

## Population Dynamics in Ethiopia, 2010 – 2014

**Background:** Demographic rates are used to see trends in the past, examine the current resident profile, and to project how the population will change in the future. In addition, population pyramid depicts the age and sex distribution of the population at a given time. Demographic data are useful to evaluate the achievement of development programs to satisfy the current and future needs of the population. The United Nations International Conference on Population and Development (ICPD) in Cairo 1994 recognized the important role that demography plays in socio-economic development by recommending the full integration of population factors into development strategies. The objective was to describe the patterns and trends of population change in the six research centers in Ethiopia.

**Methods:** The Health and Demographic Surveillance System (HDSS) in six networked Ethiopian Universities Research Centers has been registering vital events (births, deaths, marital changes, in and out migrations) in different part of the country. The research centers follow an open dynamic cohort of geographically defined population and update the population every 3 to 6 months regularly with standardized procedures and tools. The mortality surveillance was undergoing in each research center. The analysis used population, fertility, mortality and migration data from the surveillance database for the period between 2010 and 2014.

**Results:** The mid-year population of all the sites in 2014 was 387,244 with sex ratio of about 100 and 76.7% reside in rural areas. In 2014, under five, children less than 15 years, economically active (15-64 year), old age (65+ year) population and women in the child bearing age constituted 12.4%, 40.7%, 55.5%, 3.8% and 24.0% respectively. As shown in table 1, the proportion of children 0 to 14 year was declining while adults 15 to 64 years and elderlies 65+ years were increasing.

During the five years period, there was a decline in the proportion of children age 0 to 4 year evidenced from the indented pyramids (Fig 1).

The estimated crude outmigration rate of the population ranged from 29.4 to 42.1 per 1000 population during the five years period. The highest rate of outmigration was observed in the age group of 15 to 24 years (96 per 1000 for female and 75 per 1000 for male). As shown from the net migration rate, there was an excess of out-migration over in-migration throughout (Table 2).

Table 1 Dependency Ratio Indicators, 2010 -14

Dependency ratio	2010	2011	2012	2013	2014
Child	82.5	79.5	77.8	75.4	73.3
Aged	5.7	6.1	6.0	6.5	6.8
Total	88.2	85.5	83.8	81.9	80.1

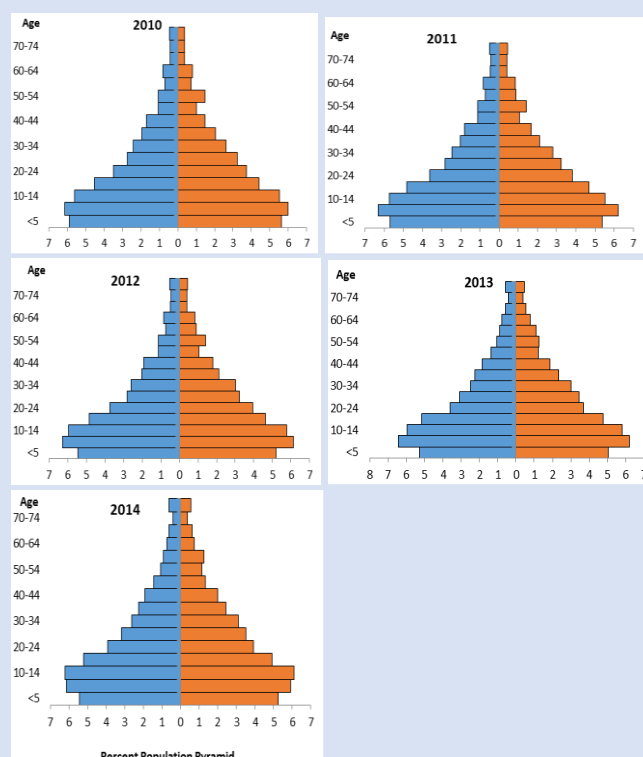


Fig. 1: Population Pyramids, 2010-14

Table 2: Rates of the Six HDSS Population by Year, 2010-14

Rates	2010	2011	2012	2013	2014
CBR	28	25	25	27	26
CDR	5.9	6.1	5.4	4.8	4.6
Pop growth rate (%)	2.2	1.9	2.0	2.2	2.1
In-Migration	27.6	34.6	38.1	39.4	40.0
Out-Migration	29.4	38.9	42.1	41.2	40.8
Net Migration	-1.7	-4.3	-3.9	-1.8	-0.8
Net Pop. Increase (%)	2.0	1.5	1.6	2.0	2.0

**Conclusion:** There was an indentation on the age and sex structure of the population at the base for the age group 0 to 4 and 5 to 9 years, particularly in 2014. This could be due to the increased family planning access and use in the community. Fertility and mortality have been declining over the five years period. Moreover, there was an excess of out-migration mainly among the young age, 15 to 25 years. The majority of the population were still children under the age of 15 years.

**Recommendations:**

1. As there are indicators for shift in population structure and decline in fertility, family planning service access and use needs to be intensified.
2. The presence of relatively increasing proportion of productive age group and increased age dependency ratio calls for clear planning and focused policy in accommodating these group of the population in the workforce and support needs.
3. The existence of high migration, especially out migration, information is required on how, why and where these migrants move-in and move-out. Strategies should focus on the young age group and female migrants.

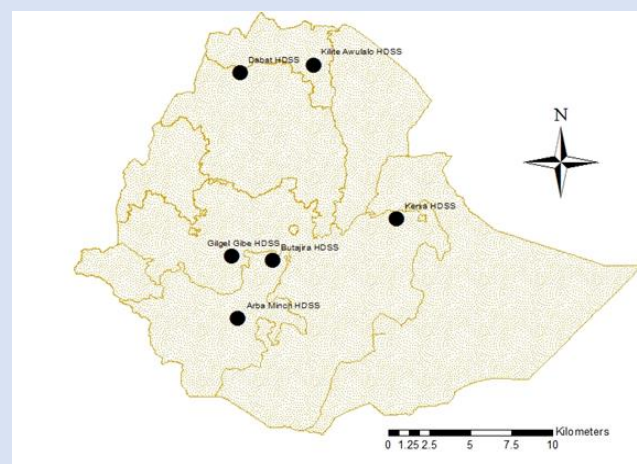
**References**

1. William Little and Ron McGivern, 2013. Introduction to Sociology - 1st Canadian Edition: Population, Urbanization, and The Environment, Rice University
2. UNFPA, 2014. International Conference on Population and Development. United Nation population Fund.

**Vision of the Ethiopian Universities Research Centers Network:** *To see evidence based decision making practices in health and development sectors in Ethiopia*

**Research Centers Profile and Location as of 2015**

Name of site	Year established	Population	Active # of households	# of kebeles
Butajira	1987	77,583	17,313	10
Dabat	1996	68,471	16,693	13
Gilgel Gibe	2005	63,234	12,748	11
Kersa	2007	129,532	25,926	24
Kilte Awlaelo	2009	63,503	13,835	10
Arba Minch	2009	72,581	14,322	9
Total		474,904	100,837	77



Location of the Research Centers, Members of the INDEPTH Network

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