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Dire Dawa

The city of Dire Dawa was founded in 1902 as “... a relatively lowland link (1200 m) bypassing the higher, ancient city of Harar on the Djibouti - Addis Ababa railway. An impressively planned city, its central straight avenues and quarters are matched only by Addis Ababa. Growth has since been more organic, and dense unplanned settlements can be seen scattered throughout the city. It is Ethiopia's second largest city with [a census year 2007 population of 341,834] inhabitants. Its eastern, low-land position generates a hot climate (Mean 25°C), occasioned by a seasonal river that floods the river-bank areas” [1]

Dire Dawa is 515 kilometres away from the capital with an economy less dependent on the Addis-Djibouti railway line than in the past. It has a number of small- and medium-scale industries. The city is located “...in an area defined as malaria-prone, and epidemic-like conditions can break out during flooding, like in 1981, 1985 and 1999.” Moreover, the city lacks adequate water supply with an estimated 44 percent of the population having no access or very limited access to clean water. Sanitation is also inadequate with 22% of households lacking toilet facilities. Additionally, only 44% of solid waste is collected on a regular basis [1]. A UN Habitat report highlighted a number of other developmental challenges including informal settlements and vulnerability to floods:

“Lack of formal access and a huge demand for housing has made informal settlements a main growth area in the city. An estimated 182 000 people live in sub-standard housing, of which at least half lives in simple mud-houses or shacks. Many of these are located in hills and flood-plains, rendering a significant proportion of the inhabitants vulnerable to natural hazards such as landslides and floods.... There are at least 15 000 dwellers living in high-risk flooding areas. There are also an additional 160 000 [people] living in slums, or sub-standard housing....These problems coupled with the lack of sufficient flood drainage system are posing a health and sanitation threat to the city. ”

Fig. 1 Map of Dire Dawa (November 18, 2010)



Source: Google Earth.

Proclamation No.416/2004 gave Dire Dawa “...the legal status that enabled it to become a Chartered City” “Dire Dawa is one of the biggest towns in Ethiopia. It is the hometown for diverse people from different ethnic and cultural backgrounds. It has government institutions, colleges, factories, private enterprises, and well-developed social services. The town also hosts many foreigners from neighboring Djibouti and Somalia. These factors along with economic and social ones are believed to increase the risk of HIV transmission in Dire Dawa. According to a single-point HIV prevalence estimate, Dire Dawa’s adult HIV prevalence rate is 4.3 percent, amongst the highest in the country”. [2]

Population

Urbanization has been a slow process in Ethiopia but recent growth rates have been high. This also applies to Dire Dawa city where the population was estimated at 180, 000 in 1995 [1]. The 2007 National Census gave a new population total of 233,224 with a balanced gender composition of 116,232 males and 116,992 females, an increase of 30 percent over 1995. The urban population is expected to grow 50 percent more (from 1995 levels) by the year 2015 [1]. The total population of the Dire Dawa city administration (including the surrounding rural countryside) was 341,834, of which two-thirds lived in the city proper.

Age Distribution

Table 1 shows the age structure of the Dire Dawa city administration (including the population of the surrounding countryside).

Table 1. Population of Dire Dawa (May 2007) by Age and Sex.

Age	Total	%	Male	Female	Sex Ratio
Both sexes	341,834	100.0	171,461	170,373	100.6
0--4	41,767	12.2	21,367	20,400	104.7
5--9	43,273	12.7	21,949	21,324	102.9
10-14	38,163	11.2	19,512	18,651	104.6
15-19	43,043	12.6	21,121	21,922	96.3
20-24	37,732	11.0	18,140	19,592	92.6
25-29	34,011	9.9	16,215	17,796	91.1
30-34	24,974	7.3	13,025	11,949	109.0
35-39	20,959	6.1	10,469	10,490	99.8
40-44	15,879	4.6	8,620	7,259	118.7
45-49	11,021	3.2	5,842	5,179	112.8
50-54	9,539	2.8	4,677	4,862	96.2
55-59	4,709	1.4	2,416	2,293	105.4
60-64	6,286	1.8	3,189	3,097	103.0
65-69	3,151	0.9	1,563	1,588	98.4
70-74	3,261	1.0	1,545	1,716	90.0
75+	4,066	1.2	1,811	2,255	80.3

Just under 50% of the population in of Dire Dawa are below age 20. There are roughly an equal number of males and females in the city but the sex ratios vary greatly by age. The ratios are relatively high in the 0-14 age groups and low in the 15-29 age groups reflecting the possible impacts of in-migration of teenage girls and young adult females.

Fig.2 Dire Dawa Single Age Distribution (2007)

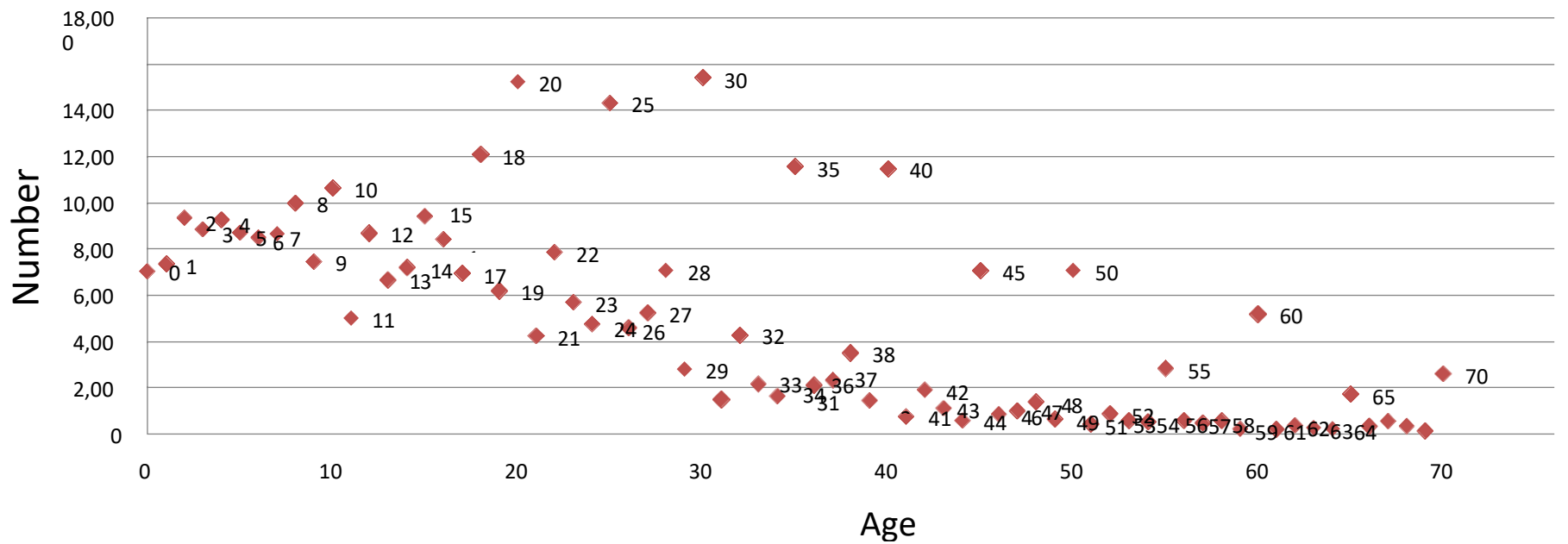


Figure 2 shows the age distribution of Dire Dawa residents by single ages. The clearest evidence of data error in this graph is what Demographers call age “heaping” or digit preference. It is obvious that digits ending in 0s (example 10, 20, 30.....), and those ending in 5s (example 15, 25, 35,...) are the most preferred. For example, just over 3000 individuals and less than 2000 individuals told the census enumerators that they were 29 years old and 31 years old respectively. Nearly 16,000 said they were 30 years old (Fig.2). It is obvious that a few thousand individuals said that they were 30 years old when in fact they were 29, and a few additional thousands told interviewers that they were 30 when in fact they were 31. This creates serious analytical problems when examining other demographic attributes of the city including mortality levels and trends, and seriously hampers efforts to project into the future the population sizes by age.

The graph below shows the effects of “smoothing” the age data. The number of people in three consecutive ages (example, 0, 1, and 2) are added together and averaged (divided by 3). And then the next three (ages - 1,2, and 3) are added together and divided by three to produce what statisticians refer to as rolling/moving averages/means. This smoothed-out the original (blue) distribution or curve to produce the less erratic (red) distribution or curve.

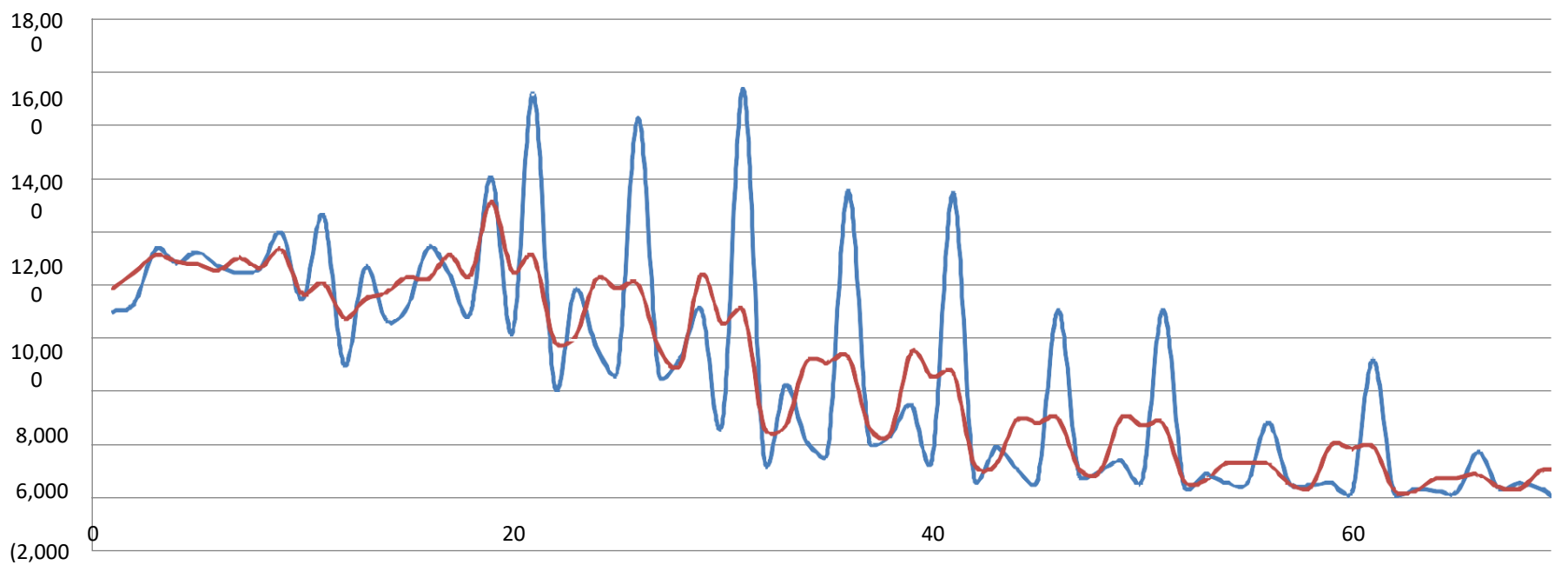


Table 2 shows the distribution of households by family size. This is an important statistic when studying overcrowding as well as family formations and relationships.

Table 2. Numbers and Percentage of Residents by Household Size

Total	336,720	100.0
1	10,635	3.2
2	21,190	6.3
3	34,155	10.1
4	44,756	13.3
5	47,545	14.1
6	44,526	13.2
7	36,610	10.9
8	50,944	15.1
9	10,665	3.2
10	8,090	2.4
11	5,918	1.8
12+	21,686	6.4
Average		4.4

The highest number and percentage of people (15.1%) live in households with a family size of 8. Overall, a high (double digits) percentage of residents live in households with 3 to 8 members, indicating a high level of overcrowding.

Table 3. The Ethnic Composition of Dire Dawa's population (2007 census).

Ethnic group	Populattion	%
Oromo	156958	46.1
Somalie	83,069	24.4
Amhara	68962	20.3
Guragie	15543	4.6
Tigrie	4,226	1.2
Hareri	3,720	1.1
Hadiya	1,791	0.5
From d/p	1004	0.3
Qebena	612	0.2
Silte	605	0.2
Welaita	402	0.1
Malie	393	
Other Forei	365	
Kembata	274	
Argoba	264	
Burji	235	
Berta	209	
Eritrean	187	
Anyiwak	172	
Djiboutian	168	
Agew/Hamgra	150	
Affar	148	
Mareko	148	
Other Eth.	136	
Mao	125	
Alaba	121	
Gumuz	119	
Messengo	112	
Somalian	108	
Total	340326	

Table 3 lists ethnic members of the Dire Dawa population with at least 100 members. Twenty nine groups are listed, the Oromo being the largest (46.1%) followed by the Somalie (24.4%) and Amhara (20.3%). With over 15,500 members, the Gurage, have a significant presence in Dire Dawa. This is not surprising given their business acumen and willingness to trade and invest in any town or city anywhere in the country.

Marital Composition

The marital composition of females is shown below (Table 4). We have chosen females only due to the fertility implications of their marital status. Surprisingly, however, we observe that marriage rates are very low, especially among young females below age 25. Less than half of females in the 20-24 age group are married. Marriage being nearly universal in the rest of Ethiopia the figure for middle age women (30-55) is typically in the 80th or 90th percentile in the rest of the country. In Dire Dawa the percentages are in the 50s, 60s, and 70s. Not a single age group reaches the 80th percentile. Moreover, the percentages of women who reported that they were “currently married” decrease sharply after age 50. A research narrowly focused on marriages and family formations among females at all ages in the city of Dire Dawa is needed to fully understand the marital dynamics here and know the factors behind the very low marriage rates.

Table 4. Distribution of Females by Age and Marital Status.

		Never	Currently				%
Age	Total	Married	Married	Divorced	Separated	Widow	Currently married
Female	128649	49,835	58,091	5230	3,059	12,082	45.2
10--14	18,651	16,304	2,224	40	13	45	11.9
15-19	21,922	16,900	4,536	218	150	33	20.7
20-24	19,592	8,830	9,705	533	309	136	49.5
25-29	17,796	4,300	11,948	682	432	389	67.1
30-34	11,949	1,612	8,477	680	413	717	70.9
35-39	10,490	793	7,541	819	413	911	71.9
40-44	7,259	310	4,688	686	300	1,257	64.6
45-49	5,179	134	3,014	512	252	1,261	58.2
50-54	4,862	154	2,402	441	269	1,597	49.4
55-59	2,293	66	1,060	197	125	846	46.2
60-64	3,097	102	1,162	178	153	1,503	37.5
65-69	1,588	65	506	100	71	829	31.9
70-74	1,716	49	454	82	62	1,056	26.5
75+	2,255	218	373	63	100	1,502	16.5

Demographic and Health Indicators

The following are Dire Dawa-specific excerpts from the results of the 2011 Demographic and Health Survey (DHS) in the city [4]

1. 43% of female residents in this city (second largest city in the country) have no education. This is twice the percentage of illiterate females in the largest city - Addis Ababa (22.5). The rate is much lower among males (24.5). The primary and secondary school attendance ratios are 77.5 % and a dismal 32.9 % respectively.
2. 57.4% of the women and 11.3% of men were not gainfully employed during the 12 months prior to the 2011 DHS survey.
3. Nearly a quarter of men (23.6%) in Dire Dawa smoked cigarettes and nearly three-quarters (72.9%) chewed Chat.
4. The median age at first marriage for females currently in the age group 20-24 was 19.4. For those in the 25-29 age group at the time of the 2011 survey the median age at first marriage was. 18.9. This suggest an increasing trend of the median age at first marriage for females in Dire Dawa, and a possible decline in fertility in the future due to the reduction in exposure to the risk of conception.
5. At 3.4 Dire dawa has the second lowest total fertility rate (the number of children women in the 15-49 age group are expected to have at the end of their reproductive period). Addis Ababa has the lowest (1.9) and Somali the highest (7.1).
6. The mean ideal number of children for women in Dire Dawa is 4.6.
7. Just over a third (33.9%) of women are currently using contraception.

Table 5. Percentage of the last births by months since the previous birth (Addis Ababa and Dire Dawa – 2011)

Months since the previous birth	7-17	18-23	24-35	36-47	48-59	60+	Total
% of birth (Addis Ababa)	5.8	3.4	16.1	15.3	14.3	45.1	100.0
% of births (Dire Dawa)	7.5	17.8	31.9	19.2	9.1	14.5	100.0

In Addis Ababa, nearly half of the women who gave birth in the last 12 months before the 2011 DHS waited over 60 months (5 years) since the previous birth to have that (last) birth. In Dire Dawa only 14.5% of women who gave birth in the 12 months before the 2011 DHS waited that long. The highest percentage in Dire Dawa was among those who waited 24-35 months (2 to 3 years). In Addis Ababa, the highest percentage was recorded for those that waited over 60 months to have that last birth. The gap between births is not as high in Dire Dawa as it is in Addis Ababa. It is no wonder then that the total fertility rate (TFR) is higher in Dire Dawa than in Addis Ababa.

Table 6. Childhood Mortality Rates in Dire Dawa and Addis Ababa (DHS 2011)

	<u>Neonatal mortality (NN)</u>	<u>Postneonatal mortality (PNN)</u>	<u>Infant mortality (iq0)</u>	<u>Child mortality (cqi)</u>	<u>Under-five mortality (sq0)</u>
Harari					
Addis Ababa	21	19	40	14	53
Dire Dawa	30	30	60	39	97

The numbers in Table 6 reveal the significant mortality disadvantage children in Dire Dawa are facing in comparison to those in the country's capital city Addis Ababa where health care is more widespread and preventive measures including childhood immunization are accessed with relative ease. The differences in neonatal mortality rates show the difference in the number of babies dying in the first month of life (out of 1000 births) in Addis Ababa and Dire Dawa (about 30% more). The rates for the postneonatal mortality refer to the remaining 11 months until the first birth day. Here too babies in Dire Dawa face a higher risk of dying (about a third higher) than those in the capital. The sum of the two numbers gives the infant mortality rate (the number of babies dying in the first year of life out of a 1000 babies born in the same period). The mortality disadvantage for Dire Dawa's children is more pronounced in the years between the 1st and 5th birthdays where more than a 100% more children die (per 1000 births) than in the capital city Addis Ababa. Moreover, the under-five mortality rate (sq0) in Addis Ababa is only 54% of the rate in Dire Dawa. Researchers, health workers, and policy makers need to make note of this finding and make long term plans to institute corrective actions.

Demographic and Health Indicators : 2016 Demographic and Health Survey (5)

Indicator	Percent
Total fertility rate 2000	3.5
Total fertility rate 2005	3.6
Total fertility rate 2011	3.4
Total fertility rate 2016	3.1
Percentage of women using any contraceptive method 2000	28.4
Percentage of women using any contraceptive method 2005	34.0
Percentage of women using any contraceptive method 2011	33.9
Percentage of women using any contraceptive method 2016	30.3
Median age at first marriage 2000	19.4
Median age at first marriage 2016	18.1
Infant mortality rate 2000	106

Infant mortality rate 2005	71
Infant mortality rate 2011	60
Infant mortality rate 2016	67
Under five mortality rate 2000	176
Under five mortality rate 2005	136
Under five mortality rate 2011	97
Under five mortality rate 2016	93

Indicator	Percent
Women delivering in a hospital 2005	28.4%
Women delivering in a hospital 2011	44.4%
Women delivering in a hospital 2016	63.6%
Children receiving all eight vaccinations 2000	35.3%
Children receiving all eight vaccinations 2005	43.4%
Children receiving all eight vaccinations 2011	58.6%
Children receiving all eight vaccinations 2016	75.9%
Percent of children stunted 2000	34.3
Percent of children wasted 2000	12.1
Percentage of children underweight 2000	26.1
Percent of children stunted 2005	34.6
Percent of children wasted 2005	16.4
Percentage of children underweight 2005	26.3
Percent of children stunted 2011	36.3
Percent of children wasted 2011	12.3
Percentage of children underweight 2011	27.6
Percent of children stunted 2016	40.2
Percent of children wasted 2016	9.9

Indicator	Percent
Percentage of children under weight 2016	25.7
Women who have received HIV test results 2005	1.9
Women who have received HIV test results 2011	40.8
Women who have received HIV test results 2016	39.0
Men who have received HIV test results 2005	7.3
Men who have received HIV test results 2011	42.0
Men who have received HIV test results 2016	35.8
Women who are literate 2000	52.3
Women who are literate 2005	53.0

Women who are literate 2011	50.8
Women who are literate 2016	54.5
Women who were circumcised 2000	95.1
Women who were circumcised 2005	92.3
Women who were circumcised 2016	75.3
Households with electricity 2000	63.7
Households with electricity 2005	68.0
Households with electricity 2011	68.9
Households with electricity 2016	71.9

[Click **HERE** to access the interactive web map and zoom in on Dire Dawa](#)

[Click **HERE** to access the *Wereda* population density map and zoom in on Dire Dawa's *Weredas*](#)

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