence of shifting **age structure** from a young population to old population.

Birth rate (or crude birth rate): The number of live births per 1000 people in a given year. Not to be confused with growth rate.

Childhood mortality: Also known as under-5 **mortality. Child death** refers to the **death** of infants and children under the age of 5 or between the ages of one month and 4 years, depending on the **definition**. A **child's death** is emotionally and physically hard on the parents.

Crude death rate: The number of deaths per 1000 people in one year.

Census: A survey conducted every ten years to determine the population characteristics of a country.

Crude birth rate: The number of births per 1000 people in one year.

Demographic transition model: A model showing the stages of growth of a country's population.

Death rate (or crude death rate): The number of deaths per 1000 people in a given year.
Demography: The scientific study of human populations, including size, composition, distribution, density, growth, and other characteristics, as well as the causes and consequences of changes in these features.

Demographic dividend: A period – usually 20 to 30 years – when fertility rates fall due to significant reductions in child and infant mortality rates. A demographic dividend is the freeing up of resources for a country's economic development and the future prosperity of its populace as it switches from an agrarian to an industrial economy.

Demographic bonus: A demographic bonus can only be realized if human capital investments have been made in the health and education of those entering the labour force, and jobs have been created to meet the demand. Only then can youth realize their potential as healthy and productive members of society and boost their countries' economic and development status. Investment in youth must be made early enough to create the conditions for this bonus to occur. Otherwise, a large, uneducated, unhealthy, unskilled, and underemployed workforce creates a burden to society and threatens its stability.

Demographic transition: The historical shift of birth and death rates from high to low levels in a population. The decline of mortality usually precedes the decline in fertility, thus resulting in rapid population growth during the transition period.

Demographic window: The period of time in a nation's demographic evolution when the proportion of people of working age is particularly prominent. This occurs when the demographic architecture of a population becomes younger and the percentage of people able to work reaches its height.

Dependency ratio: The ratio of the economically dependent part of the population to the productive part, arbitrarily defined as the ratio of the elderly (ages 65 and older) plus the young (under age 15) to the working-age population (ages 15–64).

Doubling time: The number of years required for the population of an area to double its present size, given the current rate of population growth.

Economic transformation: Achieving economic transformation requires a structural change in the economy away from dependence on agriculture towards industry and services, accompanied by a demographic transition from high birth and death rates to low birth and death rates.

Elderly population: The elderly population is defined as people aged 65 and over.
The share of the dependent population is calculated as total elderly and youth population expressed as a ratio of the total population.

The elderly dependency rate: The ratio between the elderly population and the working-age (15–64 years) population.

Family: Usually two or more persons living together and related by birth, marriage or adoption. Families may consist of siblings or other relatives as well as married couples and any children they have.

Family planning: The concept or programme of limiting the size of families through the spacing or prevention of pregnancies, especially for economic reasons.

Fertility transition: The point at which couples begin to deliberately limit the number of children women bear. It is generally considered to have begun in a country when there is at least a 10% decline in fertility.

Fertility: The actual reproductive performance of an individual, a couple, a group or a population. See general fertility rate.

Gender: The economic, social, political, and cultural attributes, constraints and opportunities associated with being a woman or a man. The social definitions of what it means to be a woman or a man vary among cultures and change over time. Gender is a sociocultural expression of particular characteristics and roles that are associated with certain groups of people with reference to their sex and sexuality.

Gender equality: The state or condition that affords women and men equal enjoyment of human rights, socially valued goods, opportunities and resources.

Gender equity: The process of being fair to women and men. To ensure fairness, measures must be taken to compensate for historical and social disadvantages that prevent women and men from operating on a level playing field.

General fertility rate: The number of live births per 1000 women ages 15–44 or 15–49 years in a given year.

Household: One or more persons occupying a housing unit.

Human Immunodeficiency Virus (HIV): Retrovirus that infects cells of the immune system, destroying or impairing their function. As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections. HIV is transmitted through unprotected sexual intercourse, transfusion of contaminated blood, sharing of contaminated needles and between a mother and her infant during pregnancy, childbirth and breastfeeding.

Immigration: The process of entering one country from another to take up permanent or semi-permanent residence.

Immigration rate: The number of immigrants arriving at a destination per 1000 people at that destination in a given year.

Incidence rate: The number of persons contracting a disease per 1000 people at risk, for a given period of time.

Infant mortality rate (IMR): The number of deaths per 1000 children under 1 year old in a country per year.

In-migration: The process of entering one administrative subdivision of a country (such as a province or state) from another subdivision to take up residence.

Intercensal: population characteristics relating to the interval between two censuses.

Internal migration: The movement of people from one place to another within a particular country.

Labour force: The people who are willing and able to work.

Labour market: A labour market in an economy functions with demand and supply of labour; in the labour market, employers compete to hire the best, and the workers compete for the best satisfying job.

Labour participation rate: A measure of the active portion of an economy's labour force. The participation rate refers to the number of people who are either employed or are actively looking for employment.

Life expectancy: The average number of additional years a person could expect to live if current mortality trends were to continue for the rest of that person's life. Most commonly cited as life expectancy at birth.

Life span: The maximum age that human beings could reach under optimum conditions.

Maternal death: Defined by the World Health Organization (WHO) as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental" (http://www.who.int/healthinfo/statistics/indmaternalmortality/en/).

Maternal mortality ratio (MMR): The number of women who die as a result of pregnancy and childbirth complications per 100,000 live births in a given year.

Marital fertility rate: The number of live births per 1000 married women aged 15–44 or 15–49 in a given year.

Menarche: The beginning of the menstrual function; especially the first menstrual period of an individual.

Menopause: The period in a woman's life (typically between the ages of 45 and 50) when menstruation ceases.

Metropolitan area: An area with a large concentration of people, usually 100,000 or more. The area typically includes an important city with 50,000 or more inhabitants and administrative areas bordering the city that are socially and economically integrated with it.

Migration: The movement of people across a specified boundary for the purpose of establishing a new or semi-permanent residence. Migration is divided into international migration (migration between countries) and internal migration (migration within a country).

Millennium Development Goals (MDGs): The United Nations Millennium Development Goals are eight goals that all 191 UN member states have agreed to try to achieve by the year 2015. The United Nations Millennium Declaration, signed in September 2000, commits world leaders to combat poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women. The MDGs are derived from this declaration, and all have specific targets and indicators.

Mortality: Deaths that occur within a population; it is one of the factors that influence population change.

Mobility: The geographic movement of people.

Natural increase: The increase in a population, determined by the birth rate minus the death rate and normally expressed as a percentage.

Neonatal mortality rate: The number of deaths of infants under 28 days of age in a given year per 1000 live births in that year.

Net migration: The net effect of immigration and emigration on an area's population in a given time period, expressed as an increase or decrease.

Net migration rate: The net effect of immigration and emigration on an area's population, expressed as an increase or decrease per 1000 people of the area in a given year.

Nuptiality: The frequency, characteristics and dissolution of marriages in a population.

Out-migration: The process of leaving one subdivision of a country to take up residence in another.

Overall mortality: Shows trends in age-specific mortality rates by age and sex and therefore summarizes the mortality situation that prevails across all age groups, from children to the elderly.

Population: A group of objects or organisms of the same kind.

Population density: Population per unit of land area; for example, the number of people per square mile or square kilometre of arable land.

Population distribution: The patterns of settlement and dispersal of a population.

Population dynamics: The branch of life sciences that studies the size and age composition of populations as dynamic systems, and the biological and environmental processes driving them (such as birth and death rates, and immigration and emigration). In other words population dynamics is concerned with the sizes of populations and the factors involved in their maintenance, decline, or expansion.

Population growth rate: The number of people added to (or subtracted from) a population in a year due to natural increase and net migration expressed as a percentage of the population at the beginning of the time period.

Population increase: The total population increase resulting from the interaction of births, deaths and migration in a population in a given period of time.

Population momentum: The tendency for population growth to continue beyond the time that replacement-level fertility has been achieved because of the relatively high concentration of people in the childbearing years.

Population policy: Explicit or implicit measures instituted by a government to influence population size, growth, distribution or composition.

Population pyramid: A bar chart, arranged vertically, that shows the distribution of a population by age and sex. By convention, the younger ages are at the bottom, with males on the left and females on the right.

Population structure: The age and sex composition of a country, region or city.

Post-neonatal mortality rate: The annual number of deaths of infants aged 28 days to 1 year per 1000 live births in a given year.

Post-partum abstinence: Refraining from sexual intercourse after child birth. Sometimes women who do not wish to become pregnant can use an additional contraceptive method during the entire post-partum period but especially if bottle-feeding is increased.

Prevalence rate: The number of people having a particular disease at a given point in time per 1000 people at risk.

"Push–pull" factors/hypothesis: A migration theory that suggests that circumstances at the place of origin (such as poverty and unemployment) repel or push people out of that place to other places that exert a positive attraction or pull (such as a high standard of living or job opportunities).

Rate of natural increase (or decrease): The rate at which a population is increasing (or decreasing) in a given year due to a surplus (or deficit) of births over deaths, expressed as a percentage of the base population.

Reproductive age: In women, those years of life between menarche and menopause, roughly from ages 12 to 49. The term is imprecise, since some women can become pregnant and bear children at younger or older ages. In men, those years between the onset of puberty and loss of fertility.

Reproductive health: A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes.

Sex ratio: The number of males per 100 females in a population.

Social policies: These are perceived as the outcomes of national and local decisions in response to human development requirements. They consist of formal and informal rules which are embedded in the organized efforts of society to meet identified personal needs as well as within the wider context. The ultimate aim of such organized efforts is to enhance the well-being of societal members in their respective environments.

Social protection: Policies and programmes designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people's exposure to risks and enhancing their capacity to manage economic and **social** risks, such as unemployment, exclusion, sickness, disability and old age.

Survey: A canvass of selected persons or households in a population usually used to infer demographic characteristics or trends for a larger segment or all of the population. See also census.

Survival rate: The proportion of persons in a specified group (age, sex or health status) alive at the beginning of an interval (such as a five-year period) who survive to the end of the interval.

Sustainable development: *Development* that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Total fertility rate (TFR): The average number of children that would be born alive to a woman (or group of women) during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year. This rate is sometimes stated as the number of children women are having today. See also gross reproduction rate and net reproduction rate.

Unemployment: Unemployment occurs when people who are without work are actively seeking paid work.

Unemployment rate: A measure of the prevalence of unemployment, calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labour force.

Under-5 (U5) child mortality: Probability of a child born in a specific year or period dying before reaching the age of 5.

Unmet need: Women with unmet need for spacing births are those who are able to become pregnant and sexually active but are not using any method of contraception (modern or traditional), and report wanting to delay the next child or limit their number of births. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behaviour.

Urban: Countries differ in the way they classify population as 'urban' or 'rural.' Typically, a community or settlement with a population of 2000 or more is considered urban. A listing of country definitions is published annually in the United Nations Demographic Yearbook.

Urban penalty: This normally occurs during the course of urbanization, in which people living in slums exhibit notable inequalities in social services such as health relative to non-slum urban residents and even rural populations. The built urban environment, in turn, is a crucial context within which the social production of disproportionate morbidity and mortality is enacted.

Urbanization: Growth in the proportion of a population living in urban areas.

Youth: The UN, for statistical consistency across regions, defines youth as those persons between the ages of 15 and 24 years, without prejudice to other definitions by member states.

Youth unemployment: The unemployment of young people, defined by the United Nations as 14–28 years old. An unemployed person is defined as someone who does not have a job but is actively seeking work.

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