



POVERTY & EQUITY NOTES

JANUARY 2020 · NUMBER 18

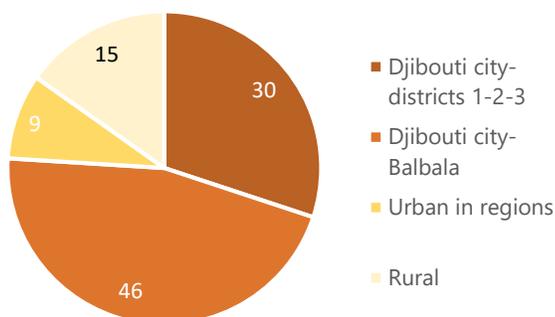
Location matters: welfare among urban and rural poor in Djibouti

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This note presents aspects of welfare of urban and rural poor in Djibouti. With only 15 percent of Djibouti's population, rural areas host about 45 percent of the country's poor. As such, these areas require a comprehensive strategy that invests in infrastructure and service provision and better connection to cities. The urban poor are more numerous and concentrated in the Balbala community of the capital. A policy tool kit to promote high quality of public services, better education and employment opportunities for urban poor would be critical.

Djibouti is a small lower-middle income economy that has recently experienced a period of unprecedented economic growth of 35 percent between 2013 and 2016. It is also a highly urbanized country. With an area spanning 23,200 square kilometers, it is divided into five regions (Ali Sabieh, Dikhil, Tadjourah, Obock, Arta) and the city of Djibouti, the capital. Djibouti city is further subdivided into 5 districts; the 4th and 5th districts in Djibouti city together comprise the area of Balbala¹.

Figure 1. Distribution of the population across locations (%)



Source: Calculations using EDAM4-IS².

Strikingly, about 46 percent of the country's population resides in Balbala (Figure 1). Another 30 percent of the population resides in the remaining 3 districts of Djibouti city. About 15 percent of the population lives in rural areas while the remaining 9 percent resides in urban areas.

Welfare Differs Across Location

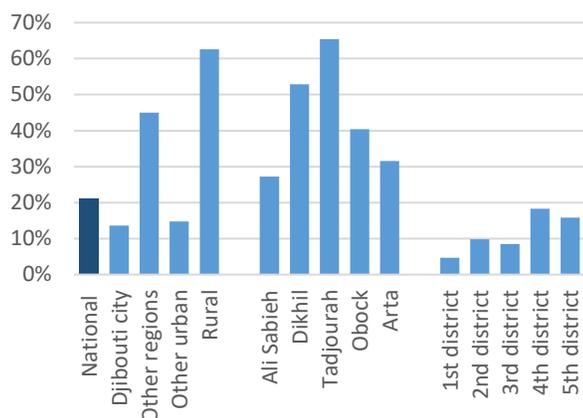
There are significant disparities in welfare between the residents of the capital and other regions. The estimates for 2017 based on the national poverty line (around \$2.18 a day 2011 PPP) show that a little more than a fifth of the Djiboutian population is living in extreme poverty and is unable to cover its basic needs. The extreme poverty rate in Djibouti city, which is entirely urban, is estimated at 13.6 percent, while in rural areas, it is more than four times higher at 62.6 percent (Figure 2). Rural areas comprise only 15 percent of the population but are home to 45 percent of the poor population. Another interesting facet of spatial variation in welfare is that locations further away from the capital and locations hosting a

¹ Most of the analysis presented here summarizes key results from a World Bank report entitled "Challenges to Inclusive Growth: a poverty and equity assessment of Djibouti".

² EDAM4-IS is *Enquete Djiboutienne Aupres des Menages* conducted in 2017 by the National Institute of Statistics, Djibouti (INSD).

relatively large rural population show higher levels of deprivation. In the capital, disparities are also found across districts: the extreme poverty rate in Balbala community is three times higher than that in the 1st district. The Balbala area in the capital accounts for 37 percent of the poor population.

Figure 2. Extreme poverty rates, by location



Source: Calculations using EDAM4-IS. Note: Line across graph denotes the national extreme poverty rate.

Poor rural households are the most deprived group in the population (Table 1). Showing the highest dependency ratios, they have the lowest participation in the labor force (among individuals aged 15 and above). The heads of rural poor households have very low levels of employment, a low likelihood of being employed in the public sector, and very low percentage work in formal private sector. School enrolment is very low among rural poor too. Taking all these elements together, it is no surprise that this group has one of the highest multidimensional deprivation scores³ of 0.83.

The poor living in Djibouti city share certain characteristics with poor living in rural areas. In addition, the former also display characteristics similar to the those living in rural areas in general.

In particular, the educational attainment and job quality of the household heads of the extreme poor population living in Balbala is similar to those of household heads residing in rural areas. The average consumption per capita among the poor in Balbala is much lower than the nonpoor in Balbala and also lower than that in rural areas.

But the poor in Djibouti city have better access to public services than rural poor, because they reside in the capital city. About 41 percent of rural poor have access to an improved water source, 10 percent have access to sanitation and a mere 3 percent have access to electricity. A little more than a third of rural poor households are close (less than 1 km away) to an elementary school and only 10 percent live less than 1 km away from any health facility. Compared to the rural poor, poor households in the capital have better coverage rates of water, sanitation, electricity and more families live close to an elementary school and health facility. The urban poor also are more likely to send their children to school.

The rough arid climate affects inhabitants of rural areas in the face of increased climate change risk, highlighting the importance of location further. Due to the series of droughts that Djibouti has experienced in recent years, the livelihoods of nomadic and pastoralists have come under threat. This population is thought to have dwindled substantially with some fleeing to neighboring countries and others practicing pastoralism becoming sedentary in the outskirts of villages and cities. Still in 2017, more than half of the population in Tadjourah and Obock practiced some sort of animal husbandry, as did 42, 31 and 25 percent of the population in Arta, Ali Sabieh and Dikhil, respectively. Poverty amongst this population is much higher than the national rate, calling for attention to this vulnerable group.

³ Following the methodology proposed in the Poverty and Shared Prosperity Report 2018 (PSPR 2018), a multidimensional deprivation score is calculated looking at deprivations along 3 dimensions- monetary poverty, education and access to services. The final score ranges from 0 to 1 wherein a score of 1 indicates deprivation on all 3 dimensions and a score 0 indicates no deprivation.

Table 1. Characteristics of the population by poverty status and location

	Non-poor population			Extreme poor population		
	Districts 1-2-3	Balbala	Rural	Districts 1-2-3	Balbala	Rural
Household size	6.1	6.6	4.7	7.6	8.7	5.4
Dependency Ratio*	0.71	0.87	1.08	0.75	0.82	1.35
Average annual consumption per capita (DJF)	323,598	212,859	151,326	69,392	67,669	49,051
Deprivation Score	0.13	0.16	0.44	0.47	0.50	0.83
Individual characteristics						
Percentage of 6-14yo enrolled in school	84%	87%	69%	70%	79%	53%
Percentage of 15+ in labor force	48%	46%	41%	49%	41%	33%
Percentage of individuals employed ⁺	29%	25%	22%	13%	12%	13%
Household head characteristics						
Head has no education	44%	61%	81%	87%	87%	94%
Head has at least secondary education	19%	15%	3%	4%	2%	1%
Head is employed	57%	61%	41%	31%	42%	26%
Head is employed in public sector (as a % of all employed)	43%	48%	45%	32%	46%	27%
Head is employed in private formal sector (as a % of all employed)	19%	10%	5%	2%	3%	4%
Access to public services						
Open defecation	2%	1%	44%	12%	12%	77%
Appropriate garbage disposal	94%	90%	28%	90%	72%	13%
Access to sanitation	36%	33%	2%	21%	31%	1%
Access to electricity	90%	68%	10%	59%	18%	3%
Access to water	99%	99%	66%	92%	97%	41%
Household lives <1 km away from an elementary school	39%	41%	41%	41%	47%	37%
Household lives <1 km away from any health facility	26%	25%	15%	28%	29%	10%

Source: Calculations using EDAM4-IS.

Notes: * Only households with at least one working age (15-64) individual are included. + Includes all individuals 15 years and above.

Private sector comprises all branches of activity except public administration and others (international organizations, military bases, and unspecified categories). Within the private sector, employers, contractors and independent workers are considered working in the formal sector when they have accounting records, a trading license (commonly referred to as "*patente*") and registration in the chamber of commerce. Within the private sector, salaried individuals, family helpers and apprentices are considered working in the formal sector if the worker has a contract and is registered in social security. All remaining individuals working in the private sector are considered as working in the informal sector. Access to electricity is defined as the use of electricity as the main source of lighting. Access to water is defined as the availability of water in the household in the form of running water (ONEAD indoor connection), direct connection from a borehole, ONEAD outdoor connection, by pipe, public fountain and drilling (with a pump). Appropriate garbage disposal is defined as garbage collector - OVD (public dump), garbage collector - private and deposited in a special place. Access to sanitation is defined as unshared access to a water closet with flush, or latrine with slab.

Guiding policy

Rural and urban poor face a distinct set of concerns, and separate, targeted sets of policies must be considered for each of these subgroups. The urban poor are covered by basic services but have few opportunities for economic development. The GoD should focus on ensuring that human capital accumulation is a priority for

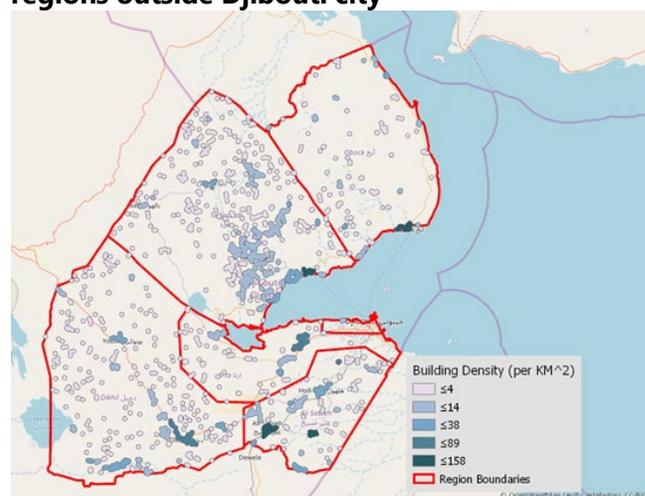
this group. The schools and hospital in these areas are accessible, thus focus would need to be placed on ensuring high quality of service delivery. There is a gap that needs to be filled in understanding how the increased educational attainment reflects actual learning (Djibouti does not participate in internationally comparable testing efforts of students). Expanding employment opportunities will be key to unlocking the potential of the Djiboutian population.

Rural poor require a comprehensive strategy that focuses on infrastructure and service provision. Households in these areas suffer from low access to public services such as electricity, water, and sanitation. Electricity access—a key service that has been shown to stimulate consumption and income and enable better education and health—especially needs to be addressed, as only 6 percent of the rural population has access to it. Meanwhile, open defecation rates are high in rural areas, calling for strong investments in sanitation services as well as disease management, especially as these areas are also affected by low coverage of health facilities.

Achieving universal coverage of basic services in rural areas is challenging due to the dispersed population and the low population density. We illustrate this by using geospatial data and conducting the following exercise. First, we identify all the buildings in Djibouti using satellite imagery. Second, using these buildings as *proxies* for dwelling or inhabited spaces, we created a 1km radius around each dwelling. Third, we create clusters of dwellings to represent inhabited areas, like communities or villages. To build these clusters we draw a 1km radius around each dwelling and then combine (i.e. create the union) all the radii where their areas overlap. For instance, if two dwellings are near each other they will form a cluster shaped like a peanut. And fourth, we calculate the dwelling density (i.e. number of dwellings per km²) for all the clusters identified. Figure 3 shows the results of this exercise for the 5 regions. In Tadjourah, the region with the highest poverty rate and lowest coverage rates of certain services, close to 60 percent of dwellings are in extremely low-density areas (one building per km²) and almost three quarters (73 percent) are in very low-density areas (two buildings or less per km²). Meanwhile in Dikhil, where extreme poverty is 53 percent, these shares are 77 and 86 percent, respectively. As a

comparison, Djibouti city has all dwellings under one cluster with an estimated density of 293.3 buildings per km². Expanding coverage of basic services in these areas will therefore require GoD to find innovative ways to reach the populations in the poorest regions. Achieving universal coverage of basic services in rural areas will certainly require additional resources, but they will have to be coupled with a well-crafted strategy to reach the neediest in an efficient manner.

Figure 3. Clusters and density of clusters for regions outside Djibouti city



Source: own calculations using geospatial data created by the World Bank. Map is taken from OpenStreetMap. Clusters refer to groups of 1km-radius neighborhoods around all buildings identified through a building footprint exercise. Djibouti city cluster not shown.

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