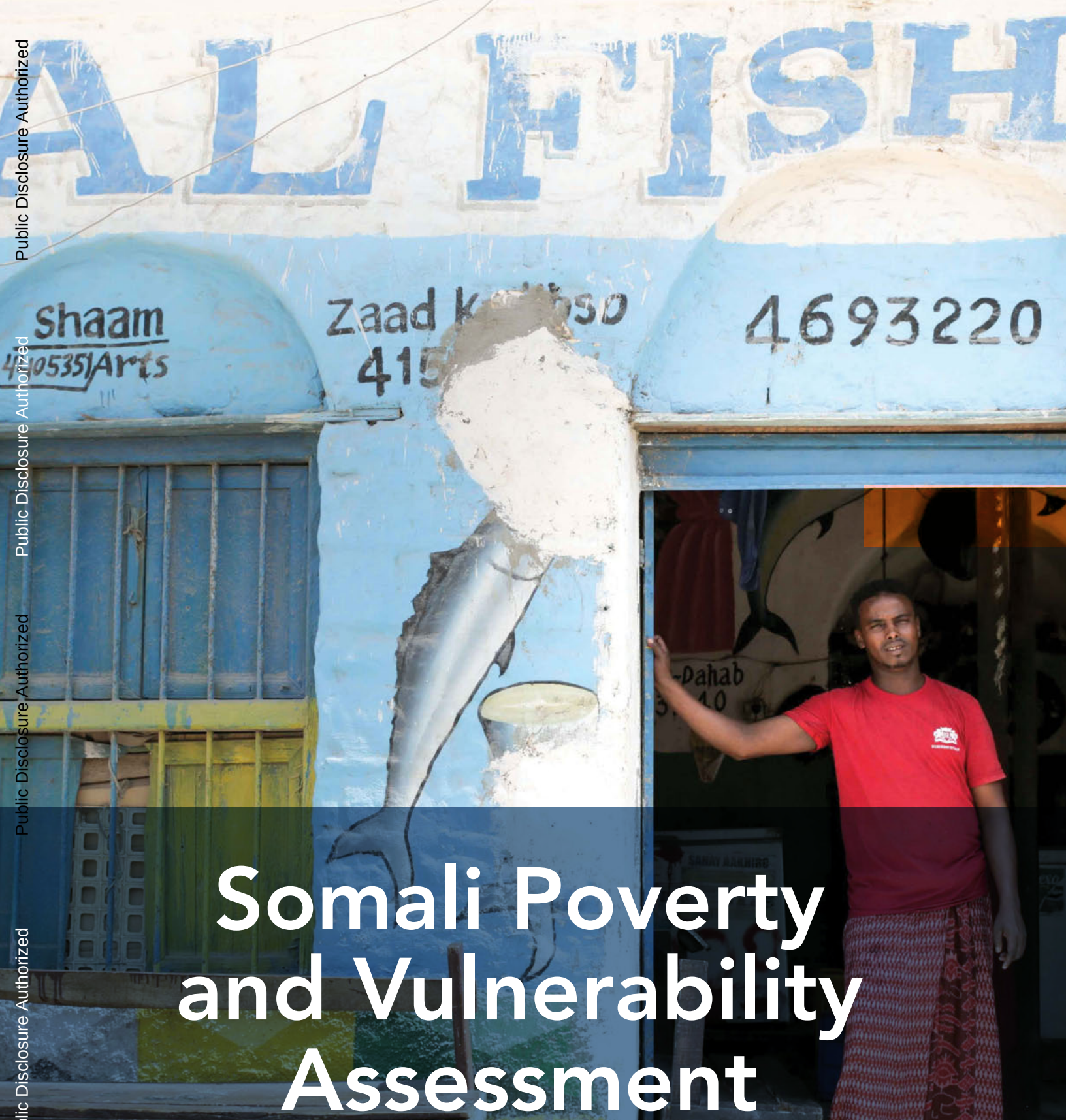

Somali Poverty and Vulnerability Assessment

Findings from Wave 2 of the Somali High Frequency Survey

WORLD BANK GROUP

Report No. AUS0000407

April 2019

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Abbreviations and Acronyms

AE	Adult equivalent
AML/CFT	Anti-Money Laundering and Combatting the Financing of Terrorism
AWD	Acute Watery Diarrhea
CBS	Central Bank of Somalia
DFID	Department for International Development Government of the United Kingdom
DINA	Drought Impact and Needs Assessment
FAO	Food and Agriculture Organization (UN)
FEWSNET	Famine Early Warning Systems Network
FSNAU	Food Security and Nutrition Analysis Unit
GDP	Gross domestic product
HIPC	Heavily Indebted Poor Countries
ICRC	International Committee of the Red Cross
IDPs	Internally displaced persons
IPC	Integrated Phase Classification for Food Insecurity
KYC	Know Your Client
MODIS	Moderate Resolution Imaging Spectroradiometer
MTB	Money Transfer Business
MTO	Money Transfer Operators
NDVI	Normalized Difference Vegetation Index
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary least squares
PESS	Population Estimation Survey of Somalia
PPP	Purchasing power parity
RRF	Recovery and Resilience Framework
RSP	Remittance Service Provider
SDGs	Sustainable Development Goals
SHFS	Somali High Frequency Survey
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	The United Nations Children's Fund
USGS	United States Geological Survey
WHO	The World Health Organization

Executive Summary

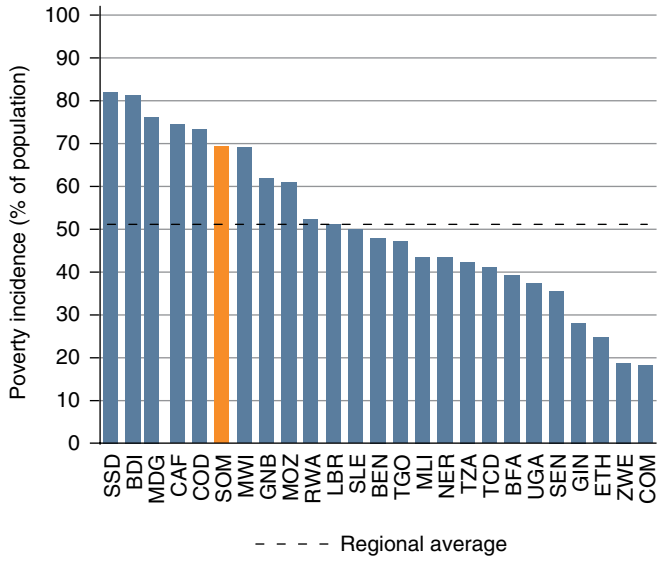
Poverty and vulnerability in Somalia will impede future development without appropriate policies. This report overviews poverty and vulnerability in Somalia to inform long-term development and resilience policies and programs. The report describes poverty in Somalia in detail, including geographical variation, based on the 2nd Somali High Frequency Survey. The report analyzes the livelihoods impact of the recent drought, and estimates effects of future droughts, emphasizing effects on precarious livelihoods. The report also discusses general shocks, including conflict and climate, and the extent to which they have contributed to displacement. Formal safety nets and informal remittances can support resilience. The report discusses and recommends policies and strategies to protect the poor and vulnerable while opening paths to escape poverty.

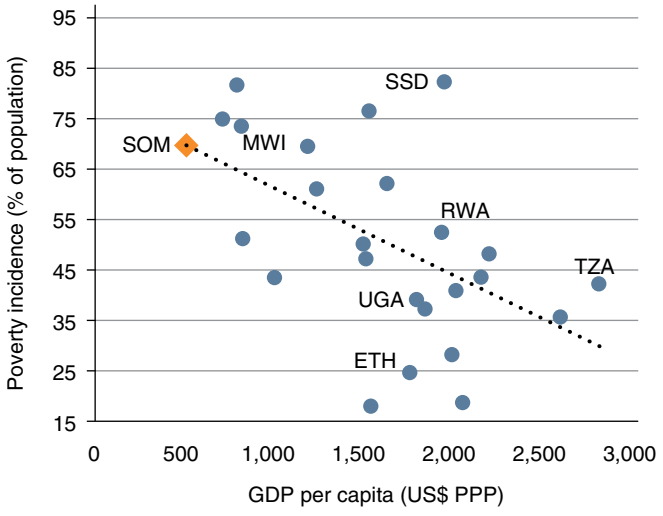
Somalia is one of the poorest countries in Sub-Saharan Africa. Nearly 7 of 10 Somalis live in poverty, the 6th highest rate in the region, only after the Democratic Republic of Congo, Central African Republic, Madagascar, Burundi, and South Sudan. The incidence of poverty of 69 percent is 19 percentage points higher than the unweighted average of low-income Sub-Saharan African countries of 51 percent in 2017. Somalia's Gross Domestic Product (GDP) per capita of US$500 in 2017 and high poverty incidence is in line with low income countries, as shown by the relationship between poverty and GDP per capita across Sub-Saharan Africa.

Poverty is widespread and deep, particularly among rural residents, internally displaced persons (IDPs) in settlements, and children

Poverty is widespread and deep, particularly for rural households and for IDP settlements. According to the 2nd Somali High Frequency Survey, almost three-fourths of the population in rural areas, IDP settlements, Mogadishu, and among nomads are poor. Poverty is deepest in rural areas and IDP settlements. To raise living standards, an estimated US$1.64 billion per year is needed if perfectly targeted to the poor (ignoring administrative and logistics costs). A significant group

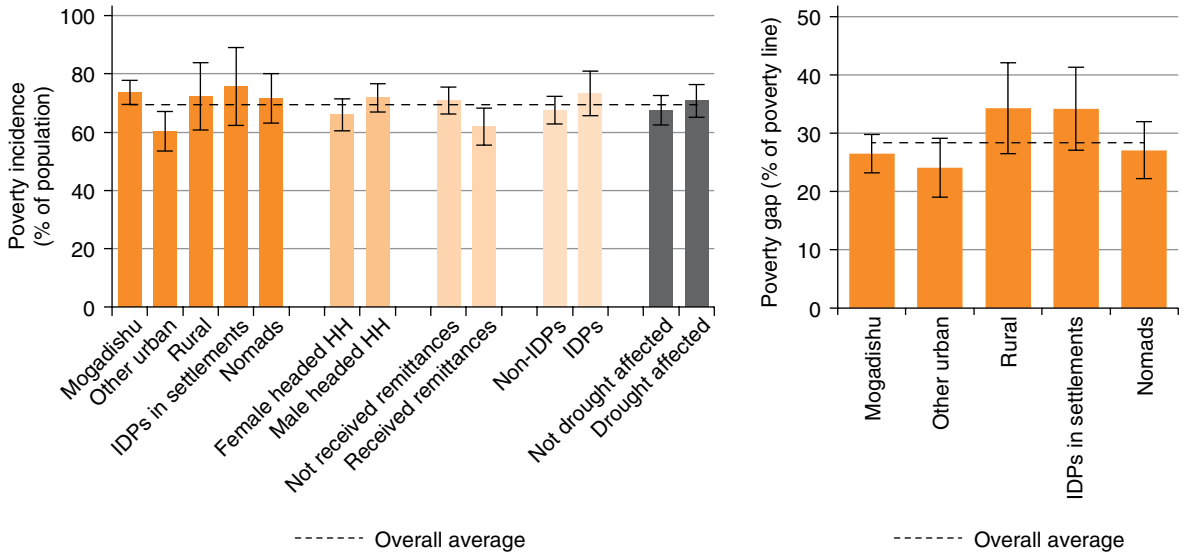
■ Poverty is among the highest in Sub-Saharan Africa





Authors' calculations based on the SHFS 2017–18, World Bank Macro Poverty Outlook and World Bank Open Data.

■ Poverty is high and deep for households in rural areas and IDP settlements



Source: Authors' calculations based on the SHFS 2017–18.

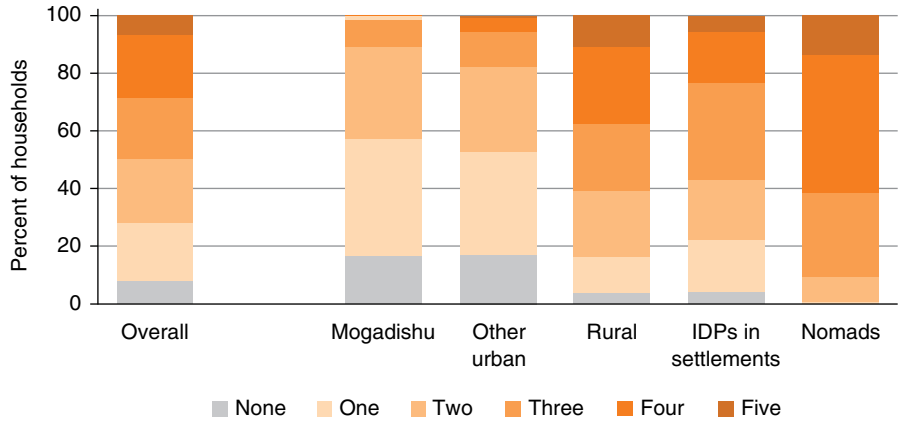
of non-poor are vulnerable to falling into poverty, representing that about 10 percent of the population is within 20 percent in terms of total daily consumption above the poverty line.

Children and households that do not receive remittances are disproportionately poor. Children below 14 years of age represent nearly half of Somalis, and 73 percent of them are poor. Children from poor households face challenging conditions—for example, they have no electricity or are deprived of education—which present strong obstacles to escaping poverty.

Poverty extends beyond lack of money to nonmonetary deprivations across multiple dimensions

In addition to monetary poverty, most Somali households suffer other nonmonetary deprivations. Almost 9 of 10 Somali households are deprived in at least one dimension: monetary, electricity, education, or water and sanitation. Nearly 7 of 10 households suffer in two or more dimensions. Nomadic populations suffer the most, while urban dwellers experience the least. Poor households

■ **IDPs in settlements, rural, and nomadic households face high deprivations across multiple dimensions**



Authors' calculations based on the SHFS 2017–18.

are slightly more deprived than non-poor ones in access to electricity and education.

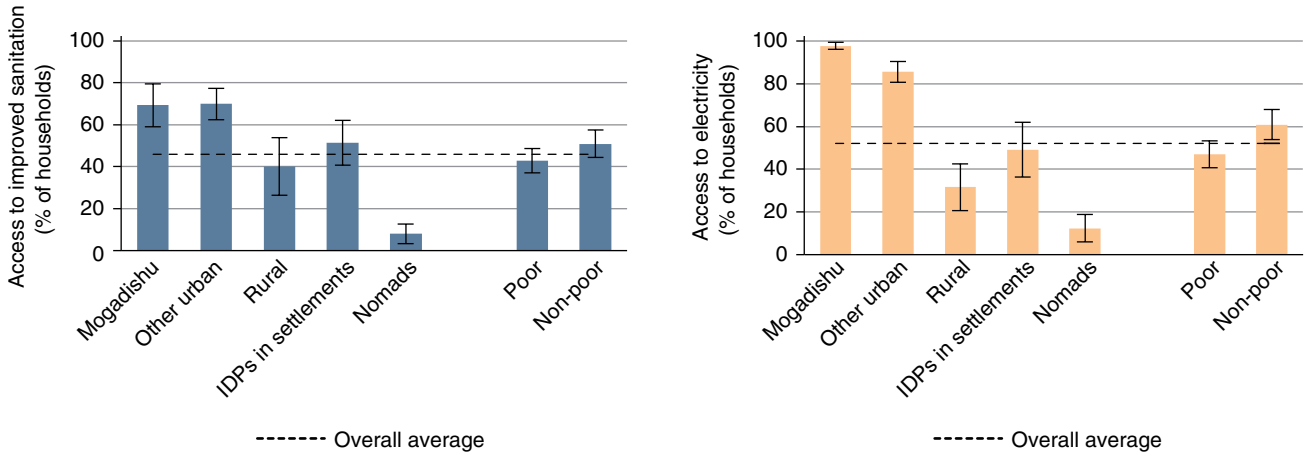
Access to services is limited, particularly for rural residents, IDPs in settlements, and nomads. Improved water and sanitation is critical for health, school performance, and productivity, but only 5 of 10 households have access to improved sanitation, and 8 of 10 to improved water sources. Only 5 of 10 households have electricity. Access to services is somewhat higher in urban areas. Poor households are less likely to have access to improved sanitation and electricity. Markets and health clinics are far—more than 30 minutes walking distance—for 34 to 40 percent of Somali households and for most nomads.

Overage school enrollment is common, with stark geographical and gender disparities in enrollment rates. Nearly 27 percent of children enrolled in primary school are older than 13 years, and more than 55 percent of those enrolled in secondary school are not between the ages of 14–17 years. Somali children start primary school late as parents believe children aged 6–9 are too young to attend. Enrollment of children aged 6–13 is only 33 percent and highest in urban areas. In Mogadishu and other urban areas, enrollment among primary school-aged children aged 6–13 is about twice the enrollment rate in rural areas and IDP settlements, and more than six times that of nomadic children. Geographical disparity in enrollment for secondary school-aged 14–17 year-old children is also pronounced. While there are no gender differences in enrollment rates and reasons for not attending among children aged 6–13, a gender gap emerges for 14–17 year-olds; male enrollment is significantly higher after controlling for age, poverty status, and other household characteristics. The main reasons for not attending school at this age are lack of money for boys and having to work or help at home for girls. Nomads and girls face the biggest challenges.

Distance from schools, rather than cost, is the primary barrier to primary school enrollment. Schools are at least 30 minutes walking distance for one of three Somali households, a distance negatively associated with primary enrollment. On average, households spend about 3 percent of the US$1.90 poverty line on education per household member enrolled. Expenditure on education weakly correlates with enrollment, however.

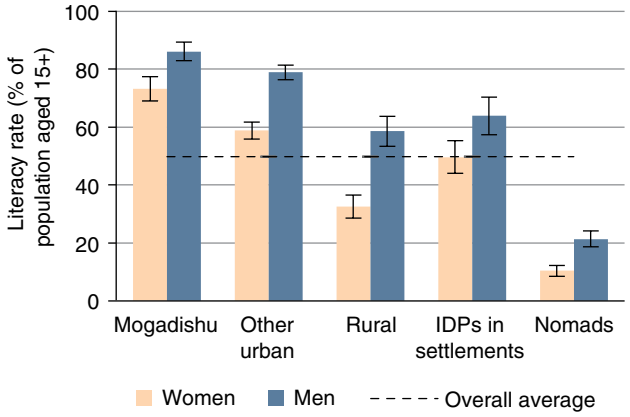
Gender and regional disparities in access to education reflect educational outcomes of Somalis. Education is key for increasing welfare and breaking the poverty cycle. Only half of Somalis read and write, with literacy more common among younger generations, urban populations, and men. Similarly, the share of rural residents, IDPs in settlements, and nomads without formal education is 1.6, 2.6, and 2.5 times, respectively, higher than that of urban residents. Older Somalis are less likely to have formal education than younger Somalis, and women are less likely than men. Furthermore, children are more likely to be enrolled in school when household heads are literate. Despite higher enrollment rates in urban areas, completion of primary

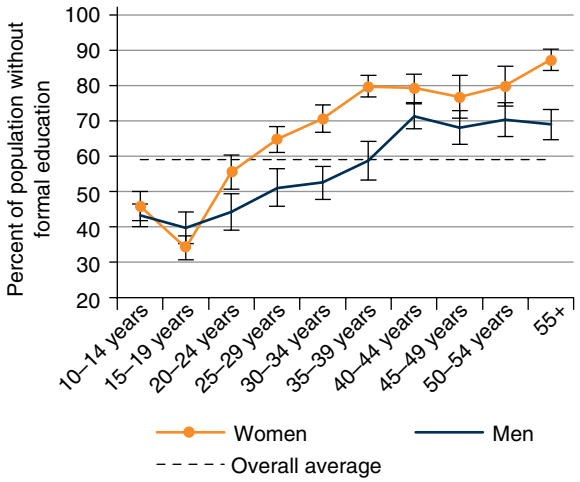
IDPs in settlements, rural, and nomadic households lag in access to key services



Authors' calculations based on the SHFS 2017–18.

Women across all population groups have lower literacy and educational attainment





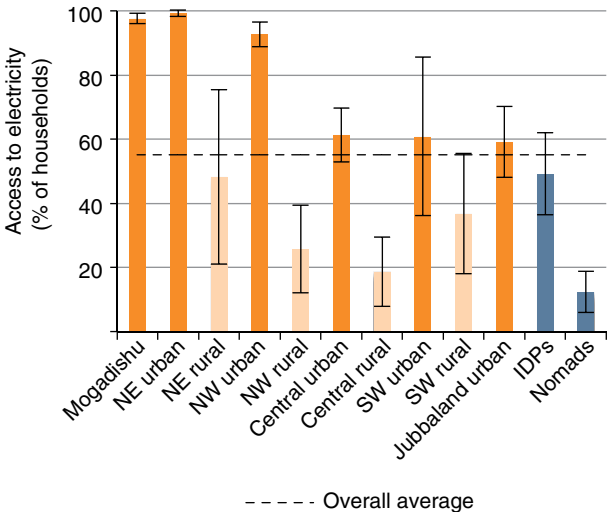
Authors' calculations based on the SHFS 2017–18.

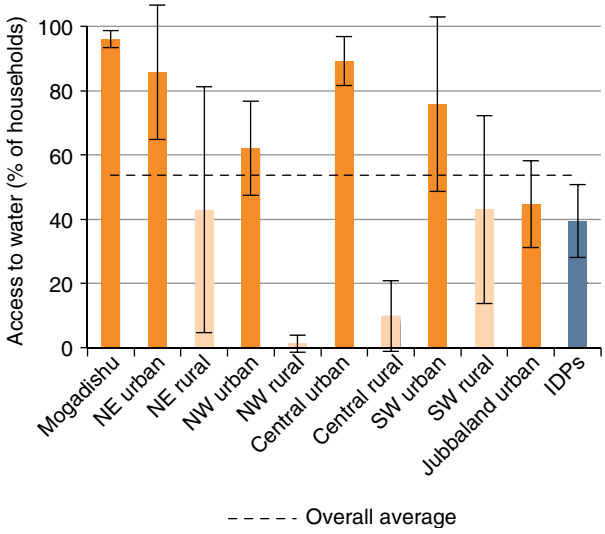
education is limited—only 11 percent of those aged 15 or more who were previously enrolled did not complete the primary school.

Urban areas generally provide higher standards of living and better access to services than rural areas, except for access to land and housing

Somali cities tend to have lower monetary poverty and better services than rural areas. Poverty averages 64 percent across urban areas (including Mogadishu) compared to 69 percent nationally, 72 percent in rural areas, and 76 percent among IDPs. The only exception is Mogadishu, where poverty is higher than nationally or than rural areas. Cities consistently provide better access to services—except for land and housing—and more stable income than rural areas. Access to electricity, water, improved sanitation, health, education, improved housing, and Internet is consistently higher in urban areas irrespective of poverty levels, whether IDP or female-headed households. Rural areas fare better than urban in land and housing tenure: due to land scarcity and high land values,

Urban areas provide better services than rural areas





Authors' calculations based on the SHFS 2017–18.

urban households are less likely to own. Somali cities provide more wage employment and access to remittances, and since urban jobs are less climate-dependent, they provide more stable income than agriculture or family businesses.

Despite better conditions in cities, cities struggle with hunger, high absolute poverty of 64 percent, nonmonetary poverty of 41 percent, and ensuring universal access to services. Many cities have not coped with constant and large influxes of IDPs. Pressure on land, housing, and services is increasing with 75 percent of IDPs already residing in cities.

Mogadishu and North East and North West cities provide better access to services compared to Baidoa, Kismayo, and Central urban areas. While poverty is higher in Mogadishu than all urban areas except Baidoa, access to basic services such as electricity, water, sanitation, improved housing, education, and health is higher in Mogadishu. Kismayo has the lowest poverty yet fares poorly on services. Strikingly, access to water, literacy, enrollment, and employment are significantly better in IDP settlements than in Kismayo. Baidoa has high poverty, and correspondingly low access to services. North East and North West cities fare relatively well on access to services, while Central urban areas lag. North East and North West cities, which have been relatively free of violent conflict, have relatively high access to services; 86 percent of NW urban residents report feeling "very safe." Public institutions are more established in these areas, which facilitates entry of external assistance. Subnational governments are nascent in Kismayo, Baidoa, and Central urban areas, which have only recently liberated from Al-Shabaab. Much of their rural territories remain under Al-Shabaab control.

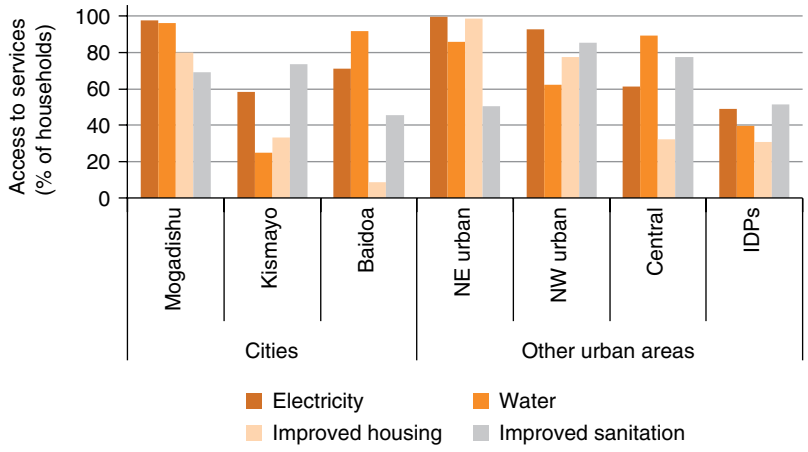
Urban IDPs have more access to services than rural IDPs, but lag behind non-IDP households

Urban IDPs, though worse off than urban non-IDP households, fare better than rural IDP households. Irrespective of whether IDPs live in settlements or not, they have better access to electricity, improved housing, and improved sanitation than rural IDPs. However, urban IDPs still have less access to electricity, piped water, improved sanitation, improved housing, dwelling ownership, and Internet compared to non-IDP urban households. Moreover, urban IDPs suffer lower enrollment, literacy, and employment rates, and tend to live further from primary schools and food markets. Many urban IDPs, deprived of their former livelihoods, assets, and social networks, are disadvantaged in education and access to good jobs.

Urban households in IDP host communities are no worse off than other urban households

There are no significant differences between urban households in communities that host IDPs (urban host) and those in communities that do not (urban non-host). While hosting IDPs is

Significant regional inter-urban variation exists in access to services



Authors' calculations based on the SHFS 2017–18.

thought to constrain access to services, jobs, and housing, survey data show that urban host and non-host households have similar poverty profiles and access to services. This suggests that either effects of hosting IDPs have not yet materialized, or that hosting IDPs does not deteriorate service access, as services are provided to IDPs dwelling in settlements. This situation may change if IDPs prolong their urban stay and/or support from humanitarian agencies declines.

Continued influx of IDPs causes urban sprawl, hindering service provision in new settlements. Seventy-five percent of IDPs in Somalia have settled on public and private lands in and around cities. Most returnees are thought to also have settled in cities. Without secure land tenure, IDPs are vulnerable to eviction. Over 109,000 IDPs living in informal settlements across the country were forcefully evicted between January and August 2017 alone; 77 percent were around Mogadishu. Many IDPs shift to city outskirts, causing urban sprawl and making service provision difficult and costly as new settlements are disconnected from urban infrastructure networks. Spatial fragmentation also inhibits IDPs' access to jobs and prevents cities from reaping scale and agglomeration benefits.

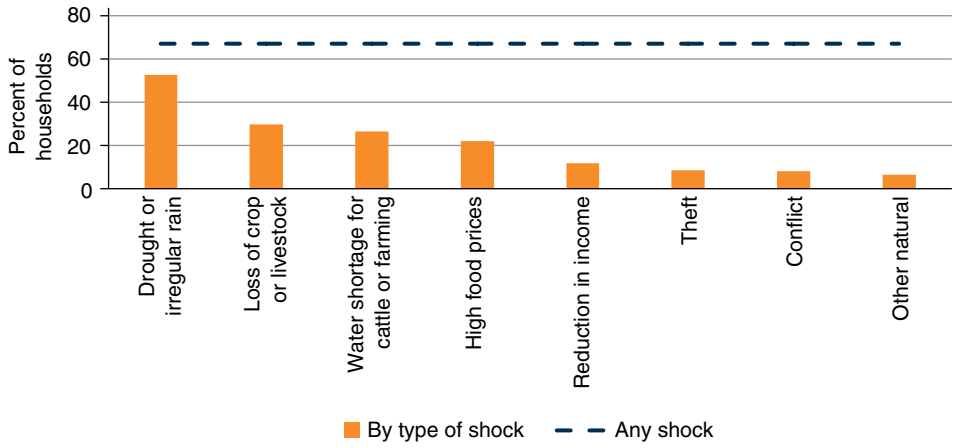
Many Somalis are vulnerable and unable to protect resources against shocks

Somali households are vulnerable to shocks such as natural disasters and epidemics, as well as to household-level shocks such as injury, death, or unemployment. Shocks contribute to extreme poverty and vulnerability, constraining economic opportunities and livelihoods, damaging assets, and limiting access to farms, fishing, and pastoralist routes. The persistent cycle of shocks increases Somalis' vulnerability to future shocks as there is limited public and private insurance.

About 66 percent of Somali households report experiencing at least one type of shock in the past 12 months. Due to the 2017 drought, most reported shocks are related to fluctuation in climate and its impact on livelihoods and the economy. In an agro-pastoralist economy, household welfare is closely linked with changes in weather. Poorer households are more likely to experience more than one type of shock. The impact of shocks is magnified when a household experiences multiple shocks simultaneously.

Low education, agricultural dependence, unemployment, low wealth, and large household size make households more vulnerable to shocks. Household characteristics affect shock impacts. Households headed by an illiterate person are 12 to 24 percent more likely to report experiencing drought and loss of crops and livestock than households headed by someone with some education. Households depending on agriculture for their main source of income are more likely to report water shortages and loss of crops and livestock, but they are less likely to report high food prices. Households receiving humanitarian aid were more

Drought is the most reported shock among Somali households



Authors' calculations based on the SHFS 2017–18.

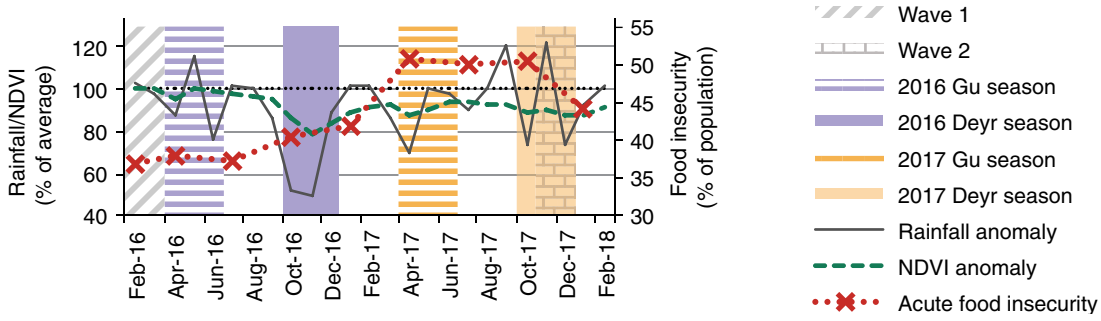
likely to have reported experiencing a shock, implying that humanitarian aid was well-targeted.

Almost all Somali households that experience shock report a negative impact on income, assets, or food resources. Households experiencing theft or conflict report loss of assets such as valuables, land, or livestock. Most Somalis rely on livestock and farming for their livelihood, so loss of crops or livestock and water shortage reduce household income. Similarly, high food prices decrease purchasing power and real income of households.

The recent drought exacerbated vulnerability and threatened millions of Somali lives

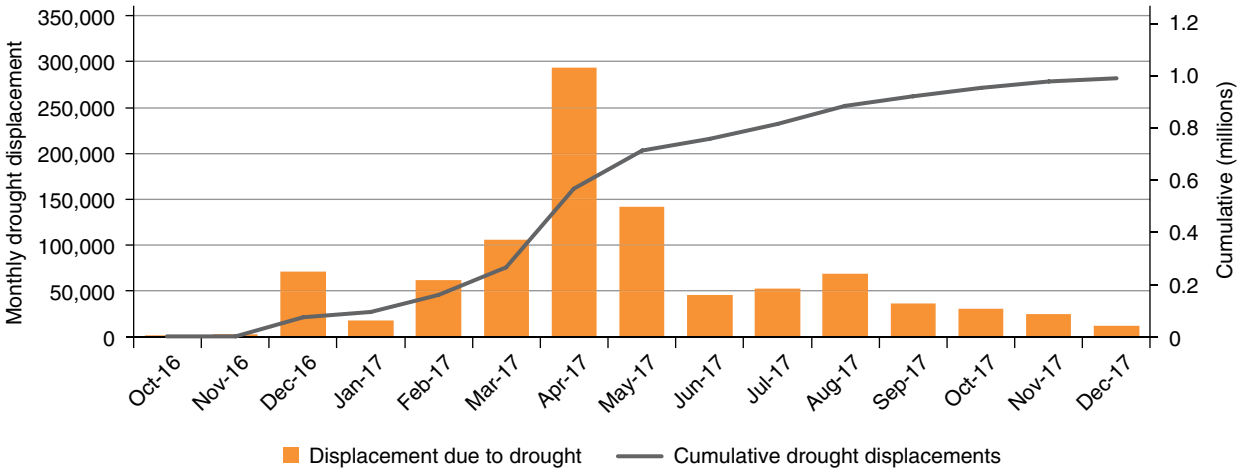
Somalia's severe drought triggered a humanitarian crisis as half of Somalis faced acute food insecurity in 2017. Four consecutive seasons of poor rains between April 2016 and December 2017 caused severe drought across the country, exacerbating food insecurity for 6.2 million Somalis. About 2.4 million people needed humanitarian assistance to avert loss of livelihoods and reduce acute malnutrition, and 866,000 people required

Food insecurity rose with each successive season of poor rains



Source: FEWSNET, WFP-VAM, and authors' calculations based on the SHFS 2017–18.

Drought-related displacement peaked in mid-2017



Source: UNHCR (2018a).

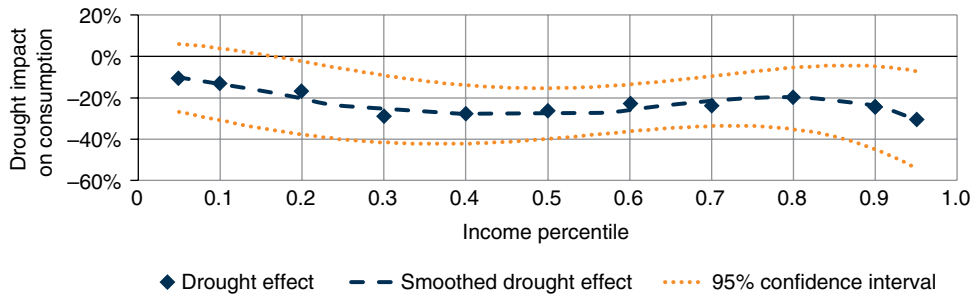
urgent food assistance to avert famine. Slightly improved rains in late 2017 to early 2018 eased drought conditions, but food insecurity remains a serious concern.

The drought exacerbated vulnerabilities, threatened livelihoods, and displaced almost 1 million Somalis. Lack of water and pasture led to high livestock deaths and low birth rates, reducing herds by 25 to 75 percent the first half of 2017. Somalis were forced to deplete household assets and food stocks to cope with rising food and water prices as weak demand for agricultural labor reduced wages. Drought reduced water for hygiene and sanitation and increased water contamination. With drought threatening livelihoods, households were forced to leave in search of government and international assistance. The 2016 to 2017 drought displaced about one million of today's Somalis.

Drought increased the likelihood of being poor and hungry for the most vulnerable rural households

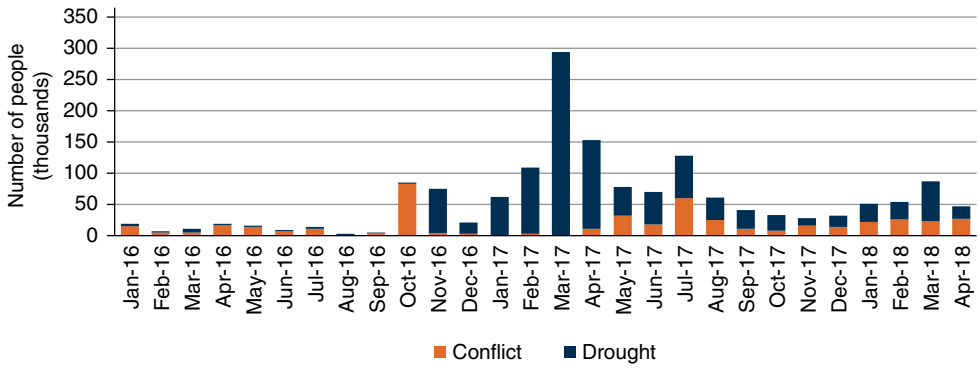
Highly drought-exposed rural households are 24 percent more likely to be poor and more likely to be hungry. In rural areas, higher drought exposure decreased consumption by 19 percent, corresponding to a 24 percent increase in probability of being poor. The drought impacted relatively wealthier rural households most: while higher drought exposure had no significant impact on consumption for the poorest 10 percent of rural households, exposure reduced consumption by 17 percent for rural households at the twentieth percentile, and between 20 and 30 percent for the top 80 percent of rural households.

Drought effect on consumption along the income distribution, rural areas



Source: Authors' calculations based on the SHFS 2017–18.

Drought has been the major cause of internal displacement in recent years



Source: UNHCR-PRMN, Jan 2016–Apr 2018.

As hunger rose across all Somali regions, rural households in highly drought-exposed areas were most severely affected. Higher drought exposure led to a 16 percent decrease in food consumption, accompanied by a 17 percent increase in the probability of experiencing hunger in December 2017. The drought had no significant effect on poverty and hunger for urban households.

Internal displacement has grown rapidly in recent years, mainly due to drought

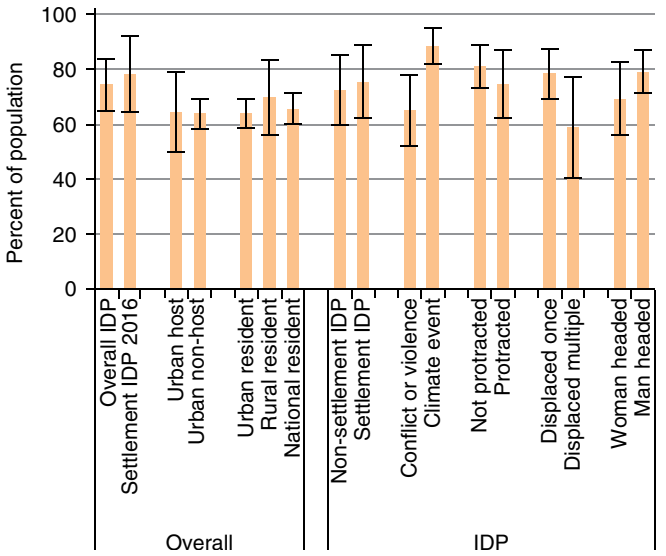
Internal displacement has grown rapidly in recent years, mainly due to drought. Four consecutive poor rainy seasons, along with ongoing conflict and violence from armed non-state actors, caused displacements to surge from late 2016 to late 2017. Over half of IDPs are under the age of 15 and less than 1 percent are above 64, driving high dependency ratios: IDP households average dependency ratios larger than one, indicating that each working-age member provides for at least one child. Poverty-alleviation policies and strategies for Somalia must address displacement-related vulnerabilities and IDPs' needs.

IDPs remain among the most vulnerable groups, thus improving rural and urban access to services and livelihoods can strengthen their viability and support voluntary return or local integration

IDPs face greater poverty and worse living conditions than other residents. Although about 70 percent of Somalis are poor, IDPs are especially marginalized: over 3 in 4 IDPs live on less than $1.90 per day, and more than half of IDP households face hunger. IDPs largely share essential amenities such as toilets, thereby crowding water, sanitation, and hygiene (WASH) facilities in settlements. IDP settlements are also further from essential facilities such as schools, health centers, and markets. Expanding access to basic services, including health and education, is essential to improve resilience in IDP communities. On average, IDP households receive about half the remittances of urban households.

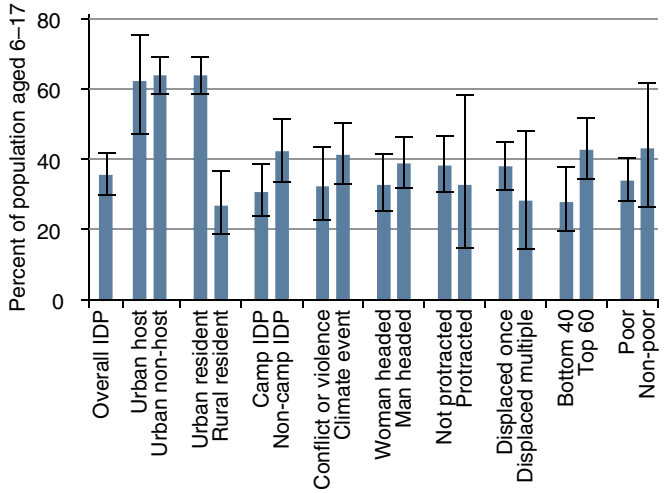
IDPs also have lower human capital, leading to lifelong welfare gaps. School-age IDPs are less likely to attend school than urban residents. Adult IDPs are less likely than urban residents to read

IDPs have greater poverty incidence than residents



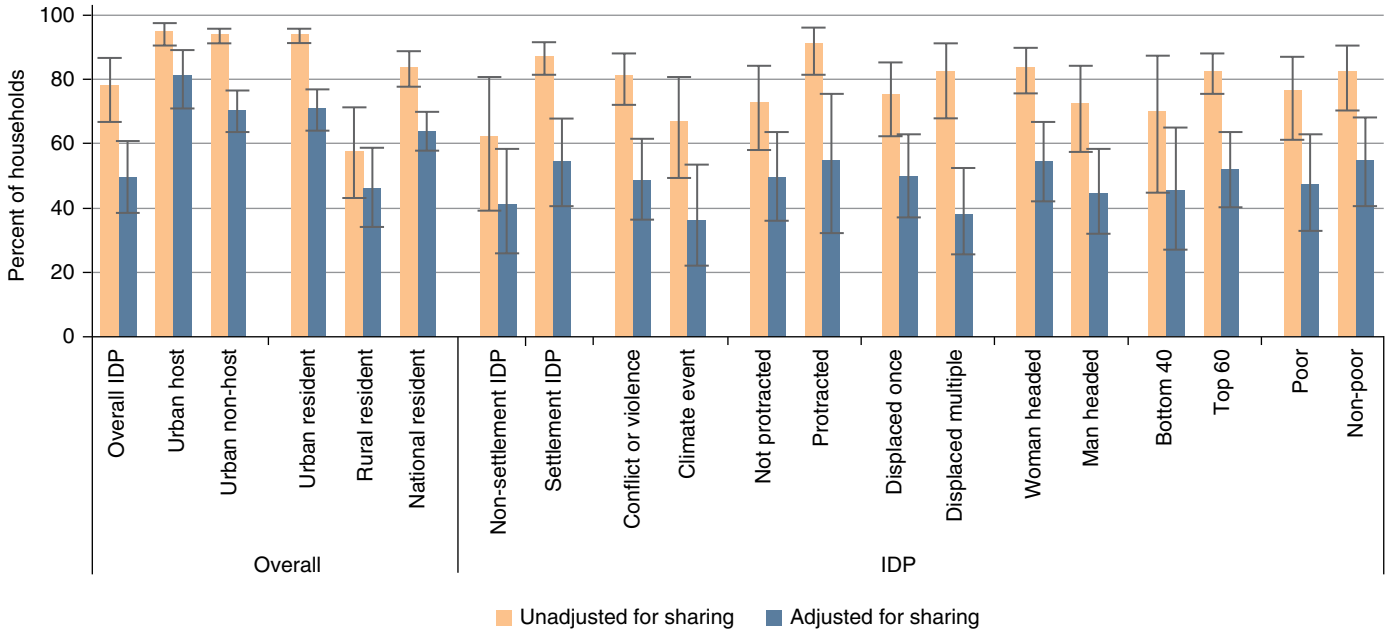
Source: Authors' calculations based on the SHFS 2017–18.

Only 1 in 3 school-aged IDPs is enrolled in school



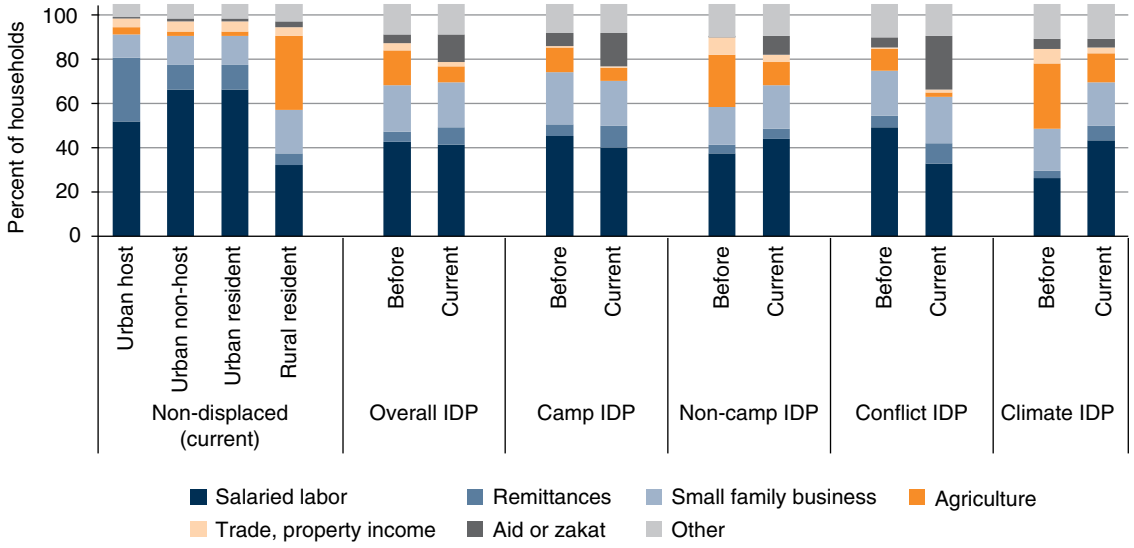
Source: Authors' calculations based on the SHFS 2017–18.

Crowding of toilets squeezes out access to improved sanitation, especially in IDP settlements and urban centers



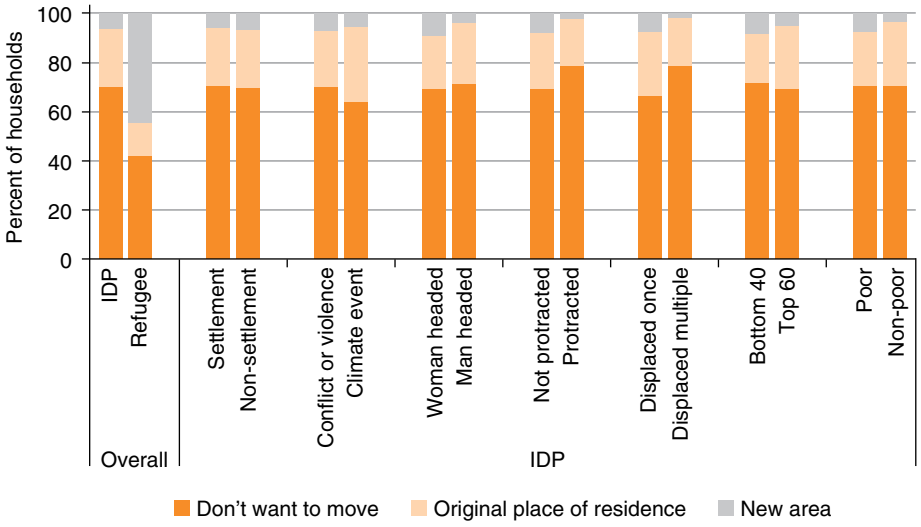
Source: Authors' calculations based on the SHFS 2017–18.

Urban livelihoods today are different from IDPs' pre-displacement livelihoods



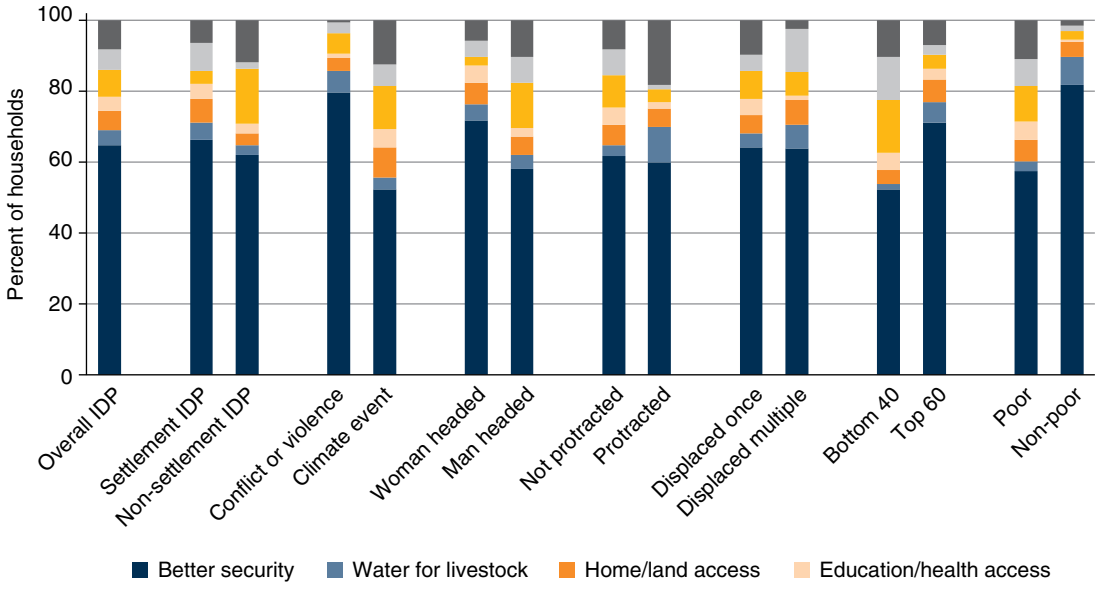
Source: Authors' calculations based on the SHFS 2017–18.

Most IDPs do not intend to return



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

Most IDPs arrived in the current location for security, regardless of the background to displacement



Source: Authors' calculation based on the SHFS 2017–18.

and write. Educational outcomes for IDPs are closer to rural outcomes even though three in four IDP households are in urban areas. Gaps in educational attainment are crucial since half of Somalis are less than age 15. As the young mature, lags in educational attainment for IDPs will lead to persistent, lifelong gaps in education, employment, and overall well-being.

Urban IDP livelihoods differ significantly from pre-displacement livelihoods. IDP livelihoods before displacement consisted of a mix of salaries, small businesses, and agriculture, whereas IDP urban livelihoods today depend largely on salaries, remittances, and aid. Many IDPs are now employed in helping with nonagricultural businesses as they adjust to the employment landscapes of new locations.

Displacement has a very negative effect on well-being. IDPs displaced by climate events are poorer and have worse housing quality than those displaced by conflict. IDPs experiencing protracted displacement—mostly in urban areas—have better access to health care. IDP households headed by a woman get only one-sixth the remittances of IDP households headed by a man. Wealthier IDPs are more confident than poorer IDPs of being relocated within the next year.

Most IDPs prefer to stay in their current location and only a few have revisited their original residence. About 7 in 10 IDPs want to remain in their current location, and only 2 in 10 intend to return to their original place of residence. Over 9 in 10 have not visited their original residence since being displaced. A majority of IDPs cited security as the reason for preferring their current location, with 8 in 10 IDPs reporting feeling "safe" or "very safe" currently. IDPs also perceive positive social relations with host communities, with 9 in 10 IDP households saying that they have good dealings with their surrounding communities.

In the absence of formal safety nets, self-insurance is a primary coping strategy for many Somali households

Somalis are vulnerable to various covariate and idiosyncratic shocks, which contribute to poverty, vulnerability, and displacement. Almost two in three Somali households (66 percent) reported experiencing at least one type of shock in the past 12 months. Of those who experienced a shock, half of households reported experiencing drought and one in four reported loss of crops or livestock and shortage of water for farming or cattle. One in five households experienced high food prices. Two of five Somali households experienced multiple types of shocks within a year. The negative impact of each shock is greater if a household experiences multiple types simultaneously. Poorer households are more likely to experience more than one type of shock. Somali households that have experienced a shock report higher food insecurity, lower wealth, fewer savings, and lower access to coping mechanisms; they are also more likely to resort to negative coping strategies.

Households mostly rely on self-insurance to cope with shocks. This indicates inadequate risk management and mitigation systems, as well as an absence of formal and informal safety nets. Household reliance on self-insurance, or choosing to do nothing, in case of conflict or theft implies a lack of access to formal conflict resolution mechanisms and regulatory frameworks. A negligible share of households has access to formal or market mechanisms. This adds to the vulnerability of households, especially those in marginalized communities. Wealthier households also lack access to formal safety nets, which makes them vulnerable to shocks, albeit less than poorer counterparts.

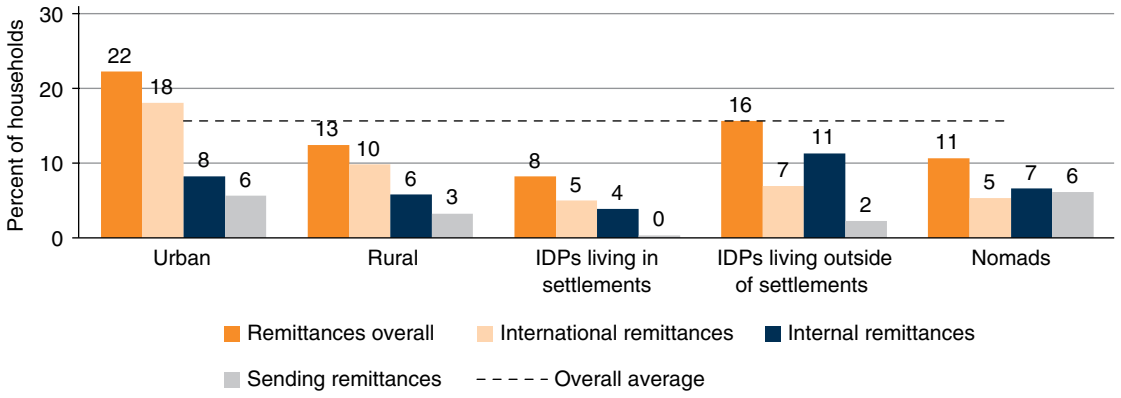
Social safety nets and social protection systems are needed to build risk management and risk coping capacity of vulnerable households. A social safety nets system includes both income and consumption smoothing to build resilience and enable households to anticipate and/or recover from shocks. A cash transfer can help reduce poverty. Globally, countries tend to spend between 2.5 and 5 percent of GDP on such programs. In contrast, Sub-Saharan countries on average spend only 1.6 percent of GDP on social safety nets. Somalia spends even less at 0.8 percent of GDP in 2016, even though it receives 16 percent of GDP (US$1.2 billion) in humanitarian aid. Using some resources to implement a well-targeted safety net would reduce poverty. Households receiving cash transfers could use them for productive investments, savings, and other income-generating activities.

International remittances represent a sizable share of household consumption, especially for the bottom 40 percent

Remittances are the major source of external development finance for Somalia. Somali migrants and refugees outside Somalia doubled between 1990 and 2017 to total more than 2 million. During 2015–2017, Somali diaspora sent home about an official US$1.3 billion per year, but remittances may be significantly larger when considering unrecorded flows. Remittances represent 20 percent of GDP, about the same amount as grants to Somalia, and more than three times foreign direct investment (FDI). Remittances may be countercyclical, as relatives and friends often send more during economic downturns, disasters, conflicts, or other negative shocks.

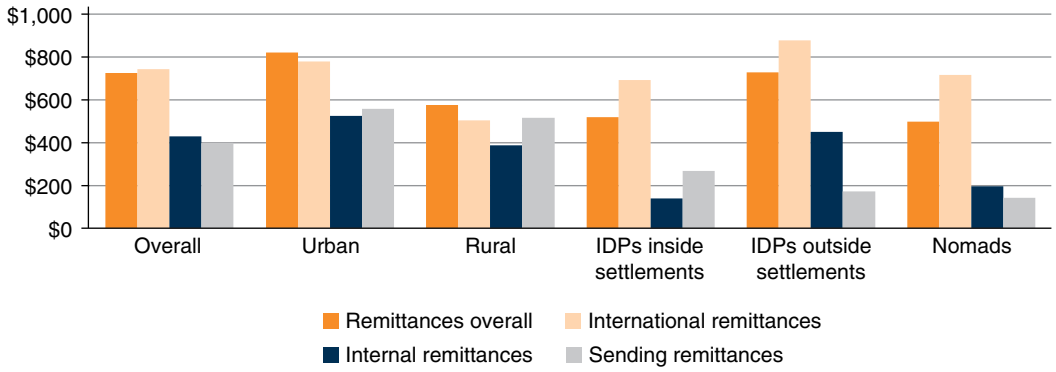
Households receiving international remittances are less likely to be poor. Only 58 percent of remittance-recipient households in Somalia are

Incidence of remittance receipt and sending



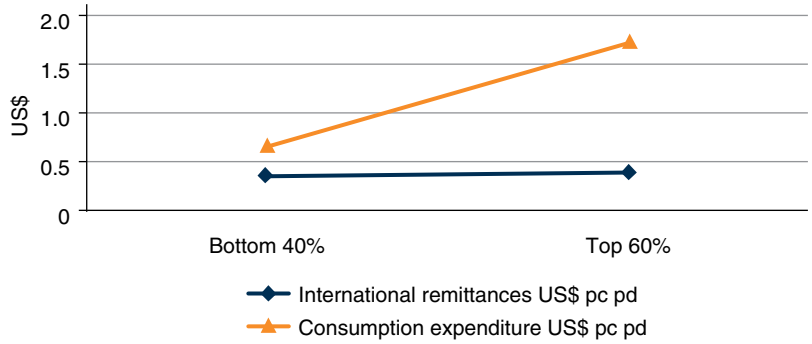
Source: Authors' calculations based on the SHFS 2017–18.

Average annual value of remittances received are almost twice those sent



Source: Authors' calculations based on the SHFS 2017–18.

International remittances are more important for the bottom 40 percent



Source: Authors' calculations based on the SHFS 2017–18.

poor, compared to 71 percent of non-recipient households. Somali households are both remittance senders and receivers, but the incidence of receipts tends to be higher for urban households, while IDPs living in settlements are least likely to receive international remittances. Despite the three-fold gap in incidence, those in IDP settlements who do receive international remittances receive almost the same amount as urban recipients. On average, recipients of international remittances receive about US$743 per year—above the 2017 average per capita Somali income of US$535. Internal transfers are also important for both urban and rural dwellers, as well as for IDPs living outside settlements.

Households receiving international remittances have higher incomes, consumption, and expenditure on education. International remittances average 34 percent of total household income, nearly as high a proportion of income from salaried labor at 35 percent for households that receive them. Domestic remittances also comprise 23 percent of total income for households that receive them. Remittances are relatively more important for the bottom 40 percent as income from remittances represent 54 percent of their total consumption, while remittances represent about 23 percent of total consumption for the upper 60 percent. International remittance-receiving households are more likely to have higher expenditures on education compared to non-recipient households. Households that receive international remittances also have substantially higher enrollment rates than non-recipients.

Remittance markets in Somalia remain relatively underdeveloped and costly but can leap-frog with mobile technologies. Forty-six percent of domestic remittances go through mobile money, while 47 percent go through money transfer operators and informal channels, such as hand-carried during visits home and *Hawala*. Meanwhile, 87 percent of international remittances are channeled through money transfer operators, and 12 percent via mobile phones. Due to anti-money laundering regulations, costs of remitting money to Somalia have increased, while the number of service providers has declined, reducing competition and encouraging informal channels. So, while remittances provide a lifeline for the poor, sending money to Somalia is costly: from the United Kingdom to Somalia, costs are more than twice the SDG target of 3 percent, and for sending from Australia costs are almost three times the SDG target.

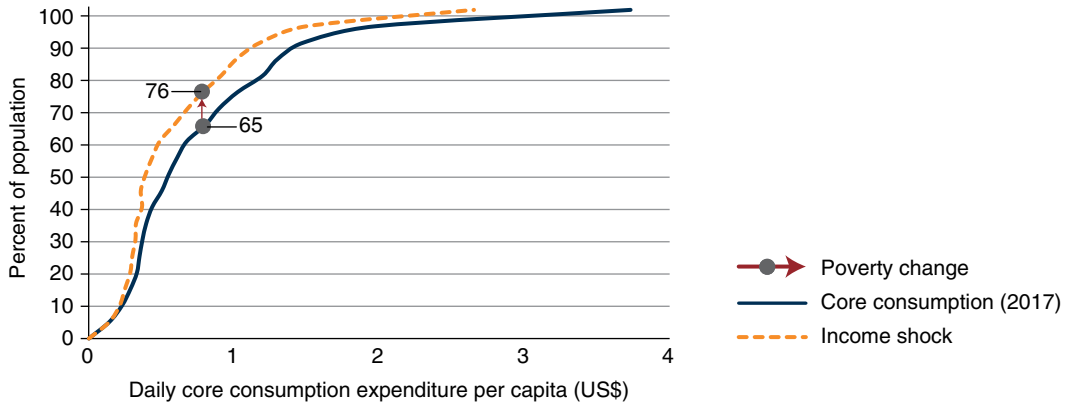
Alleviating poverty and mitigating vulnerability in Somalia require accelerating economic growth, improving services, managing urbanization, and investing in resilience and safety nets, including cost-effective remittance transfers

Economic growth-creating opportunities, especially for youth, is fundamental to sustainable poverty reduction, vulnerability mitigation, and conflict avoidance. Somalia has a large youth bulge, so youth must be able to find jobs to contribute to economic growth. The need for sustainable work for IDPs is especially urgent given changing livelihood structures and lack of safety nets. Policies to encourage business and entrepreneurship to create jobs are needed to avoid idle youth from resorting to conflict. Furthermore, enhancing access to domestic markets can increase inclusivity, spur economic activity, and accelerate poverty reduction.

Improving service provision—especially education—is crucial to improve human capital and reduce inequality that disproportionately affects girls/women, IDPs, and rural and nomadic households. Policies should aim to improve access to education and increase enrollment while considering disparities and specific needs of vulnerable groups. Increasing access to education for children and youth will allow more productive opportunities later in life and enhance standard of living. Building more schools is one alternative, but further analysis is needed given the complexity and cost of designing and implementing educational policies. The challenge of increasing enrollment rates will continue to grow given Somalia's demographics and young population. While access is still a big challenge, and a crucial first step, policies to reduce drop-out and increase levels of educational attainment are also needed.

Somalia cities need investment in land management and coordinated infrastructure. Cities mostly need proper land administration systems and land use planning to control growth and provide secure tenure to IDPs. Coordinated infrastructure investments aligned with planning would create synergy across different types of infrastructure. City investments need to be customized to address each city's needs. Detailed city-level assessments are needed to understand urbanization constraints and solutions, which consider IDP needs to facilitate their

Simulation of income shock among rural households



Source: Authors' calculations based on the SHFS 2017–18.

integration. Political economy must be considered in crafting and implementing policies to foresee opportunities, risks, winners, and losers of policies, and anticipate challenges to implementation. It is critical to strengthen government institutions by channeling development assistance through them rather than parallel structures. State and municipal governments, ultimately accountable for providing services to constituents, can participate more.

Within cities, the needs of IDPs not living in settlements should be addressed along with the IDPs in settlements. Area-based targeting can ensure equity among vulnerable urban population groups. Assistance has focused on urban IDPs living in settlements deemed most deprived, but urban IDP not living in settlements are equally deprived of services. Moreover, they consistently fare worse on development outcomes compared to other urban households. Because non-settlement IDPs are difficult to track, it is important to use area-based interventions on poor urban areas with high concentrations of non-settlement IDPs. Group-based approaches only focus on IDPs in settlements. In pursuing poor area-based approaches, development must align with urban development plans.

Investment in resilience is needed to prevent livelihood loss for vulnerable rural households, especially due to likely future droughts. A consumption shock of the same magnitude as the 2016/17 drought is estimated to increase rural poverty from 65 to 76 percent. Investing in resilience and rural market access would help these households avoid livelihood loss. Measures may include agricultural insurance, enabling households to diversify income, and improving access to roads and clean water.

Cash transfers can help build resilience, especially for poor households with limited access to formal and informal insurance. Protecting vulnerable groups and creating income opportunities are crucial to prevent childhood poverty from progressing into adulthood. Poor households most vulnerable to shocks experience the highest welfare impact. High vulnerability tends to make them risk averse, hence having access to insurance and other risk mitigation can help poor household invest with less fear. On average across countries, household consumption can increase by US$0.74 for each dollar transferred. In resource-constrained environments such as Somalia, short- to medium-term humanitarian assistance might be needed to complement social safety nets.

Remittances, crucial to resilience and investment in Somalia, would benefit from policies facilitating their flow. Mobile licensing and increasing competition will decrease costs, as will the introduction of new products, interoperability among service providers, and establishment of open infrastructure to collect digital payments. A barrier to lowering remittance fees arises from anti-money laundering and combatting financing of terror requirements. Somalia is working on complying with AML/CFT and establishing digital identification to "de-risk" for international banks. Remitters could benefit from new financial products such as micro-insurance and direct payments of tuition.

Box 1 ■ The Somali Pulse website shares some of the world's least represented voices

A poverty incidence of 69 percent summarizes the country's poverty level, yet it does not reveal the daily struggle of the population. Somalia has suffered from armed conflict and several humanitarian crises. The recent drought severely affected the lives of millions and exacerbated existing vulnerabilities. Securing livelihoods has become more and more difficult with 69 percent of the Somali population now living in poverty. Poverty estimates are useful for comparisons and analyses to inform policies and programs. However, an abstract poverty number does not depict the suffering that people go through to make ends meet. Wave 2 of the Somali High Frequency Survey (SHFS) used hand-held devices to collect data. At the end of the quantitative survey, respondents were asked to voluntarily record a quick message.

The Somali Pulse website contains hundreds of video testimonials recorded with tablets during fieldwork to capture the voice of the people and give a face to the data. The website presents insights from the World Bank's SHFS, as well as video testimonials—with subtitles in English— reflecting the dire situation on the ground and what it is like to live in poverty in Somalia. The videos depict the sense of powerlessness, the pain of hunger, the stress of hopelessness, and the feelings of disappointment that express Somalis' experiences. The opportunity to voice the struggle of respondents is a first step to empowerment of the world's least represented voices, allowing them to tell the world of what their lives are like. It is also an inspiration to continue finding innovative ways for helping them and millions like them to escape poverty. The Somali Pulse website can be found in the following link:

http://www.thesomalipulse.com

Introduction

Somalia is on the path to political and security stabilization after more than two decades of civil war and conflict. Since the disintegration of the central authority in 1991, the remaining power vacuum was filled by warring local factions. The country suffered from armed conflict and several humanitarian crises linked to the conflict, as well as to drought and deprivation. In the 1990s, Somalia witnessed the emergence of regional administrations. Somaliland self-declared independence in 1991 and Puntland declared itself a semiautonomous region in 1998. An interim central state, the Transitional Federal Government, was established in 2004 to bring stability, but political instability continued to plague the southern regions. Following the end of the interim mandate of the Transitional Federal Government, Somalia completed its political transition with the establishment of the Federal Government of Somalia in 2012. Since then, the period has been relatively more stable. Al Shabab's territorial footprint has narrowed, especially in the urban areas of southern Somalia, which are now the capitals of the newly-formed Federal Members States. After completing the first national electoral process in decades, a new government was ushered in in 2017 opening an opportunity for longer term stability and sustainable development.

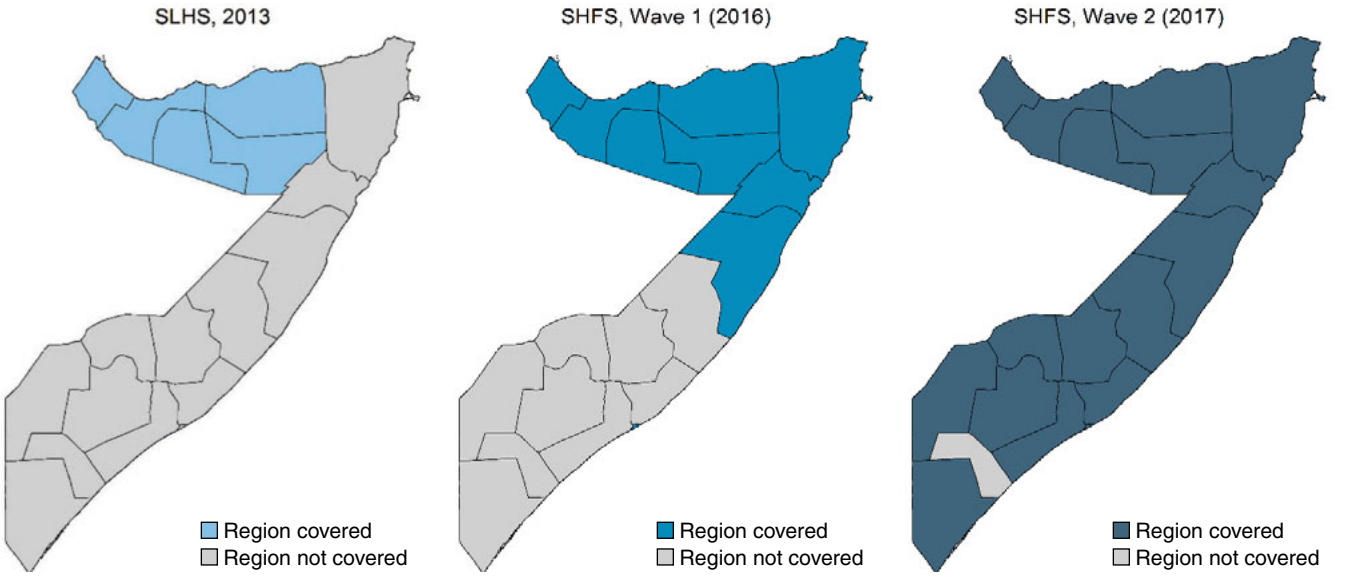
Opportunities to ensure a development trajectory face many challenges since the country remains a fragile state subject to multiple shocks. The country remains extremely fragile due to conflict.[1] Insurgency, although more restrained in recent years, remains a threat to the political progress. Limited government resources and capacity, asymmetric federal structures, and a fragile security situation limit the government's ability to govern effectively.[2] Somalia has a highly concentrated export base dependent on primary commodities (livestock), leaving it vulnerable to market dynamics in addition to environment shocks, while its reliance on imports for food and fuel leaves the country and its population at risk of spikes in import prices. With the Somali economy largely dependent on climate-sensitive activities such as agriculture and minerals, negative climatic events quickly disrupt these sectors, as well as the livelihoods they support, and easily translate into humanitarian crises. Such shocks often divert attention from long-term institutional strengthening to averting humanitarian crises. Real GDP growth fell to 1.8 percent in 2017 from 2.4 percent in 2016 due largely to severe droughts.[3] The impacts extended beyond environmental and economic impacts to having deep health and social impacts involving food security, nutrition, and public safety.

Widespread poverty and food insecurity is a recurring developmental issue. Most of the population remains poor and is vulnerable to a range of shocks, including repeated cycles of devastating droughts such as the one in 2017. Following at least three successive seasons of below normal rainfall in most areas, the ensuing drought triggered a humanitarian crisis that left more than 5.4 million Somalis (almost half of the population) in need of assistance, mostly in rural areas and IDP settlements.[4] While a famine was averted in 2017, there are 1 million children projected to be malnourished and an additional 1 million displaced, resulting in total displacement of 17 percent.[5] A confluence of factors, including conflict and insecurity, natural disasters, limited safety nets, and high levels of unemployment, are among many that contribute to poverty, food insecurity, and vulnerability.

Displacement is a key feature of modern Somali history linked to multiple drivers, including recurrent exposure to internal conflict and environmental hazards. More than 1.1 million Somalis live in

[1] See the Fund for Peace (2018) "Fragile States Index 2018;" Institute for Economics and Peace (2017a) "Global Peace Index 2017;" Institute for Economics and Peace (2017b) "Global Terrorism Index 2017."
[2] World Bank (2018d).
[3] World Bank (2018b).
[4] UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs) (2018b).
[5] UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs) (2018b).

FIGURE 0.1 ■ Coverage of household surveys in Somali regions



Note: The boundaries on the map show approximate borders of Somali pre-war regions and do not necessarily reflect official borders, nor imply the expression of any opinion on the part of the World Bank concerning the status of any territory or the delimitation of its boundaries.

internal displacement and 900,000 are refugees in the near region.[6] Recurrent and persistent shocks have threatened personal safety and severely constrained livelihoods and food security, thus playing a significant part in past and current displacement. Most internally displaced persons move to urban areas for protracted periods, settling on public and private lands in the outskirts of cities. In the absence of security of land tenures, the risk of forced eviction is high, exacerbating existing vulnerabilities among IDPs associated with the loss of assets, livelihoods, and social structures.

Somalia is urbanizing rapidly due to large-scale forced displacement and economic migration that have driven large numbers of Somalis toward the urban areas. This accelerated pace of urbanization, estimated at 4 percent, is placing a strain on the existing physical and social infrastructure.[7] Despite these challenges, urban areas fare better than the rest of the country in terms of access to basic services, public infrastructure, and development outcomes. Accessibility of the country's 22,000 km of road network remains concentrated in urban areas, posing significant connectivity challenges with other areas, especially since much of the internal transportation is by vehicle.

Remittances are central to the Somali economy and provide a lifeline to some segments of the population but not the most vulnerable. The Somali economy receives an estimated US$1.3 billion in remittances a year, equivalent to 20 percent of GDP.[8] The inflow of remittances outweighs foreign direct investment providing resources to the national economy. Somalia has maintained a trade deficit for many years, but ample remittances and grants have been able to partially offset this deficit. The economy has also been able to weather drought and terrorist attacks in 2017 thanks in part to the remittance inflows.

The World Bank implemented the second wave of the Somali High Frequency Survey in 2017/18. The survey achieved greater geographical and population coverage compared to Wave 1 of the Somali High Frequency Survey (SHFS) conducted in 2016 and the Somaliland Household Survey (SLHS) carried out in 2013. The SLHS and Wave 1 of the SHFS

[6] UNHCR (United Nations High Commissioner for Refugees) (2017).
[7] The CIA World Factbook estimates 3.79 percent for the period of 2010–2015.
[8] International Monetary Fund (2018).

generated much needed indicators, but their geographic coverage was limited while also excluding nomads. Further, SLHS did not cover settlements of internally displaced persons (IDPs).[9] For the first time, Wave 2 included the Somali nomadic population and many households in insecure areas. Wave 2 targeted almost 6,400 households distributed among rural and urban areas in Central regions, Jubbaland, Puntland, Somaliland, and South West as well as urban areas in Banadir. The sample also featured nomads and households in IDP settlements located in urban areas in the above geographic areas, as well as households in IDP host communities.

The specific context of insecurity and lack of statistical infrastructure in Somalia posed several challenges for implementing a household survey and measuring poverty. First, in the absence of a recent census, no exhaustive lists of census enumeration areas along with population estimates existed, creating challenges to derive a probability-based representative sample. Therefore, geospatial techniques and high-resolution imagery were used in the SHFS to model the spatial population distribution, build a probability-based population sampling frame, and generate enumeration areas to overcome the lack of a recent population census. Second, while some areas remained completely inaccessible due to insecurity, even most accessible areas held potential risks to the safety of field staff and survey respondents, so that time spent in these areas had to be minimized. To address security concerns, the SHFS adapted logistical arrangements, sampling strategy using micro-listing, and questionnaire design to limit time on the ground based on the Rapid Consumption Methodology. Third, poverty in completely inaccessible areas had to be estimated by other means. Therefore, the SHFS relied on correlates derived from satellite imagery and other geospatial data to estimate poverty in such areas. Finally, the nonstationary nature of the nomadic population required special sampling strategies. The methodology is described in detail in the accompanying background paper 'Estimation of Poverty in Somalia Using Innovative Methodologies'.

Somali regions are identified according to distinct geographical areas: North West, North East, Central, Jubbaland, South West, Mogadishu, and IDP settlements. North West includes the pre-war regions of Awdal, Sanaag, Sool, Togdheer, and Woqooyi Galbeed. North East includes the regions of Nugal, Bari, and Mudug. Central includes the regions of Galgaduud, Hiraan, and Middle Shabelle. Jubbaland includes Gedo and Lower Juba.[10] South West includes Bay, Bakool, and Lower Shabelle. Mogadishu includes all the households located in the capital excluding IDPs. The population is further grouped according to livelihood types: urban, rural, IDPs, and nomads. IDP settlements consist of settlements located in Mogadishu, North West, North East, Central, Jubbaland, and South West.

This report is based on the most recent and first extensive household survey, Wave 2 of the SHFS. Caution should be taken to avoid comparing results obtained from Wave 1 and Wave 2 of the Somali High Frequency Survey. Due to differences in sampling frames, inferences about the population from which the sample was drawn are not comparable. Therefore, the report focuses on results using Wave 2, given the improved sampling frame and greater survey coverage, both in terms of geographical and population coverage.

The poverty and vulnerability assessment presents a picture of Somali welfare conditions with the objective to inform policies and programs aimed at building resilience and reducing poverty. Somalia emerged from a long civil war, still in the process of graduating from fragility. Recurrent natural shocks, like the most recent drought, have the potential to reverse development progress and contribute to fragility. The large number of displaced people is a testament of Somalia's volatility. The objective of the poverty and vulnerability assessment is to contribute to a better understanding of livelihoods and vulnerabilities in Somalia to inform improved livelihoods and resilience, a core component of any sustainable development path for Somalia.

The report is organized into six chapters. The first chapter presents an updated profile of monetary and nonmonetary dimensions of poverty for the Somali population, including the nomadic population. The second chapter explores in more detail spatial variation, with a focus on urbanization. The third chapter examines the impact of the 2016/17 drought on livelihoods to identify

[9] Wave 1 of the SHFS covered Puntland, Somaliland, and South Central.

[10] Note: Middle Jubba was not surveyed due to insecurity.

the populations at risk and the factors that protected households against its negative effects. The fourth chapter provides an in-depth analysis of the internally displaced populations to identify displacement-related needs and to inform durable solutions. As a reaction to the analysis of poverty and vulnerabilities, the fifth chapter focuses on social protection as a means of promoting equity and building resilience against the effect of shocks on livelihoods. Similarly, the sixth chapter examines remittances and their role for livelihoods and resilience.

CHAPTER 1

Poverty Profile

KEY MESSAGES

Nearly 7 of 10 Somalis live in poverty, making Somalia one of the poorest countries in Sub-Saharan Africa. About 69 percent of the population lived in poverty in 2017. Somalia has the sixth highest poverty rate in the region, only after the Democratic Republic of Congo, Central African Republic, Madagascar, Burundi, and South Sudan. Poverty incidence is lower in other urban areas, excluding Mogadishu, compared to nomadic households, IDPs in settlements, and those in rural areas and Mogadishu. Nearly half of the population is not even able to meet the average consumption of food items, confirming the dire living standards of most Somalis.

Poverty is both widespread and deep, particularly for households in rural areas and IDP settlements, highlighting substantial challenges to overcoming poverty. While almost three-fourths of the population in rural areas, IDP settlements, Mogadishu, and among nomads live in poverty, according to survey estimates, poverty is deeper in rural areas and IDP settlements. The average poverty gap in Somalia is 29 percent, indicating that the average consumption level of a poor Somali is about 71 percent of the international poverty line. Rural residents and IDPs in settlements are relatively worse off since they have the largest poverty gap (34 percent). To bring the poor in the population out of poverty and up to the poverty line, a transfer of around US$1.64 billion per year would be required under a perfect targeting scheme and ignoring administrative and logistical costs. In addition to the high levels of poverty, a significant proportion of non-poor Somalis are vulnerable to falling into poverty should they experience an unexpected decrease in consumption levels. Around 10 percent of the population have a total daily consumption expenditure within 20 percent above the poverty line.

Children and households that do not receive remittances are disproportionately poor. Children aged 0–14 years represent nearly half of the total population, and 73 percent of them are poor according to survey estimates. Children from poor households are likely to grow up in challenging conditions, for example without electricity and deprived in the education dimension, which ultimately hinders their path out of poverty. People in households that do not receive remittances have a poverty rate that is 9 percentage points higher than those in recipient households. Poverty is also deeper for non-recipient households. The negative correlation between poverty and receiving remittances is confirmed by other poverty measures such as the food consumption poverty and an adult equivalent measure of poverty. Remittances can serve as a mechanism to smooth consumption in the event of negative shocks and improve welfare conditions, yet these transfers do not necessarily reach the ones most in need. Protecting vulnerable groups and creating income generating opportunities is crucial to prevent childhood poverty from translating into poverty in adulthood. Targeting dedicated social protection programs can be a good alternative to reach the most vulnerable and address the general lack of resilience mechanisms.

Women are less likely to be the head of the household and to participate in the labor market. Women represent nearly half of the adult population, but only 4 of 10 Somali households are headed by a woman. 58 percent of men participate in the labor market compared to 37 percent of women. The gender gap is primarily driven by a larger number of women staying at home and caring for their families compared to men. Even though 64 percent of the Somali households perceive that most or all women can work outside the home, the gap in employment between men and women is substantial (20 percentage points). Increasing participation of women in the labor market will be important to accelerate economic growth and raise the living standards of Somali households. Removing barriers to work is a crucial step to tackle gender inequalities.

Overage enrollment is common, with stark geographical and gender disparities in enrollment rates. Nearly 27 percent of children enrolled in primary school are older than 13 years, and more than 55 percent of the population enrolled in secondary school are not aged 14–17 years. Somali children start primary school late as most parents believe children aged 6–9 are too young to attend school. The perception of parents is not associated with the fact that some children would have to walk a long distance to school,

—continued

KEY MESSAGES—continued

nor with the household's own perception of safety for walking during the day. The net enrollment rate of the population aged 6–25 years is 33 percent, and highest in urban areas. In Mogadishu and other urban areas, net enrollment among primary school-aged children (6–13 years) is around twice the enrollment in rural areas and IDP settlements and more than six times the enrollment of nomadic children. The geographical disparities in enrollment for the population of secondary school age (14–17) are likewise pronounced. Moreover, there are no gender differences in both net enrollment rates and reasons for not attending among children aged 6–13 years. However, for children aged 14–17 years, a gender gap emerges as male enrollment is significantly higher after controlling for age, poverty status, and other household characteristics. The main reason for not attending school at this age is the lack of money for boys, while having to work or help at home for girls. Policy efforts should improve access and aim to increase enrollment rates while considering the disparities and needs of different vulnerable groups.

Distance from schools rather than the costs of schooling affects the enrollment of children. For 1 out 3 Somali households, schools are at least 30 minutes walking distance. Being more than 30 minutes away from school is negatively associated with enrollment for primary school-aged children and the overall enrolled population. On average, households spend around 3 percent of the poverty line on education per household member enrolled. Expenditure on education is weakly correlated with net enrollment and is only significant for the overall enrollment rate but not for those of primary or secondary age. Increasing access to education for children and youth will allow them to attain more productive opportunities later in life and enhance their standard of living. Building more schools is one alternative, yet further analysis is needed given the complexity and cost of designing and implementing policies aimed at improving access to education. The challenge of increasing enrollment rates will continue to grow given the demographic structure of Somalia and its overall young population.

Gender and regional disparities in access to education are reproduced in educational outcomes of the Somali population. Education is a key tool for increasing the levels of welfare and helping to break the poverty cycle. Only 1 of 2 Somalis can read and write, with literacy being more common among younger generations, urban population, and men. Similarly, the share of urban residents without formal education is 1.6, 2.6, and 2.5 times lower than that of rural residents, IDPs in settlements, and nomads respectively. Women are also less likely to have formal education compared to men. Furthermore, enrollment is associated with the educational level of older generations as children are more likely to enroll in school in households with a literate household head, after controlling for other factors that affect school enrollment. In urban areas where access to education is higher, 11 percent of the population aged 15 years or more were previously enrolled but did not complete the primary level. While access is still a big challenge for most Somalis and a crucial first step, additional policies to reduce the dropout rates and increase the levels of educational attainment will have to be considered.

Some improvements in educational outcomes can be seen across generations. Despite large gender and geographical disparities in terms of access and availability of education, younger generations tend to have better educational outcomes as they more likely to have formal education and to be literate. The government should try to explore and learn from the drivers behind the improvements seen in younger generations, to ultimately inform policies aimed at achieving better educational outcomes for the Somali population.

The nomadic population are at disadvantage and face the biggest challenges to improve their educational outcomes. The net enrollment rate of the nomadic population is 12 percent for both primary and secondary school-aged children respectively. Only one in five can read and write and around 80 percent do not have any formal education. Nomadic households reported the lack of schools nearby as the first or second reason for not attending school. Thus, access seems to be the main barrier with 73 percent of households being far—more than 30 minutes away—from the closest school.

Inequalities in access to key services are large across population groups, with rural residents, IDPs in settlements, and nomads left behind for the most part. Improved water and sanitation are critical for health, as inadequate sources for drinking water and poor hygiene affect school performance as well as productivity. However, only 5 of 10 households have access to improved sanitation and 8 of 10 to improved water sources. Also, only 5 of 10 households have electricity. Access to these services is higher in urban areas, with the share of households with access relatively smaller for rural residents, IDPs in settlements, and nomads. Poor households are also less likely to have access to improved sanitation and electricity. Markets and health clinics are far—more than 30 minutes away—for more than a third of Somali households (34 to

40 percent) and for most of the nomads. Enhancing access to markets can increase productivity and accelerate the reduction of poverty.

Multiple deprivations in education, water, sanitation, and electricity affect most Somali households and are consistent with monetary poverty. Poverty extends beyond the monetary component to non-monetary deprivations across multiple dimensions. Somali households are often more deprived in multiple dimensions. Almost 9 of 10 Somali households are deprived in at least one dimension of education, water, sanitation, or electricity, as well as monetary poverty. The highest levels of deprivations are found among the nomadic population, and the lowest in urban areas. Also, poor households are slightly more deprived than non-poor ones in educational, water, and electricity dimensions. Moreover, monetary poverty is correlated with multiple deprivations since around 40 percent of poor households are also deprived in at least one of the other four dimensions: education, water, sanitation, and electricity.

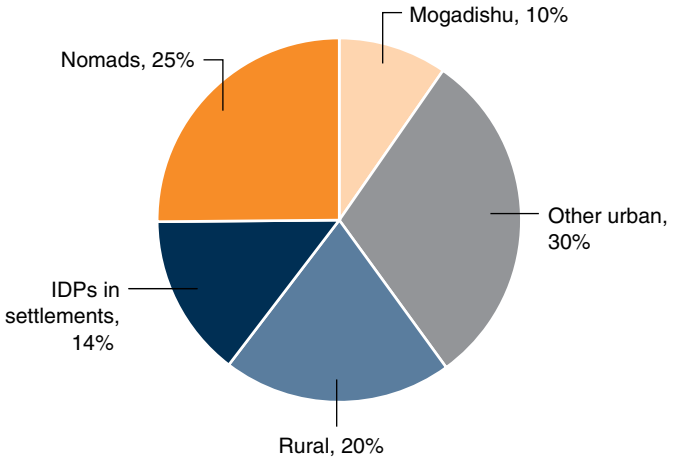
Profiling the poor and vulnerable is crucial to inform policies and alleviate poverty. Political instability and conflict have eradicated the statistical capacity of Somalia, resulting in a lack of information necessary for the effective design and implementation of policies. Such information gaps are currently being filled. Reducing poverty requires identifying and targeting the poor to improve their welfare conditions. Furthermore, the evolution of living standards should be monitored, and poverty reduction efforts evaluated.[11] Profiling the population living below a minimum threshold is a first crucial step for evidence-based planning aimed at alleviating poverty in Somalia.

This chapter presents an overview of poverty in Somalia. It describes the extent of poverty among Somalis in 2017 using various measures of poverty, analyzes inequality among the population, and profiles the characteristics and living conditions of different groups. The chapter then reviews educational indicators, as well as labor market indicators and access to services. Finally, it expands the analysis beyond monetary poverty to describe the socioeconomic realities of Somalis by incorporating other types of deprivations, such as water and sanitation, living standards, and education.

Monetary poverty

A better future for Somalia depends on the young and those living in rural areas, IDP settlements, and the nomadic population. A large working-age population in Somalia can accelerate future economic growth and increase overall welfare conditions.[12] In 2017, 72 percent of the Somali population was below the age of 30, and around 58 percent aged 20 or less (Figure A.1 in the Appendix). Nearly half of the population are women and the other half men. Urban households represent 40 percent of the total (10 percent from Mogadishu and 30 percent in other urban areas), followed by the nomads with 25 percent, rural households with 20 percent, and internally displaced persons (IDPs) in settlements with 15 percent (Figure 1.1).[13] Provided Somalia decreases fertility rates, it has an opportunity to reap the benefits of a demographic dividend stemming from a growing working-age population, but to achieve such gains will require

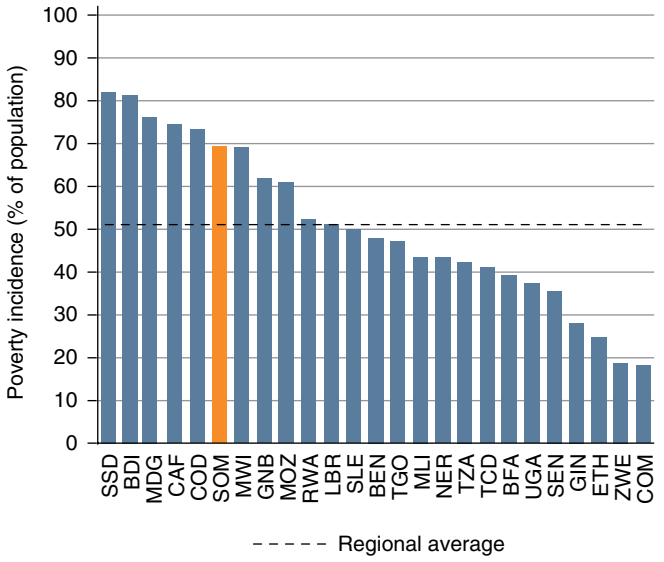
FIGURE 1.1 ■ Somali households by type of population



Source: Authors' calculation based on the SHFS 2017–18.

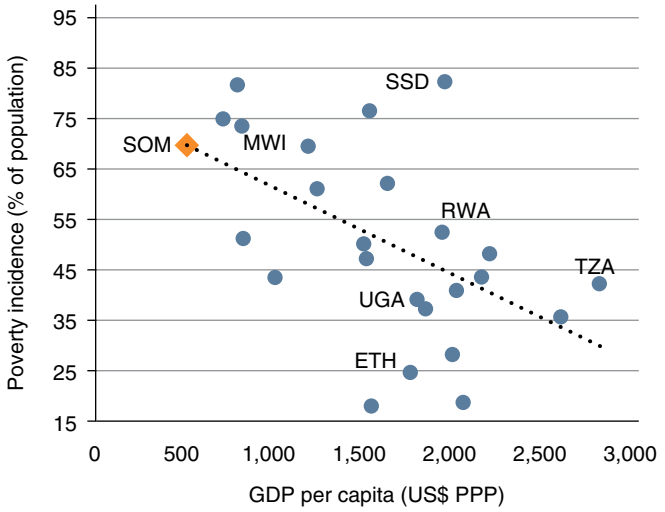
[11] Baker (2000).
[12] Kelley and Schmidt (1999).
[13] Many households in Somalia are nomads or pastoralists, which implies they move from one place to the other in search for pasture, water, and/or food. Mobility is at the center of their livelihood and can involve seasonal concentration and dispersal of herders and their livestock, according to the availability of forage and water in different areas.

FIGURE 1.2 ■ Cross-country comparison of poverty in 2017



Source: Authors' calculation based on the SHFS 2017–18, and World Bank Macro Poverty Outlook.

FIGURE 1.3 ■ Cross-country comparison of poverty and GDP



Source: Authors' calculation based on the SHFS 2017–18, and World Bank Open Data.

increased support to younger generations as well as greater reach to large segments of the population that live in rural areas, IDP settlements, and the nomads.[14]

Nearly 7 of 10 Somalis live in poverty, which makes Somalia one of the poorest countries in Sub-Saharan Africa. Poverty in Somalia is widespread with 69 percent of the population living in poverty in 2017 (see Boxes 2 and 3 for more details), as defined by having a total daily per capita consumption expenditure lower than the international poverty line of US$1.90 at 2011 purchasing power parity (PPP).[15] The incidence of poverty was 19 percentage points higher in Somalia compared to the unweighted average of low-income countries in Sub-Saharan Africa (51 percent) in 2017.[16] The country has the sixth highest poverty rate in the region, only after the Democratic Republic of Congo, Central African Republic, Madagascar, Burundi, and South Sudan (Figure 1.2).[17] The Somali population has relatively low levels of economic activity and income, as reflected by a Gross Domestic Product (GDP) per capita of US$500 in 2017.[18] The high poverty incidence of Somalia is in line with its low level of income, as suggested by the relationship between poverty and GDP per capita across Sub-Saharan Africa (Figure 1.3). Alleviating poverty in Somalia requires accelerating economic growth to increase the income levels and living standards of the population. Reduced fertility rates and population growth can improve the prospects of economic development and poverty reduction. Somalia has experienced a steady decrease in fertility rates from 7.7 births per women in 1998 to 6.3 in 2016.[19] In the same period, annual population growth decreased from 3.4 to 2.9 percent. These demographic changes could increase

[14] The demographic dividend refers to economic growth as a result from having a large proportion of working age population relative to the number of dependents (children and elderly), which allows for some resources to be allocated in productive activities that would have otherwise been used to support the dependents.

[15] The value of the international poverty line in 2017 was estimated using the 2011 So.Sh./$ PPP, a Somali Consumer Price Index increase between 2011 and 2017, and the 2017 nominal exchange rate between the Somali Shilling and the US Dollar.

[16] Based on World Bank estimates.

[17] The countries used for regional comparison are all the African low-income countries as defined by the World Bank: Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, the Democratic Republic of Congo, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, South Sudan, Tanzania, Togo, Uganda, and Zimbabwe. For each country, we include the most recent available year for each indicator.

[18] GDP per capita estimate from the Macro Poverty Outlook Indicators, Spring Meetings 2018 in World Bank (2018b).

[19] According to data from World Bank Open Data.

Box 2 ■ Wave 1 and 2 of the Somali High Frequency Survey

The infrastructure of the Somali High Frequency Survey (SHFS) offers a modern data collection system that can be used to fill the most important data gaps. In the absence of representative household surveys not much was known about welfare conditions of the Somali population. The World Bank's Somali High Frequency Survey provides quantitative data to inform essential resilience programs and shape policy.[20] The success of this established survey infrastructure offers an opportunity to implement additional waves of the survey with expanded coverage.[21]

The World Bank implemented the first wave of the Somali High Frequency Survey in 2016. The survey was administered to urban and rural households in North East, North West, and Banadir, as well as IDP settlements.[22] However, the sample was not fully representative of the Somali population as it excluded nomadic households, and households in inaccessible and conflict-affected areas.

Wave 2 implemented in 2017 included for the first time the nomadic population and expanded its coverage to include additional urban and rural areas. The survey was administered to households distributed among rural and urban areas in Central regions, Jubaland, North East, North West, South West and urban areas in Banadir. The sample also featured households in IDP settlements and the nomadic population.

The data from both waves is not fully comparable due to differences in the sampling frame and accessibility of areas during fieldwork, thus the Poverty Assessment primarily uses data from Wave 2. Data collection is challenging in Somalia due to insecurity in some areas and the lack of an updated and reliable source of information to derive a representative sample. The sampling frame for Wave 1 was based on the 2014 Population Estimation Survey of Somalia (PESS) for urban areas, while for rural areas PESS was combined with a list of settlements from different sources to complement missing rural and semi-urban settlements. Wave 2 used a WorldPop population density layer together with PESS and other existing data sources to create urban, rural, and IDP strata, while considering a security assessment to exclude insecure areas. Therefore, the sampling and accessibility of regions covered in both waves was different in 2016 and to 2017, and it is not recommended to compare the data from both waves of the SHFS without addressing these caveats.

the availability of resources within the household and help them in feeding, educating, and providing health care to children.

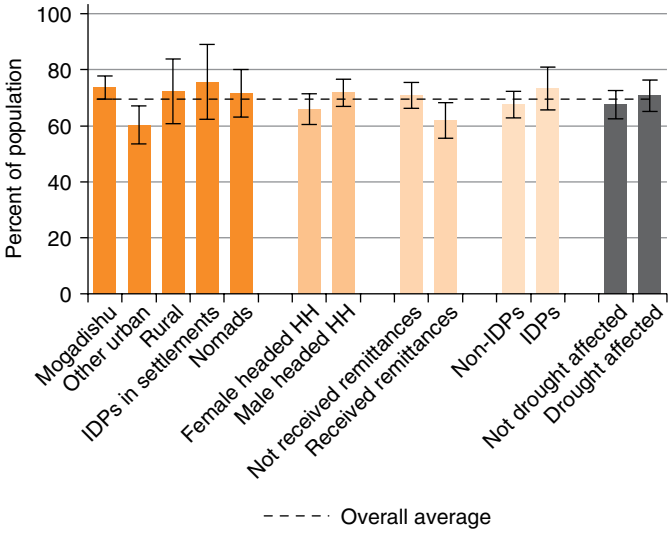
Poverty is widespread across Somalia with lower incidence found in other urban areas, and similar levels among nomads, IDPs in settlements, and the population in rural areas and Mogadishu. Urban areas usually benefit from agglomeration effects that result in more economic opportunities and access to services, relative to rural areas.[23] Poverty incidence is similar (between 72 and 76 percent) for those living in Mogadishu, rural areas, IDPs in settlements, and nomadic households (Figure 1.4). Only those living in other urban areas, without considering Mogadishu, have a smaller incidence of poverty (60 percent), than the rest of the Somali population ($p<0.01$ vs. Mogadishu, $p<0.05$ vs. IDPs in settlements and nomads, and $p<0.10$ vs. rural areas).[24] A higher poverty rate in Mogadishu compared to other urban areas might be the result of a larger concentration of IDP population and the challenges associated with the displacement crisis (see Chapter 4, Displacement, and Chapter 2, Spatial Variation in Living Standards, for a detailed discussion).[25]

High levels of poverty are more prevalent in the North and South West of Somalia according to poverty estimates from satellite images. Data collection in Wave 2 was restricted to accessible areas due to insecurity. Thus, the survey estimates are

[20] World Bank (2014).
[21] Pape and Mistiaen (2015).
[22] World Bank (2017a).
[23] Lall, et al. (2017).

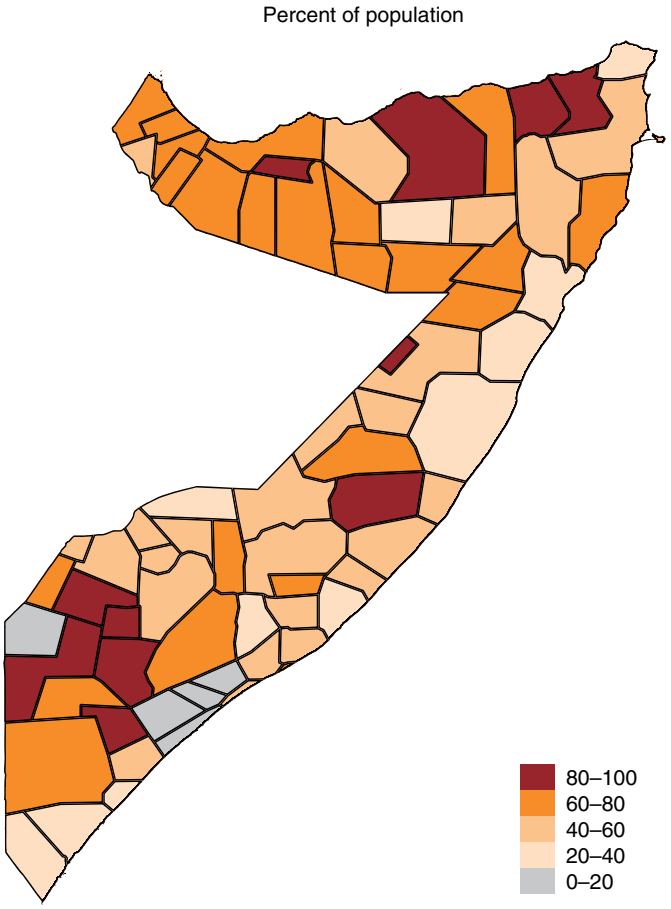
[24] An adult equivalent measure of poverty is consistent with this characterization of the poor (see the Appendix A for more details).
[25] Banadir concentrates 41 percent of IDPs in settlements and 28 percent of the overall displaced population according to the second wave of the SHFS. The share is similar (around 22 percent) for the overall displaced population with data from the Protection & Return Monitoring Network of the United Nations High Commissioner for Refugees (UNHCR).

FIGURE 1.4 ■ Poverty incidence



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.5 ■ Map of poverty incidence from satellite estimates[27]



Source: Authors' calculation from satellite data.
Note: The poverty incidence of each region does not include IDPs in settlements.

only representative of accessible areas in Somalia (see Table A.1). Wave 2 filled this critical gap by imputing poverty based on data extracted from satellite images for inaccessible areas (Box 4).[26] This approach allows to have an objective measure of poverty for areas where the survey data are not available. The satellite estimates indicate that poverty incidence is highest—more than 80 percent—in the North (some districts of Togdheer, Sanaag, and Bari) and South West (some districts of middle Juba, Gedo, and Bay), besides a few districts of Mudug and Galguduud (Figure 1.5).

Poverty is both widespread and deep, particularly for households in rural areas and IDP settlements, highlighting substantial challenges to overcoming poverty. The poverty gap can be defined as the minimum amount of resources that would have to be transferred to the poor, under a perfect targeting scheme, to eradicate poverty (Box 3). The average poverty gap in Somalia is 29 percent (Figure 1.6), indicating that the average consumption level of a poor Somali is about 71 percent of the international poverty line. While almost three-fourths of the population in rural areas, IDP settlements, Mogadishu, and among nomads are poor according to survey estimates, poverty is deeper in rural areas and IDP settlements (34 percent for both), compared to Mogadishu (27 percent, $p<0.1$) and other urban areas (24 percent, $p<0.05$). A large share of Somalis living in poverty, together with a large gap between their consumption expenditure and the poverty line indicate that many of the poor are far from overcoming poverty and would need a substantial increase in their consumption to bring it to the poverty line. A transfer of around US$1.64 billion per year would be required under a perfect

[26] For a detailed description of the methodology see Pape, U. and P. Wollburg (2018).

[27] The boundaries on the map show approximate borders of Somali pre-war regions and do not necessarily reflect official borders, nor imply the expression of any opinion on the part of the World Bank concerning the status of any territory or the delimitation of its boundaries.

Box 3 ■ Measures of poverty

Measuring living standards is crucial for poverty reduction efforts to be successful. The international poverty line was introduced in the 1990 World Development Report with the aim of measuring poverty consistently across countries.[28] The value of the poverty line has been revised through the years and adjusted to reflect welfare conditions of low-income countries, and it currently stands at a daily value of US$1.90 (2011 PPP) per person. Comparable poverty measures help us to identify poor households, monitor the evolution, and assess the effectiveness of policies.

The poverty incidence is the most common poverty measure. The poverty incidence or headcount ratio refers to the share of population that is poor or that have a total consumption lower than the poverty line. It's derived from the total consumption of the household in food, nonfood, and durable goods; the number of members that comprise the household; and a specific consumption threshold or poverty line. This measure describes the extent of poverty in a country or region.

The poverty gap index measures how far poor households are from overcoming poverty, while the poverty severity index measures the level of inequality among the poor. The poverty gap index is the difference between current consumption and the poverty line as a proportion of the poverty line for the poor population. It can be interpreted as the minimum amount of resources that would have to be transferred to the poor, under a perfect targeting scheme, to eradicate poverty.[29] The poverty severity index is estimated as the square of the poverty gap. It attributes a larger weight to the poorest among the poor, thus reflecting inequality conditions for the poor.

A food consumption measure of poverty considers the total consumption of each household relative to the average expenditure on food items only. Using the total consumption of households, a food consumption measure of poverty identifies those households that cannot afford the average food consumption, even if they were to allocate all their expenditure to food items only. Effectively, the poverty line is scaled down by multiplying for the overall share of food consumption relative to total consumption.

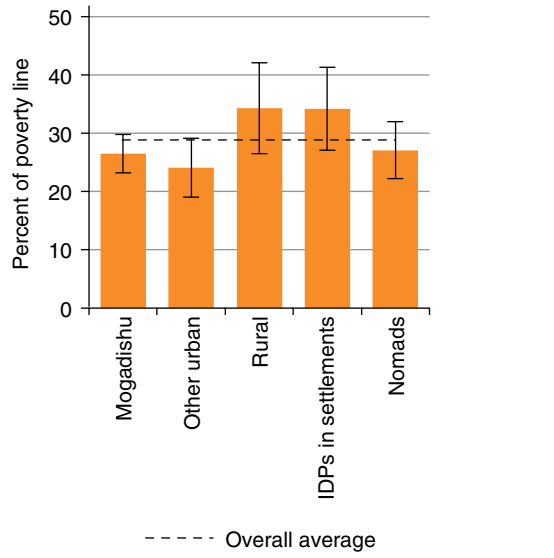
targeting scheme and ignoring administrative and logistical costs to bring the poor in the population out of poverty.[30] In line with these results, the average poverty severity index is 15 percent, pointing to inequalities among the poor. These inequalities are concentrated in rural areas and IDP settlements (Figure 1.7), compared to Mogadishu, other urban areas, and the nomads (for all the comparisons, at least $p<0.05$).

Poverty has a gender dimension as households headed by women are slightly less poor. Households headed by women have a poverty incidence that is 6 percentage points lower than those headed by men (66 vs. 72 percent, $p<0.05$). The results are robust and weakly significant ($p<0.1$) after controlling for regional differences (Table A.4). The finding of overall lower poverty in households headed by women is only significant for rural areas and IDP settlements ($p<0.01$ and $p<0.1$ from Table A.2), after controlling for age of the household head, household composition, access to services, and sources of income. However, poor households headed by men and women have on average the same poverty gap (Figure A.2). Children are also less poor in households headed by women after controlling for regional differences ($p<0.05$, Table A.3). Overall, households headed by women have a larger share of working age members ($p<0.05$), which might explain a slightly higher consumption level among this group of households. Any policy or program aimed at reducing poverty should consider the gender dimension of poverty in Somalia.

Children are disproportionately affected by poverty. Children aged 0–14 years are one of the most vulnerable groups, and those from poor households face bigger obstacles to overcome poverty in their adult life.[31] They represent nearly half of the total Somali population (49 percent), but

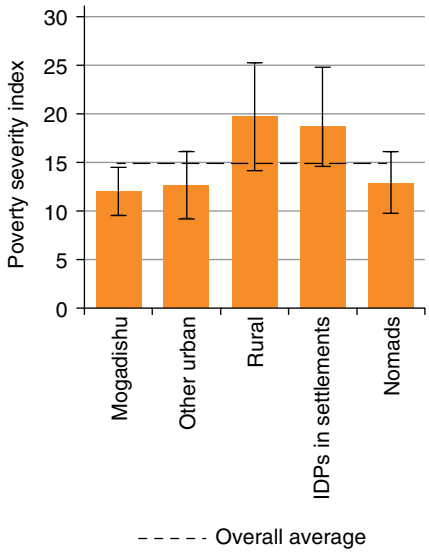
[28] Ravallion, et al. (2009).
[29] Deaton (2006).
[30] Corresponds to an annual value for all the regions, including areas not covered in Wave 2 of the SHFS. For these, the same poverty incidence and gap was assumed as in regions covered by the survey.
[31] UNICEF (2016).

FIGURE 1.6 Poverty gap



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.7 Poverty severity



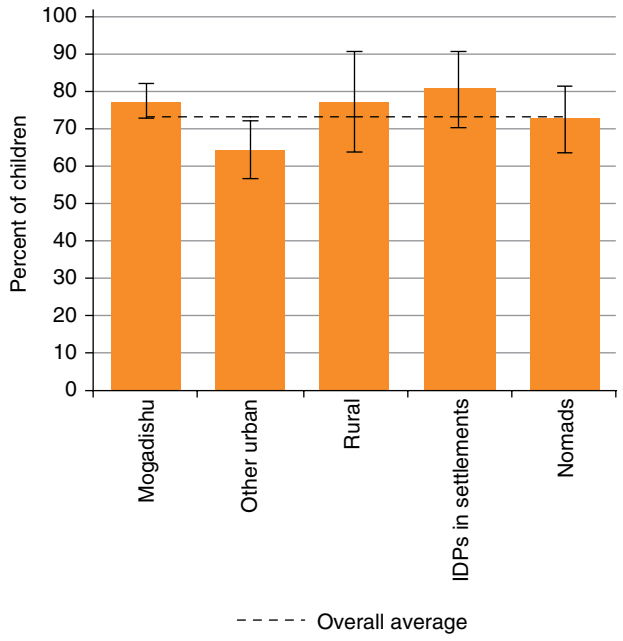
Source: Authors' calculations based on the SHFS 2017–18.

73 percent of them are poor according to survey estimates. The youth aged 15–24 years represent around 15 percent of the population and 68 percent of them live in a household whose consumption is less than the poverty line (Figure 1.9). Child poverty incidence is similar in Mogadishu, rural areas, IDPs in settlements and among nomadic households (Figure 1.8). Compared to other urban areas, children are more likely to be poor in Mogadishu (13 percentage points of difference, $p<0.01$) and in IDP settlements (16 percentage point difference, $p<0.05$). Moreover, the gap between child and overall poverty incidence is larger for rural households and those living in IDP settlements. It is partially explained by high poverty rates, but also because households have on average more children than the overall average of 2.6 (2.8 and 2.9 in rural areas and IDP settlements, respectively). Breaking the poverty cycle requires improving conditions for children and youth. The challenge will only grow considering the country's demographic structure.

Remittances provide a lifeline to some households, which makes them less likely to be poor or their poverty less deep. Receiving remittances can serve as a resilience mechanism to smooth shocks and improve welfare conditions. Poverty is 9 percentage points lower for households that received remittances, compared to non-receivers (62 percent vs. 71 percent, $p<0.01$). The results are robust and significant ($p<0.05$) after controlling for regional differences (Table A.4). Among the poor, poverty is also deepest for households that did not receive remittances ($p<0.01$, Figure A.3 and $p<0.01$ from an OLS regressions with fixed effects in Table A.5). The correlation between poverty and receiving remittances is confirmed by other poverty measures (see Chapter 6, Remittances, for a detailed discussion). Food consumption poverty is also less likely for households that received remittances compared to non-receivers ($p<0.01$). Youth are 12 percentage points less likely to be poor in households that received remittances compared to non-receivers ($p<0.05$) (Figure A.3 and $p<0.05$ from logistic regressions of Table A.6). Receiving remittances seems to contribute to the well-being of some households. However, they are not immune to shocks nor remittances scale with needs. Furthermore, remittances are de-centralized and not targeted to the most vulnerable households. Social protection programs can reach the ones most in need and help lift the population out of poverty (see Chapter 5, Social Protection, for a detailed discussion).

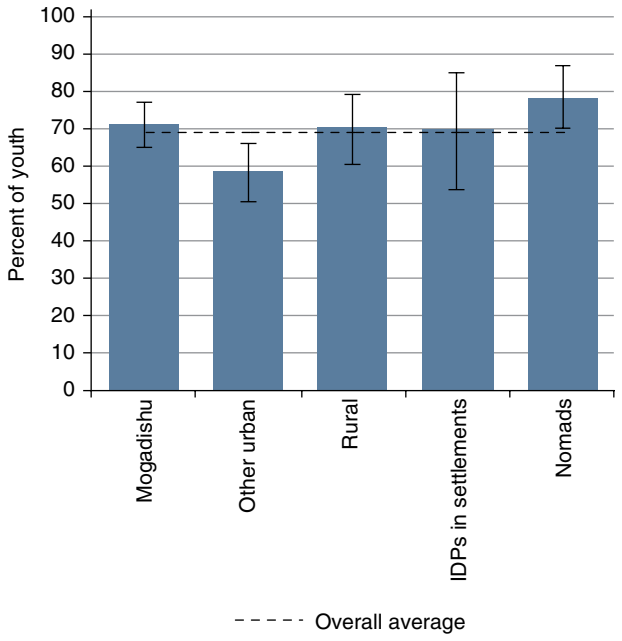
Nearly half of the population is not able to meet the average consumption of food items, highlighting the dire living standards of most Somalis. The food consumption measure of poverty corresponds to households that have a total consumption smaller than the average expenditure on food

FIGURE 1.8 Child poverty incidence



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.9 Youth poverty incidence



Source: Authors' calculations based on the SHFS 2017–18.

items across regions (Box 3). Thus, households considered poor with this threshold are those that are not able to afford the average food expenditure, even if they were to allocate all their expenditure to food items and nothing to nonfood and durable items. Food consumption poverty is 49 percent in Somalia (Figure 1.10), and is similar in Mogadishu (43 percent), rural areas (44 percent), for IDPs in settlements (50 percent), and the nomads (41 percent). Households living in other urban areas are less likely to be poor with this measure than rural areas (22 percentage point difference, $p<0.05$) and those in IDP settlements (28 percentage point difference, $p<0.05$). Food consumption poverty is also less likely among households that have not been displaced (46 percent) compared to the group of IDPs (55 percent, $p<0.05$).[32] Food consumption poverty indicates most Somalis live in extreme conditions, and that some vulnerabilities seem to be associated to the displacement status of households. Alleviating poverty in Somalia will require addressing significant challenges posed by the displacement crisis and ensuring this group is integrated into society and the economy.

Experiencing hunger is equally likely for poor and non-poor households. Hunger is likely to be present in most households after a severe shock like the drought experienced in Somalia between March 2016 and December 2017.[33] Forty-two percent of poor households reported experiencing some hunger compared to 38 percent of non-poor, but the difference is not significant. Consistent with monetary poverty, households from other urban areas were less likely to report hunger (22 percent, Figure 1.11) than IDPs in settlements (60 percent, $p<0.01$), nomads (50 percent, $p<0.01$), rural households (44 percent, $p<0.01$), and those in Mogadishu (43 percent, $p<0.01$). Households receiving remittances have an advantage and thus are slightly less likely to report hunger compared to non-receivers after controlling for regional differences ($p<0.1$, Table A.7). Moreover, those that reported to be affected by the drought are more likely to report some hunger in the past four weeks,

[32] Households living outside of IDP settlements were classified as being displaced if they were living in any location because they were forced to leave their usual place of residence due to conflict, violence, human rights violations, and natural or man-made disasters.

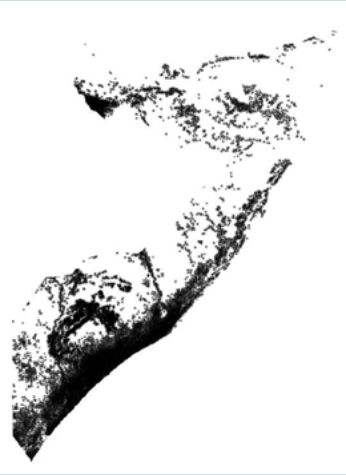
[33] Corresponds to experiencing hunger at least 1–2 times in the past four weeks.

Box 4 ■ Poverty estimates from satellite images for inaccessible areas

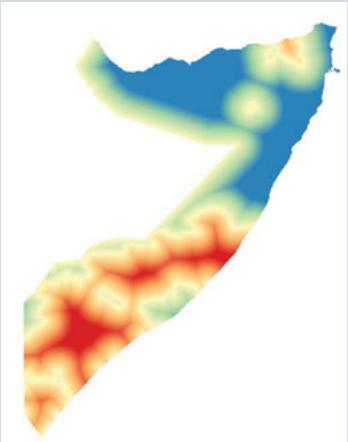
Data collection in Wave 2 was restricted to accessible areas, so poverty was imputed for inaccessible areas using data extracted from satellite images. The implementation of the SHFS was challenging due to insecurity. Wave 2 considered a security assessment and excluded insecure areas. Hence, an alternative approach was employed to provide an objective measure of poverty for areas where the survey data are not available. Wave 2 filled this gap by imputing poverty based on satellite imagery for inaccessible areas. The methodology has been used for Nigeria, Tanzania, Uganda, Malawi, and Rwanda.[34] These experiences show that image features can explain up to 75 percent of the variation in local-level outcomes, ultimately suggesting that poverty estimates of inaccessible areas are reliable.

The data extracted from satellite images corresponds to distance to certain reference points, population, and conflict density, as well as rain and temperature levels. The information used to predict the poverty rate of inaccessible areas refers to the distance from the center of each geographical unit to bare areas, cultivated areas, major roads, drought areas, health clinics, schools, water sources, waterways, food insecure areas, urban centers, and unsafe areas. In addition, data on temperature, precipitations, conflict density, and population density were also included in the estimation. The pictures below are examples of explanatory variables extracted from satellite images.

Distance to cultivated areas



Distance to unsafe areas



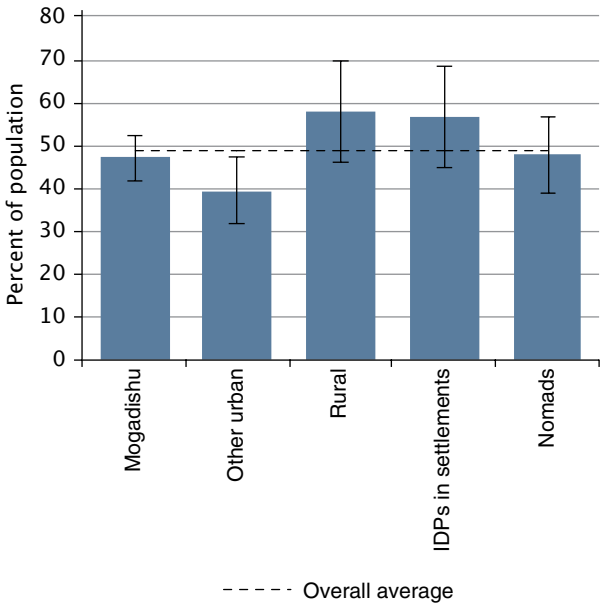
Population density

The poverty rate—from survey estimates—was regressed on the data extracted from satellite images for each administrative area, explaining between 56 and 97 percent of the variation. The correlation between poverty and the explanatory variables was different for each population type. For each, a separate linear model was estimated with interaction terms using all the explanatory variables. The final specification was derived from a stepwise regression to maximize the adjusted R-squared and minimize the root mean squared error, considering the information from all accessible areas. Poverty was then predicted and weighted by population in areas where survey data were not available, while excluding inhabited areas. To derive a nationwide poverty rate, survey and satellite estimates were combined. For each pre-war region and population type, the satellite prediction was considered if the accessibility rate of Wave 2 was 90 percent or less, and the survey estimate used if accessibility exceeded this threshold. The adjusted R-squared of the final model for urban areas is 56 percent while 95 percent for rural areas. A lower variation explained by the model in urban areas is the result of larger heterogeneity in poverty rates combined with the lack of higher spatial frequency in the data available for urban areas. For a detailed description of the methodology see Pape, U. & P. Wollburg (2018).

[34] Xie, et al. (2015)and Jean, et al. (2016).

compared to households not affected (p<0.01 from logistic regressions of Table A.7).[35] The drought resulted in higher food prices, low purchasing power and displaced an additional 1 million people, leading to acute food insecurity (see Chapter 3, Drought Impact, for a detailed discussion).[36] Efforts aimed at building resilience are crucial to protect vulnerable groups from food insecurity and malnutrition.

FIGURE 1.10 ■ Food consumption poverty incidence



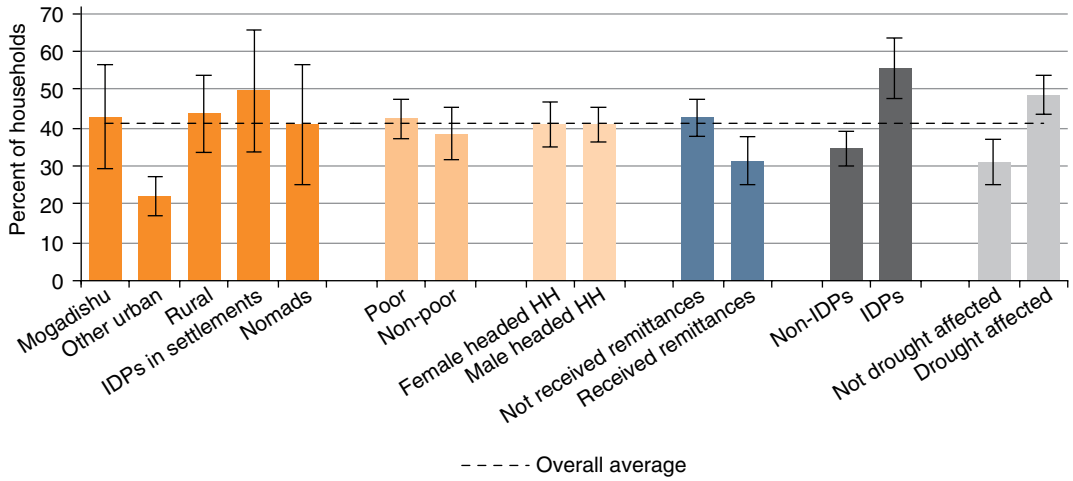
Source: Authors' calculations based on the SHFS 2017–18.

Inequality and vulnerable population

For its level of poverty, inequality is relatively low in Somalia compared to other low-income Sub-Saharan countries. The Gini index, a measure of inequality, was 34 percent for Somalia in 2017 (Figure 1.13). Due to the high levels of monetary deprivation shared by most households, consumption is relatively homogenous among them. For similar levels of poverty as in Somalia, other low-income Sub-Saharan countries tend to have higher levels of inequality. For example, Malawi and South Sudan, which have a poverty incidence of 69 and 82 percent respectively, have around a 12 percentage points higher Gini than Somalia (Figure 1.12).

Inequality is highest in rural areas and lowest in Mogadishu. The Gini index is 41 percent in rural areas, 34 percent in other urban areas, and 26 percent in Mogadishu (Figure 1.13). Urban areas might benefit from agglomeration effects that bring

FIGURE 1.11 ■ Experience of hunger in past 4 weeks

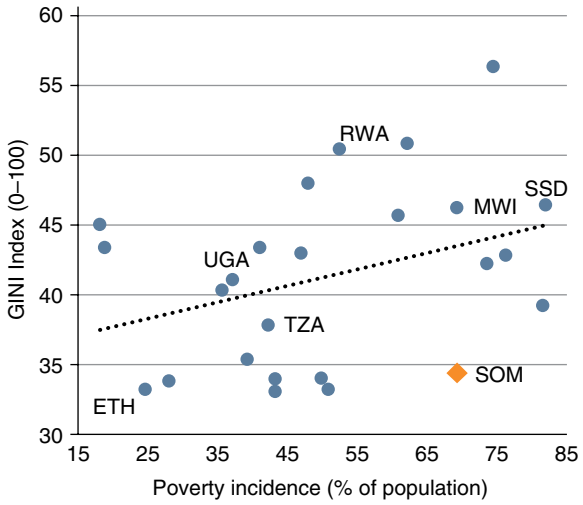


Source: Authors' calculations based on the SHFS 2017–18.

[35] Corresponds to households that self-reported to be affected by the drought or shocks associated to it, like fire, severe shortage in water for cattle or farming, livestock death or disease, and high food prices.

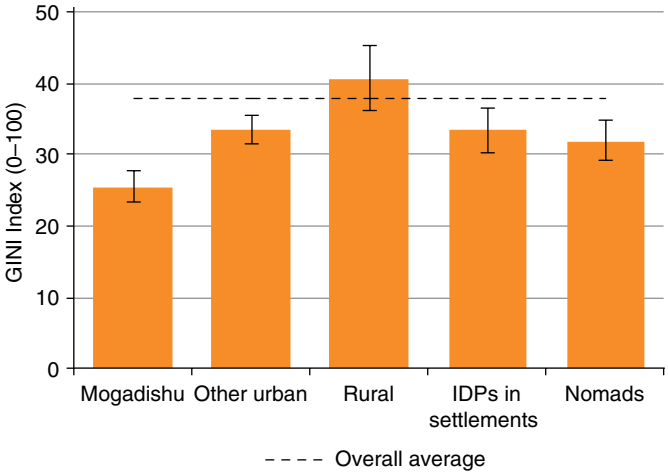
[36] UNHCR (United Nations High Commissioner for Refugees) (2018a); Famine Early Warning Systems Network (FEWSNET (2017)).

FIGURE 1.12 ■ Cross-country comparison of poverty and inequality



Source: Authors' calculations based on the SHFS 2017–18, and World Bank Open Data.

FIGURE 1.13 ■ Inequality



Source: Authors' calculations based on the SHFS 2017–18.

TABLE 1.1 ■ Inequality decomposition

Theil GE(1) inequality index		
Decomposition	By population type	By region
Between group	0.002	0.005
Within group	0.208	0.205
Total	0.210	0.210

Source: Authors' calculations based on the SHFS 2017–18

more economic opportunities and larger access to services, ultimately leading to more homogenous consumption among the urban population, relative to the rural population.[37] Additionally, the support from donors is more likely to reach urban centers due to insecurity and inaccessibility of some rural areas, which can also help level the consumption of the urban population. Compared to rural households, those in Mogadishu are more likely to have water at home ($p<0.01$), electricity ($p<0.01$), improved sources of drinking water ($p<0.01$), a mobile money account ($p<0.05$), and a larger share who live just less than 10 minutes walking (one way) to the closest market ($p<0.01$).

Inequality stems largely from differences within regions and population groups, rather than from differences between them. The Theil index—another measure of inequality which decomposes total inequality into the proportion explained by differences within and between groups—indicates that around 98 and 99 percent of total inequality corresponds to within the group component (Table 1.1).[38] Differences between households from the same region or population group (Mogadishu, other urban, IDPs in settlements, and nomads) largely explain inequality in consumption rather than the differences between regions or types of population. Alleviating poverty in Somalia entails providing sufficient economic opportunities for individuals to improve their income levels. Nevertheless, to achieve shared prosperity special attention should be placed in generating higher consumption growth for households at the bottom of the distribution.

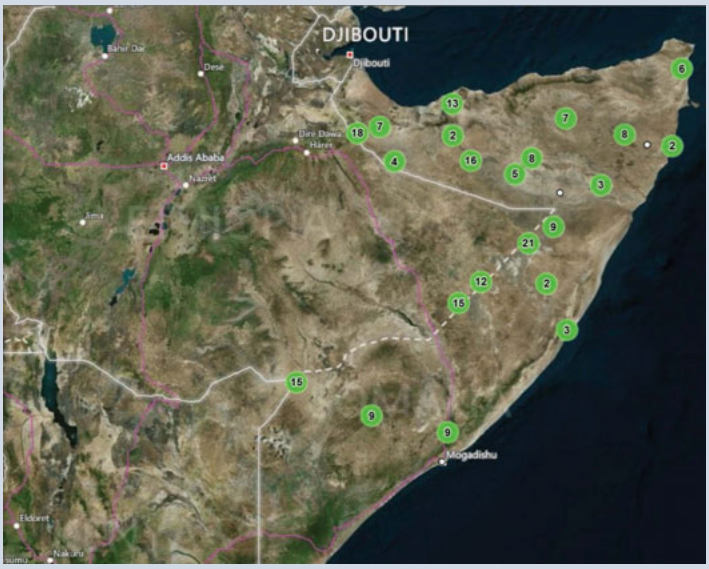
Households in the top 60 percent of the consumption distribution spend nearly three times more than those in the bottom 40 percent. The average daily real consumption per capita in Somalia is US$1.26. Overall, households in the top 60 percent of the total consumption distribution consumed

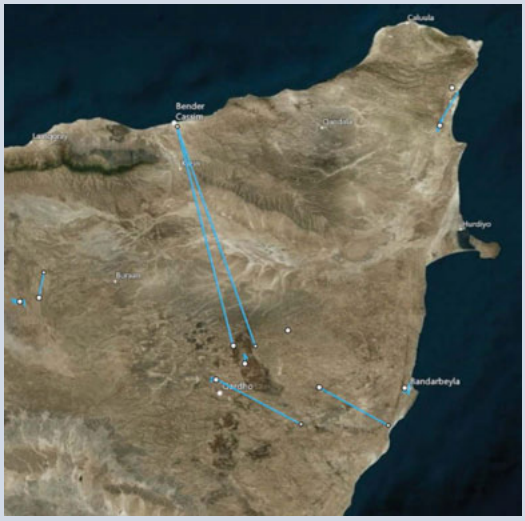
[37] Lall, et al. (2017).
[38] The Theil Index measures inequality based on an entropy measure. The index presented in this chapter corresponds to GE(1), which is also referred to as Theil's T index.

Box 5 ■ A remote monitoring system tracks migration patterns of nomads

The second wave of the SHFS extended the coverage to consider the nomadic population despite the challenges of including them in a household survey. Nomads make up around a third of the Somali population, yet only sporadic and non-systematic data are available about their welfare conditions, patterns, or needs. Including the nomads in a household survey with traditional methodologies is challenging as they change location constantly and thus they could move in and out of the surveyed area.[39] Wave 2 filled this critical gap by collecting systematic data to account for the large nomadic population by combining information on water points with a series of Key Informant Interviews and a listing exercise.

Wave 2 also introduced a new approach to track the migration patterns of nomads, providing invaluable information for policy efforts. The second wave of the SHFS established a remote monitoring system to track the migration patterns of the nomadic population. It consisted of autonomous position trackers successfully distributed to a group of 197 nomads. These devices will send the location of the nomads for a period of two years to a secure cloud-based server. The pictures below are an example of the position of these nomadic households and their migration patterns captured in real time. This innovation will enhance future sample designs and ensure nomads are accurately represented in surveys. It will also improve our understanding about their patterns and routes, as well as provide invaluable information for emergency assistance and service delivery to this population.





2.8 times more than households in the bottom 40 percent (an average of US$1.70 and US$0.62, respectively). Consistent with inequality measures, the disparities for those two groups are larger among rural households (3.4 times more), and in other urban areas (2.8 times more). Contrary to this, the difference between households in the top 60 percent and bottom 40 percent is lowest in Mogadishu, where the former group only consumes 2.1 times more than the latter (Table 1.2). In terms of the overall distribution of total consumption, the largest differences between rural and urban areas, as well as between IDPs in settlements and nomads, are found below the poverty line (Figure 1.14). Additionally, the difference in consumption among groups in the top of the distribution is relatively small.

A large share of the Somali population has consumption levels just above the poverty line, and thus is susceptible to fall into poverty in case of an adverse shock. The Somali population is at constant risk of experiencing a negative shock to their income and consumption levels due to recurrent droughts, among other shocks. Around 10 percent

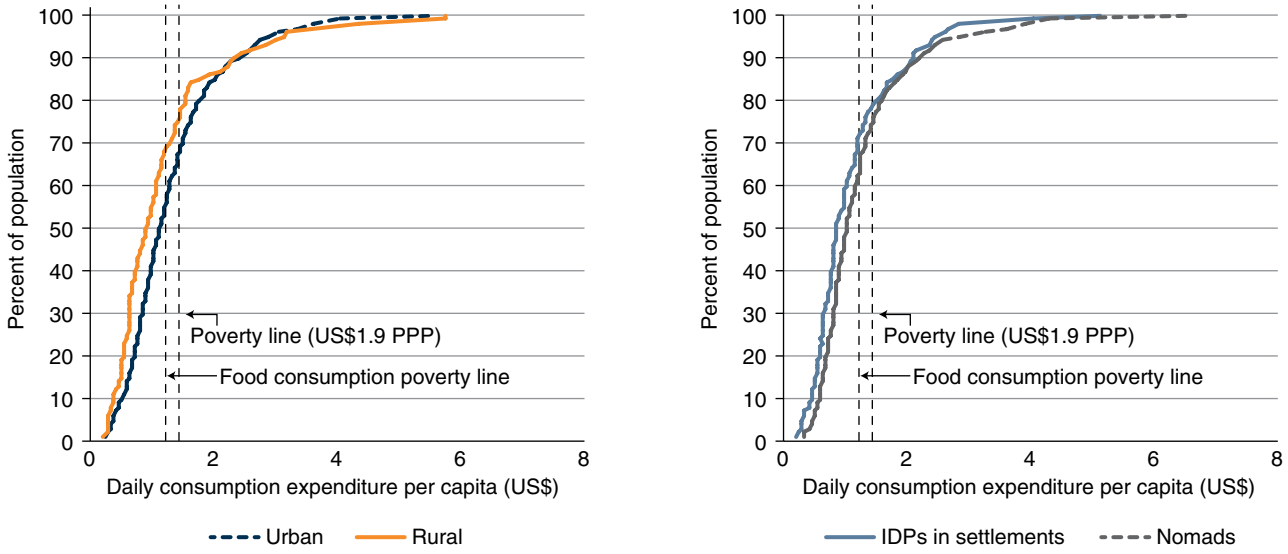
[39] Himelein, et al. (2014).

TABLE 1.2 ■ Average real consumption per capita (daily 2017 US$)

	Bottom 40%	Top 60%	Overall average
Overall	0.62 (0.59, 0.64)	1.70 (1.57, 1.83)	1.26 (1.16, 1.37)
Mogadishu	0.71 (0.67, 0.76)	1.48 (1.39, 1.57)	1.17 (1.10, 1.24)
Other urban	0.67 (0.63, 0.71)	1.87 (1.76, 1.99)	1.39 (1.25, 1.53)
Rural	0.51 (0.47, 0.55)	1.71 (1.25, 2.18)	1.23 (0.87, 1.60)
IDPs in settlements	0.55 (0.50, 0.60)	1.48 (1.16, 1.81)	1.10 (0.84, 1.37)
Nomads	0.68 (0.63, 0.73)	1.67 (1.40, 1.95)	1.28 (1.06, 1.50)

Source: Authors' calculations based on the SHFS 2017–18.
Note: 95% confidence intervals reported in parenthesis.

FIGURE 1.14 ■ Consumption distribution



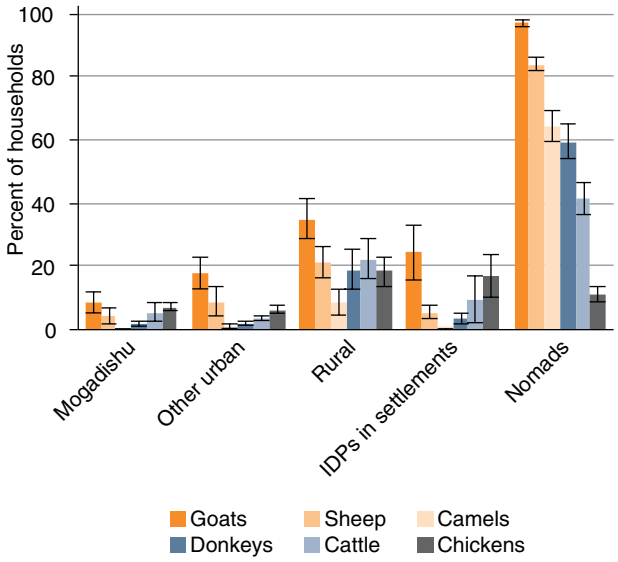
Source: Authors' calculations based on the SHFS 2017–18.

of the non-poor population have a total daily consumption expenditure within 20 percent from the poverty line.[40] The urban population is more vulnerable since 12 percent of them are in this range (10 percent in Mogadishu and 13 percent in other urban areas), compared to 10 percent of the rural population, and 9 percent and 7 percent of the nomads and IDPs in settlements, respectively. The population clustered above the poverty line is susceptible to fall into poverty in case of an unexpected decrease in their consumption levels. International and humanitarian aid can be constrained by the local capacity to efficiently deliver services. Hence, a social safety net program can be a good alternative to support and build resilience among the non-poor and vulnerable segments of the population.

Every nomadic household owns at least one goat, sheep, camel, donkey, cattle, or chicken, and they tend to own more than non-nomadic households. Pastoralist or nomadic livelihood involves raising livestock and moving constantly according to seasonal variations in search of water and pasture (Box 5). Every nomadic household owns some

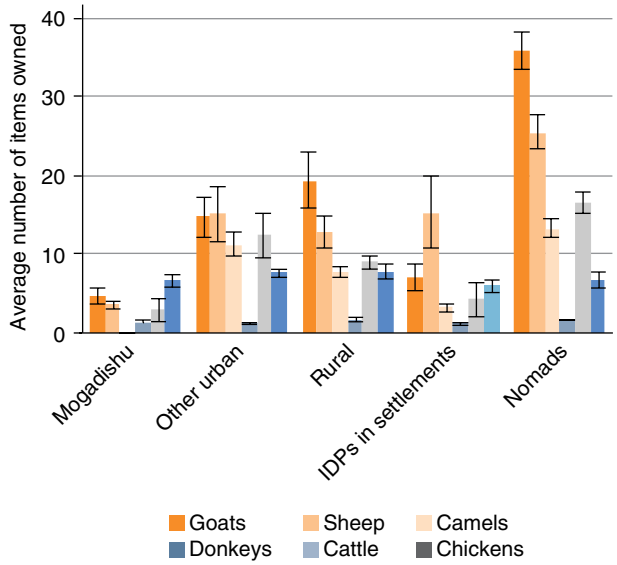
[40] The standard international poverty line of US$1.90 at 2011 PPP corresponds to US$1.40 per day per person in 2017.

FIGURE 1.15 Livestock ownership



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.16 Number of livestock owned



Source: Authors' calculations based on the SHFS 2017–18.

type of livestock, compared to 53 percent of the rural households, 35 percent of IDPs in settlements, 23 percent in other urban areas, and 19 percent in Mogadishu. Chickens are the only type of livestock owned by a similar share of rural and nomadic households, 18 vs. 11 percent, respectively ($p>0.1$, Figure 1.15). Among owners, nomadic households also own a larger number of livestock than non-nomadic households, nearly twice for cattle, sheep, goat, and camels (Figure 1.16). Wealth in the form of livestock represents an advantage against other populations living in IDP settlements, and urban and rural areas. Yet, relying primarily on livelihood based on livestock makes them more vulnerable to climate-related shocks. For example, the drought led to low birth rates and livestock deaths, representing a loss of between 25 and 75 percent of their herds in the first six months of 2017.[41]

Demographic characteristics and labor markets

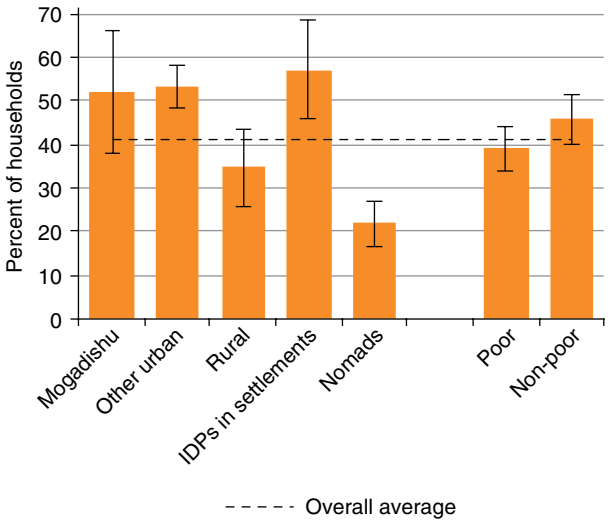
Four of 10 Somali households are headed by a woman. Women represent nearly half of the adult population, yet less likely head a household. Around 58 percent of the Somali households are headed by men and 42 percent by women (Figure 1.17). There are large gender differences across regions; households are more likely to be headed by women in Mogadishu (52 percent), other urban areas (52 percent), and in IDP settlements (54 percent), compared to rural households (37 percent, $p<0.05$ vs. Mogadishu, and $p<0.01$ vs. IDPs in settlements and other urban areas) and nomadic households (23 percent, $p<0.05$ vs. rural areas). In terms of gender composition within the household, poor and non-poor households have a similar proportion of male and female members within the household (Table 1.3).

In Somalia, the education of the household head is strongly correlated with age, gender, and receiving remittances, but weakly correlated with poverty. Education allows people to access better economic opportunities and improve their overall well-being. Households headed by men are more likely to have some formal education, compared to those headed by women (37 vs. 28 percent, $p<0.05$).[42] The results are robust and significant ($p<0.01$) after controlling for age, poverty status and other household characteristics (Table A.8). Also, older household heads, those not receiving

[41] FSNAU and FEWSNET (2018).

[42] Corresponds to formal education, including incomplete primary, complete primary, incomplete secondary, complete secondary, university, and other.

FIGURE 1.17 Female headed households



Source: Authors' calculations based on the SHFS 2017–18.

remittances and those that were displaced are less likely to have some formal education ($p<0.01$ for each). There are some differences that are weakly significant between poor and non-poor households ($p<0.1$). One plausible explanation for this finding is that besides having some years of schooling, the quality of the education matters as well as the returns to education in the labor market. The share of poor and non-poor households with at least one employed member is 72 and 73 percent respectively, suggesting they have similar access to the labor market.

Poor households have a smaller proportion of literate members. The international evidence indicates that educational outcomes tend to be associated with poverty.[43] Overall, the proportion of literate members in the household is nearly 6 percentage points lower in poor households compared to non-poor ($p<0.1$, Table 1.3). The difference is only significant for urban areas (Mogadishu $p<0.1$ and other urban $p<0.01$), and not in rural areas, IDP settlements, or for nomads (Table A.2). This might be explained by large spatial differences in terms of availability and access to education. Improving the education outcomes of the poor might allow them to engage in better income-generating economic activities and enhance their consumption levels.

A larger number of household members and dependents are salient characteristics of the poor. Consistent with cross-country observations, poor households tend to have more members and a higher dependency ratio.[44] The typical Somali household has 5.4 members, with 5.9 members among the poor and 4.5 among the non-poor. Overall, poor households have around 1.6 more members than non-poor households across Somalia ($p<0.01$, Table 1.3). The results are robust and significant ($p<0.01$) after controlling for other relevant household characteristics. Household size is larger in Mogadishu, urban areas, and among the nomadic population ($p<0.01$, Table A.2). The Somali population is predominantly young, implying that a large share is not of working age. There are 1.3 dependents in every household for every member of working age.[45] On average, there are 0.5 more dependents in poor households across the country ($p<0.01$), and the dependency ratio negatively associated with the consumption quintiles (Figure A.7). This finding is smaller and weakly significant after controlling for other household characteristics ($p<0.1$). Having more members and dependents among poor households is explained by a larger number of children in poor households relative to non-poor. Overall, poor households have 1.1 more children than non-poor ($p<0.01$), and there are no differences between poor and non-poor in terms of number of elderly within the household.

Men are much more likely to participate in the labor market than women. Somalia has traditional gender roles which are reflected in the profile of the population in the labor market. Overall, nearly 5 in 10 Somalis aged 15–64 years are economically active in the previous week, either employed (45 percent) or unemployed but actively looking for work (2 percent). Participation rates are similar across the urban, rural, IDP in settlements, and nomadic population, and most of the inactive population are not enrolled in school (Figure 1.18). In terms of participation by gender, 58 percent of the

[43] Banerjee and Duflo (2007).

[44] Banerjee and Duflo (2007).

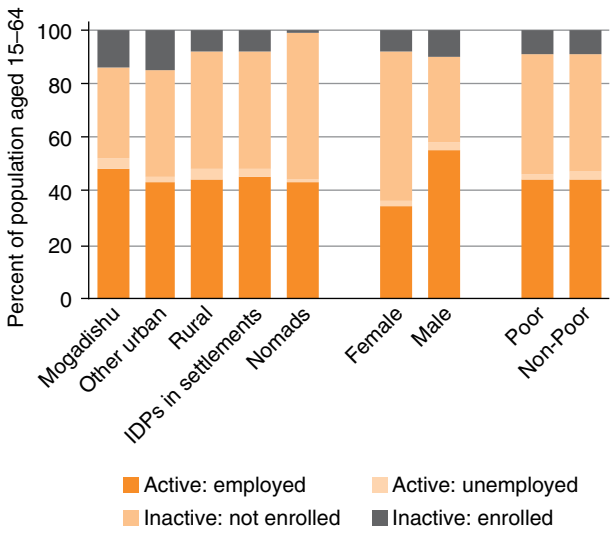
[45] The age dependency ratio is defined as the proportion of children and old age dependents to working age population (15–64).

TABLE 1.3 ■ Demographic attributes of poor households

Household characteristic	Poor	Non-poor	Difference	Logit regression on poverty status
Household size	5.9	4.5	1.4***	0.6***
Age dependency ratio	1.5	1.0	0.5***	0.2*
Number of children	3.0	1.9	1.1***	–0.1
Proportion of men in the household	50.1	49.5	0.7	2.1
Share of households headed by men	60.2	54.7	5.5	2.8
Age of household head	39.9	37.7	2.2***	–0.1
Share of literate household heads	48.9	52.1	–3.2	5.8
Share of literate members in the household	44.1	49.9	–5.8*	–6.1*
Share of households with improved sources of water	77.4	75.5	1.9	2.6
Share of households with improved sanitation	42.9	51.0	–8.1*	–2.5
Share of households with access to electricity	47.0	60.9	–13.9***	–7.9***
Main source of income: Salaried labor	36.0	38.4	–2.4	Reference
Main source of income: Agriculture, fishing, and hunting	23.9	21.8	2.1	–4.3
Main source of income: Small family business	12.0	12.0	0.0	–5.7***
Main source of income: Remittances	7.2	7.6	–0.4	0.3
Main source of income: Other	21.0	20.2	0.8	–4.6**

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). The value displayed for t-tests are the differences in the means between poor and non-poor households. The coefficients estimated from the logistic regression correspond to the marginal effects and include region and population fixed effects. The poverty status used in the regression was derived from total core consumption and a rescaled poverty line.

FIGURE 1.18 ■ Labor force participation

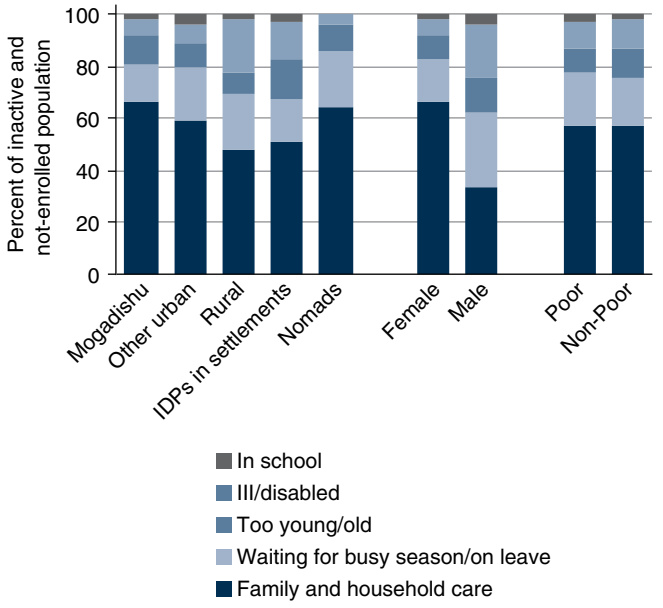


Source: Authors' calculations based on the SHFS 2017–18.

men participate in the labor market, compared to only 37 percent of the women ($p<0.01$). Increasing participation of women in the labor market will be important to accelerate economic growth and raise the living standards of Somali households.

The gender gap in labor force participation is primarily a result of a larger share of women staying at home and caring for their families compared to men. Women often tend to engage in unpaid care and domestic work and therefore are less likely to participate in the labor market (Figure 1.19). Even though 64 percent of the Somali households perceive that most or all women can work outside the home, the gap in both labor force participation and employment between men and women is substantial (21 and 20 percentage points respectively, $p<0.01$). Changing the perception of women together with removing barriers to work are crucial steps to tackle gender inequalities.

FIGURE 1.19 ■ Reasons for inactivity



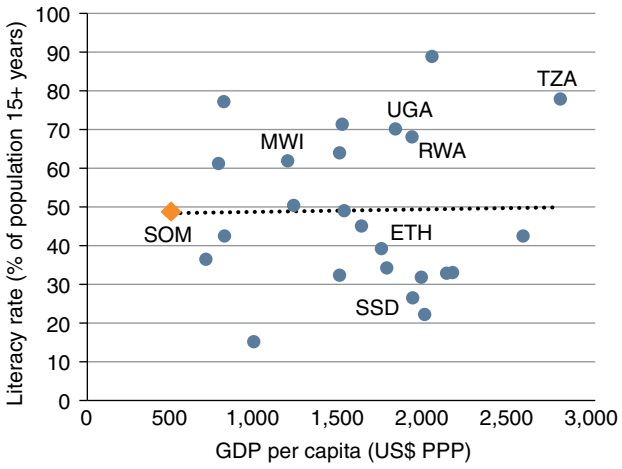
Source: Authors' calculations based on the SHFS 2017–18.

Education

Around half of the Somalis can read and write, with literacy being more common among younger generations, urban population, and men. The adult literacy rate for the population aged 15 years or more is 50 percent for Somalia. This rate is similar to the unweighted average of low-income countries in Sub-Saharan Africa (49 percent), and is in line with the cross-country comparison after considering the level of GDP per capita (Figure 1.20).[46] Younger generations are often more literate, with the highest rate of literacy found among those aged 15–19 years (62 percent, Figure 1.21). The adult literacy rate is 79 percent in Mogadishu, 68 percent in other urban areas ($p<0.01$ vs. Mogadishu), followed by IDPs in settlements (57 percent, $p<0.01$ vs. other urban), rural areas (45 percent, $p<0.1$) and by the nomads with the lowest literacy rate (16 percent, $p<0.01$). For all the population groups, literacy is higher for men compared to women (at least $p<0.05$ for each comparison from Figure 1.22). The poor and non-poor population have a similar literacy rate, yet the share of literate household members is higher for non-poor households

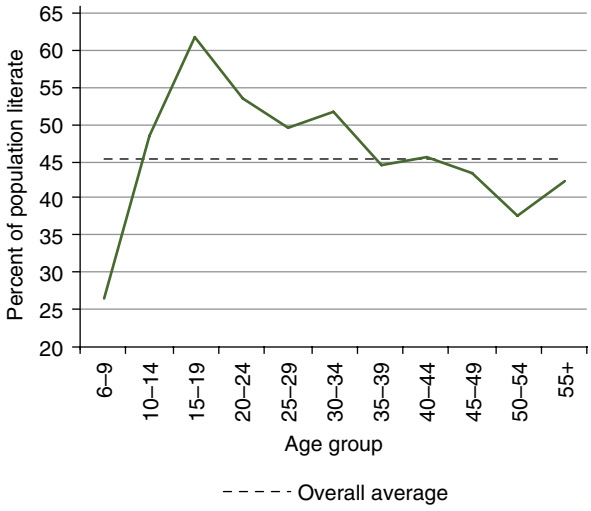
[46] The literacy rates presented in this analysis have some limitations, as they are nonfunctional and were self-reported by interviewed households.

FIGURE 1.20 ■ Cross-country comparison of literacy rate and GDP



Source: Authors' calculation from survey data and World Bank Open Data.

FIGURE 1.21 ■ Literacy by age

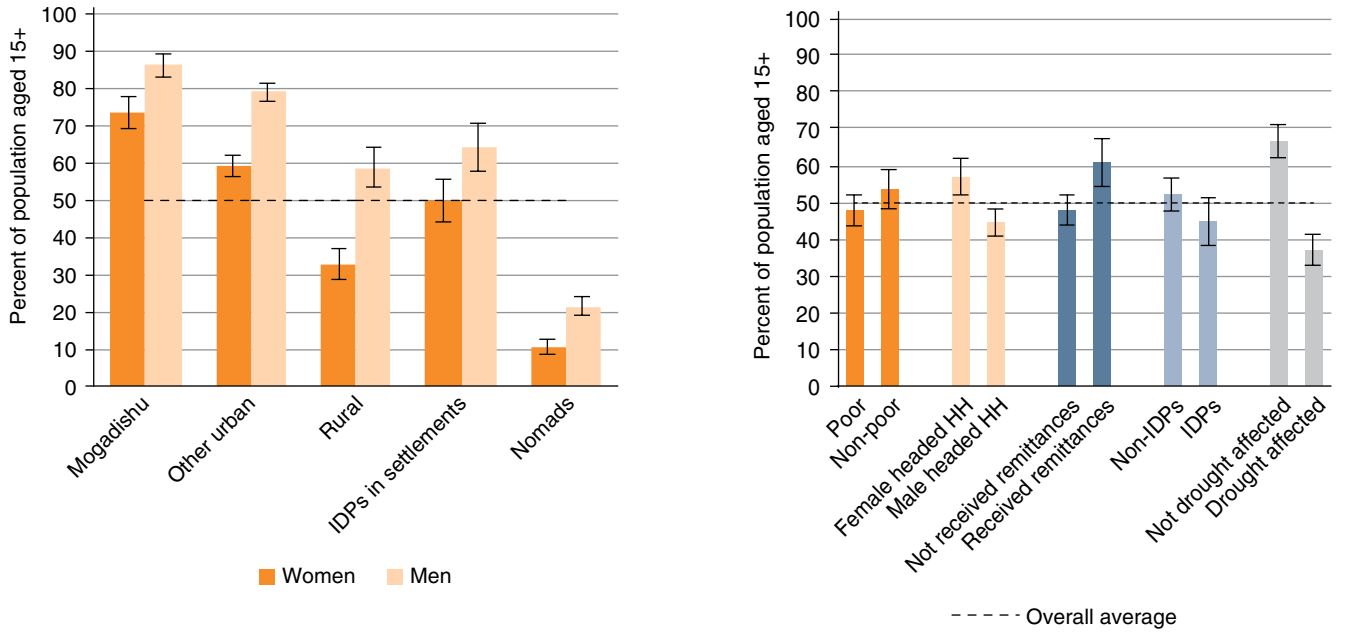


Source: Authors' calculations based on the SHFS 2017–18.

(49 percent), relative to poor households (43 percent, $p<0.05$).

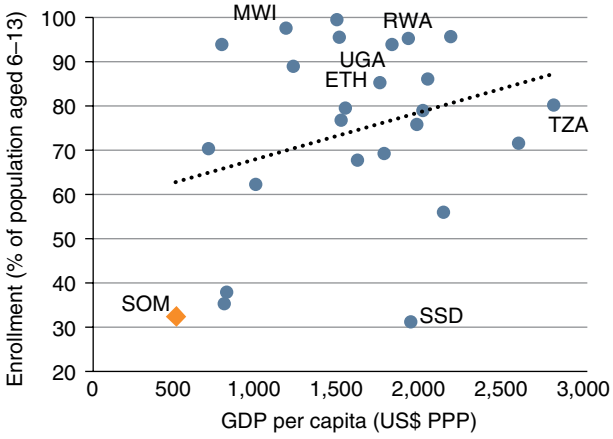
Only one-third of primary school-aged (6–13) children are enrolled, which is very low by international comparisons. In Somalia, the share of children of primary school age (6–13) enrolled in school is 33 percent, which is less than half the unweighted average of low-income Sub-Saharan countries (74 percent, Figure 1.23). For its level of GDP per capita, Somalia should have a higher net

FIGURE 1.22 Literacy rate by group (aged 15+)



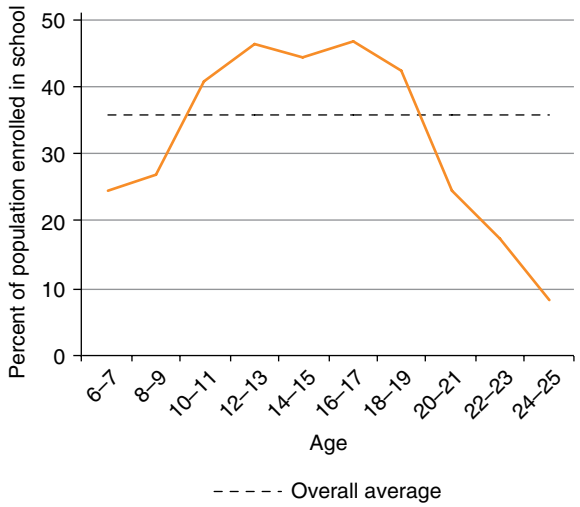
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.23 Cross-country comparison of net primary school enrollment and GDP



Source: Authors' calculation from survey data and World Bank Open Data.

FIGURE 1.24 Net school enrollment rate by age



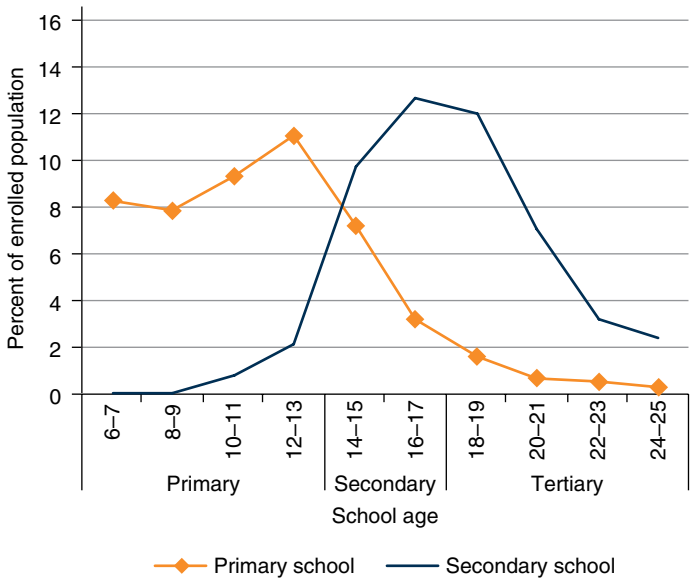
Source: Authors' calculations based on the SHFS 2017–18.

school enrollment rate, yet it has one of the lowest enrollment rates among this group of countries, only after South Sudan (Figure 1.23).[47]

[47] The net enrollment rate is the ratio of children of primary/secondary school age who are enrolled in school relative to the population of the corresponding age group.

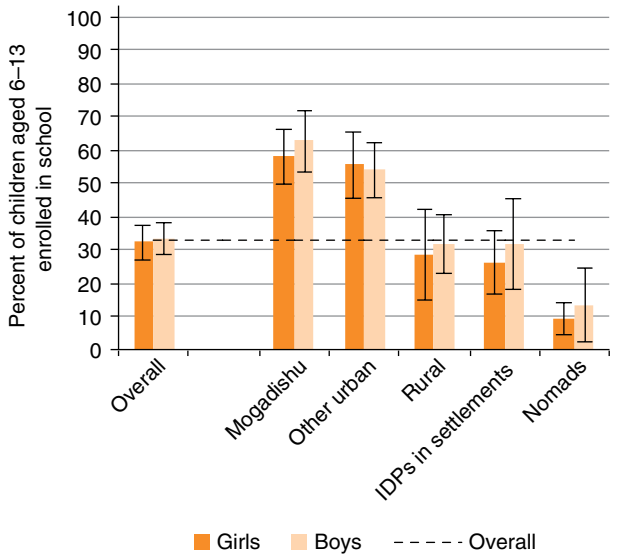
Many Somali children start primary school late since a large share of the parents think children aged 6–9 years are too young to attend school. Net enrollment rates are low for children aged 6–9 years, and range between 22 and 30 percent (Figure 1.24). For the children aged 10–19 years, the net enrollment rate increases and hovers around

FIGURE 1.25 School enrollment by level and age



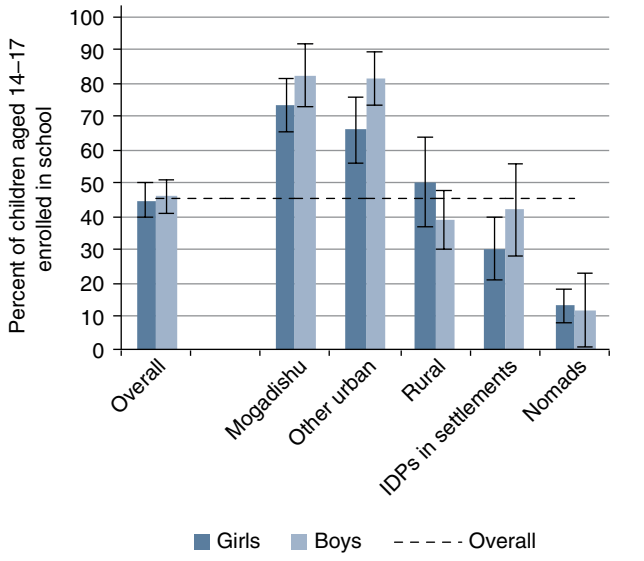
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.26 Net enrollment of primary school-aged children



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.27 Net enrollment of secondary school-aged children



Source: Authors' calculations based on the SHFS 2017–18.

40 and 47 percent. This suggests that many Somali children do not start school at age 6. Late enrollment seems to be explained by the perception of Somali parents regarding the age at which children should attend school. Seventy-three percent of parents reporting their children are not enrolled in school because they were too young were referring to a child aged between 6 and 9. As a result, 27 percent of the children enrolled in primary school are not aged 6–13 years, which corresponds to the typical age for primary school (Figure 1.25). Likewise, nearly half of the population enrolled in secondary school are older than 17. The perception of parents is not associated with the fact that some children would have to walk a long distance to school, which might not be appropriate for their age, nor with the household's own perception of safety for walking during the day. The share of households with children of primary age that responded they are too young for school is smaller among those located far (more than 30 minutes) from the closest school, compared to those that are located below the 30-minute threshold. Also, the share of households perceiving it was unsafe to walk during the day is similar among those that reported children aged 6–9 being too young for school and those who had other reasons for not attending school.

Net enrollment of primary school-aged children is largest in urban areas, yet girls and boys are equally likely to be enrolled across the country. Enrollment of children aged 6–13 is highest in urban areas (60 percent in Mogadishu and 55 percent in other urban), followed by similar rates in rural areas and IDPs (30 and 29 percent respectively, $p<0.01$ vs. Mogadishu and other urban) and finally by the nomads (12 percent, $p<0.01$ for all comparisons).

TABLE 1.4 ■ Factors associated with school enrollment

Dependent variable: Net school enrollment			
Independent variables	Overall school enrollment (1)	Enrollment for population of primary school age (2)	Enrollment for population of secondary school age (3)
Male	0.391***	0.169	0.388**
Age	N/A	0.228***	–0.069
Primary-school age (6–13)	Reference group	N/A	N/A
Secondary- school age (14–17)	0.610***	N/A	N/A
Tertiary-school age (18–25)	–0.779***	N/A	N/A
Poor household	0.166	0.294	–0.269
Household receiving remittances	0.641***	0.796***	0.457
Household headed by men	–0.224*	–0.314*	0.095
Literate household head	0.414***	0.551***	0.401*
Household expenditure on education per member enrolled	0.006**	0.006	0.007
School more than 30 minutes away	–0.600***	–0.898***	–0.617
Observations	14,646	8,247	2,467

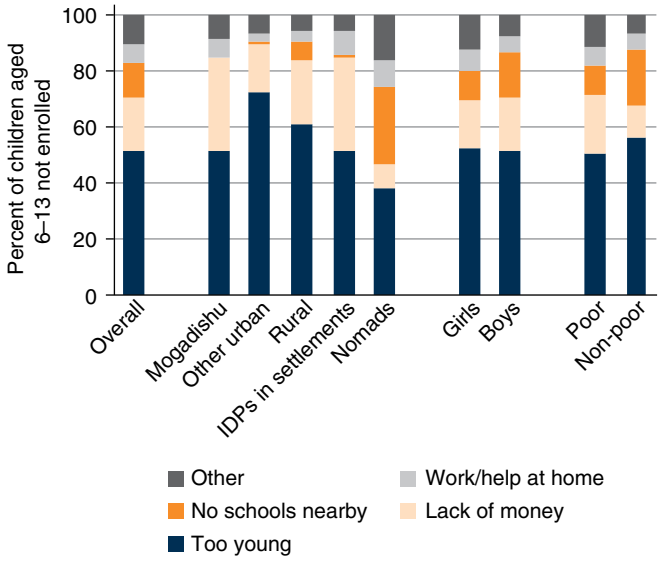
Source: Authors' calculations based on the SHFS 2017–18.
Note: N/A: not applicable. Significance level: 1% (***), 5% (**), and 10% (*). The coefficients were estimated from a logistic regression model with population and region fixed effects. The reported values correspond to the marginal effects. The poverty status was derived from total core consumption and a rescaled poverty line.

However, there are no significant differences in net enrollment between boys and girls at the national level nor for each population group (Figure 1.26). Differences in net school enrollment for the population aged 6–13 years seems to be driven by geographical disparities in terms of access and availability of education.

The geographical disparities in net enrollment are also present among secondary school-aged children (14–17 years), but the differences between boys and girls are more pronounced. The overall share of children of secondary school age (14–17) enrolled is 45 percent (Figure 1.27). Regional differences are large as secondary school enrollment ranges from 12 to 77 percent. Net enrollment is highest in urban areas (77 percent in Mogadishu and 75 percent in other urban), followed by similar rates in rural areas and IDPs (44 and 36 percent respectively, $p<0.01$ vs. Mogadishu and other urban) and finally by nomads (12 percent, $p<0.01$ for all comparisons). Moreover, at this age girls are less likely to enroll in school compared to boys, after controlling for regional effects, age, and other factors associated with school enrollment ($p<0.01$ in Table 1.4). In other urban areas, where net enrollment is highest, there is a gender gap in school enrollment of 15 percentage points (81 percent for boys vs. 66 percent for girls). The nomads with the lowest net enrollment rates are at disadvantage, and together with the girls face the biggest challenges. Policy efforts should aim to increase enrollment rates while considering the disparities and needs of different vulnerable groups.

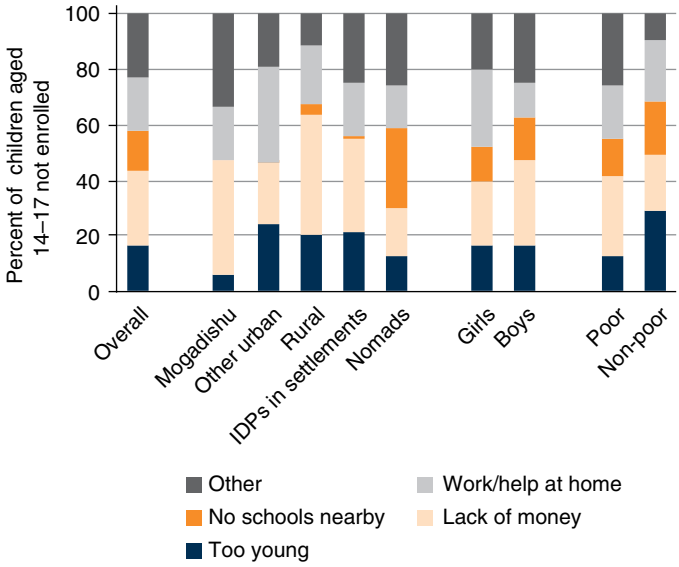
At age 14 to 17, the main reason for boys for not attending school is the lack of money and for girls it is having to work or help at home. The reasons for not attending school vary with the age and gender of children. For those of primary

FIGURE 1.28 ■ Reasons for not attending school for children of primary age (6–13)



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.29 ■ Reasons for not attending school for children of secondary age (14–17)



Source: Authors' calculations based on the SHFS 2017–18.

school age, the main reason given by the parents is that children are too young (52 percent), followed by lack of money (18 percent). The pattern is similar for boys and girls (Figure 1.28) as well as among the population in Mogadishu, other urban and rural areas, and IDP settlements. Yet, nomadic households reported the lack of schools nearby as the second largest issue. For children of secondary school age (14–17 years), the main reason is the lack of resources (27 percent), followed by others, and having to work or help at home (19 percent).[48] By the age of 14–17, girls are more likely to be working or helping at home (Figure 1.29) and not attending school, compared to boys (15 percentage point difference, p<0.01).

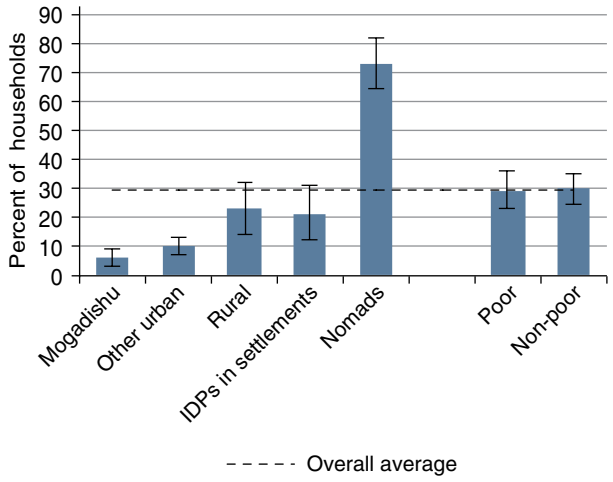
School enrollment is associated with the literacy of the household head in Somalia. Education is a key tool for increasing the levels of welfare and helping to break the poverty cycle. In Somalia, net enrollment is associated with the educational level of older generations, as school enrollment for the population aged 6–25 years is more likely in households with a literate household head, after controlling for regional effects, age, gender, and other factors associated with school enrollment (p<0.01 in Table 1.4). This relationship is robust as the same result is found for children of primary school age (p<0.01) and those of secondary school age (p<0.1). Increasing access to education for children and youth will allow them to achieve productive opportunities in their adult life and enhance their consumption levels. This challenge will continue to grow, given the demographic structure of Somalia and its overall young population.

Distance from schools rather than the costs of schooling affects the enrollment of children. The distance to school and the cost from sending children to school are important factors influencing this decision. For 1 out 3 Somali households, schools are at least 30 minutes walking distance (Figure 1.30), and they are not far for urban households as only 6 to 10 percent of them are beyond the 30-minute threshold, compared to 73 percent of nomadic households.[49] Being more than 30 minutes away from school is negatively associated with enrollment for primary school-aged children and the overall enrolled population (p<0.01, Table 1.4). Another explanation for the low enrollment

[48] Other includes too old, the lack of documents to enroll, that parents do not understand how to enroll their children, ill or sick, disabled, pregnant, insecurity, poor quality of schools, and other not specified reasons.

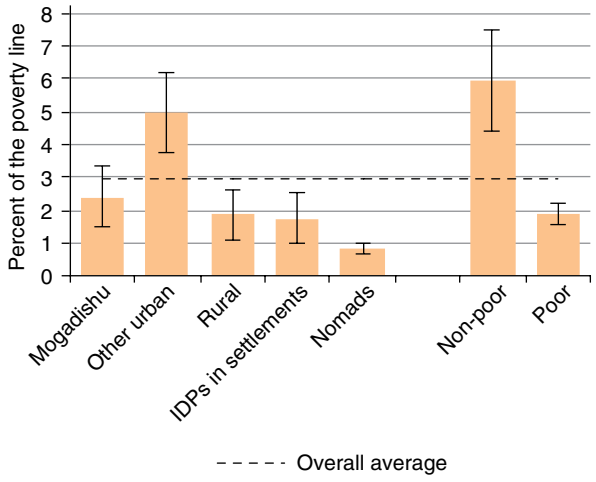
[49] Corresponds to how long it usually takes to walk (one way) to the closest school.

FIGURE 1.30 ■ Households more than 30 minutes away from the nearest school



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.31 ■ Average household expenditure on education per member enrolled

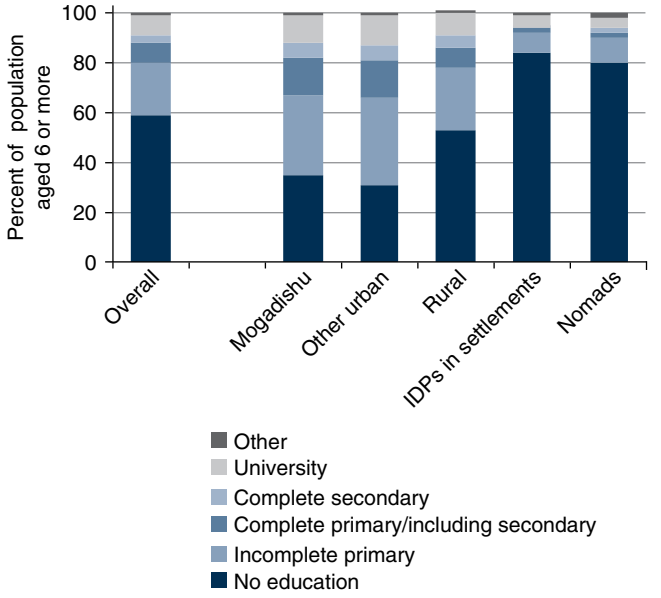


Source: Authors' calculations based on the SHFS 2017–18.

rates is the cost associated with sending the children to school. The poor are twice as likely to report lack of resources as the main reason for not sending their children to primary and secondary school ($p<0.01$). On average, households spend around 3 percent of the poverty line on education per household member enrolled (e.g., tuition, fees, books, and uniforms) (Figure 1.31).[50] These costs seem affordable since they represent a small fraction of the poverty line. Expenditure on education is weakly correlated with enrollment and is only significant for the overall enrollment rate ($p<0.05$) but not for those of primary or secondary age. Efforts aimed at increasing school enrollment should address the barriers specific to each group; for nomads the availability of schools, in rural areas and IDPs both availability and accessibility in terms of costs, while for urban areas one needs to better analyze the reason for prohibitive costs.

Gender and regional disparities in access to education are reproduced in educational outcomes of the Somali population. Low levels of school enrollment are associated with low levels of educational attainment. Overall, 60 percent of the Somalis aged six years or more do not have any formal education, 21 percent reached primary

FIGURE 1.32 ■ Educational level

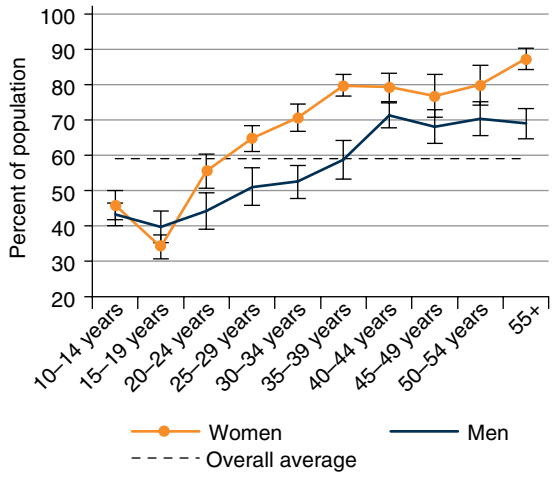


Source: Authors' calculations based on the SHFS 2017–18.

but did not complete the level and only 7 percent completed primary but not secondary (Figure 1.32). The share of population without formal education in rural areas is 1.6 times higher than in urban areas ($p<0.01$), 2.5 and 2.6 times higher for nomads and IDPs in settlements ($p<0.01$ respectively), compared to the same group of urban population. Also, not having formal education is more likely for women compared to men (Figure 1.33).

[50] Corresponds to educational expenses in tuition, fees, stationary, books, school uniforms, and other expenses excluding school meals. It does not include transportation costs, meals, and other associated costs from sending the children to school.

FIGURE 1.33 ■ Population without formal education



Source: Authors' calculations based on the SHFS 2017–18.

There are no significant differences between poor and non-poor population. Yet, not having education is more likely for those living in a household that did not receive remittances (62 percent vs. 45 percent, p<0.01) and for households that live in IDP settlements or outside these settlements but were displaced (88 percent vs. 46 percent, p<0.01). The results are significant after controlling for regional differences, and personal and household characteristics (p<0.05). In urban areas where access to education is more widespread, 11 percent of the population aged 15 or more were previously enrolled but did not complete the primary level. While access is still a big challenge for most Somalis and a crucial first step, other policies will have to be considered in urban areas to reduce the dropout rates and increase the levels of educational attainment in primary and secondary levels.

Some improvements in educational outcomes can be seen across generations. Despite large gender and geographical disparities in terms of access and availability of education, younger generations tend to have better educational outcomes. Not having formal education is more likely for the population aged 40 years or more (Figure 1.33). Sixty-three percent of Somalis aged 15–19 have some formal education compared to 26 percent of those aged 50–54. In line with this, younger generations are often more literate. Fifty-two percent of Somalis aged 30–34 are literate, while only 38 percent of those aged 50–54 are literate. The government should try to explore and learn from the drivers behind the improvements seen in younger generations, to ultimately inform policies aimed at achieving better educational outcomes for the Somali population.

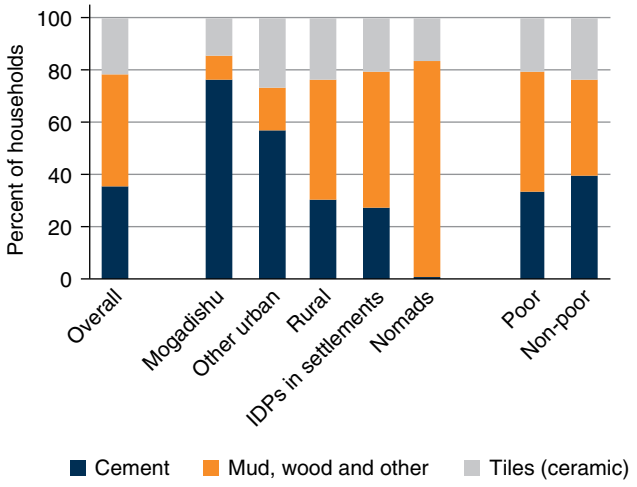
Quality of dwellings and access to services

Poor households are more likely to have a floor of mud or wood, less likely to have a roof of metal sheets, and equally likely to use a charcoal or wood stove. Most Somali households have a floor of mud, wood, or other material (43 percent), a roof of metal sheets (57 percent) and use a charcoal stove (47 percent) or woodstove (20 percent, Figure 1.36). A floor of cement is more common in urban areas, while for nomads and IDPs in settlements a floor of mud, wood, or other material (Figure 1.34). The characteristics of the dwellings are different between poor and non-poor households: 46 percent of the poor have a roof of mud, wood, or other material, compared to 37 percent of the non-poor households across Somalia (p<0.05). The poor tend to have a roof made of *harar, raar,* plastic sheets, and other material (p<0.01), while the non-poor households tend to have a roof of metal sheets (p<0.05, Figure 1.35). This information on dwelling characteristics can be used to target a social protection program, by selecting beneficiaries based on these easily identifiable features.

Around 5 of 10 Somali households have access to improved sanitation, which is less likely for the poor and nomadic households. Sanitation is critical for the health of the members of the household, as poor hygiene conditions can lead to lower productivity in work. Forty-six percent of Somali households have access to improved sanitation (Figure 1.37).[51] For its level of GDP per capita, Somalia has high access to improved sanitation relative to other low-income Sub-Saharan African countries. Its share of households with access to improved sanitation is comparable to countries with a GDP per capita that is 2–3 times higher (Figure 1.39). The share of households with access is highest in urban areas (Mogadishu 69 percent and

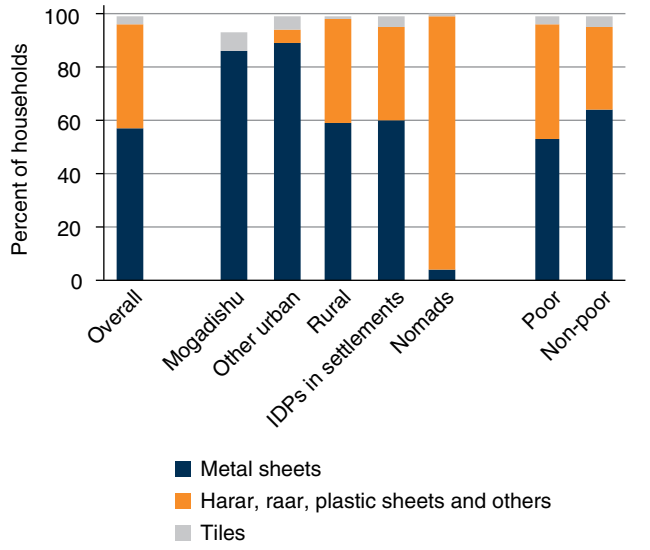
[51] Access to improved sanitation refers to those facilities that are not shared, and are likely to ensure hygienic separation of human excreta from human contact. They include flush/pour flush (to piped sewer system, septic tank, pit latrine), ventilated improved pit (VIP) latrine, pit latrine with slab, and composting toilet.

FIGURE 1.34 Type of floor



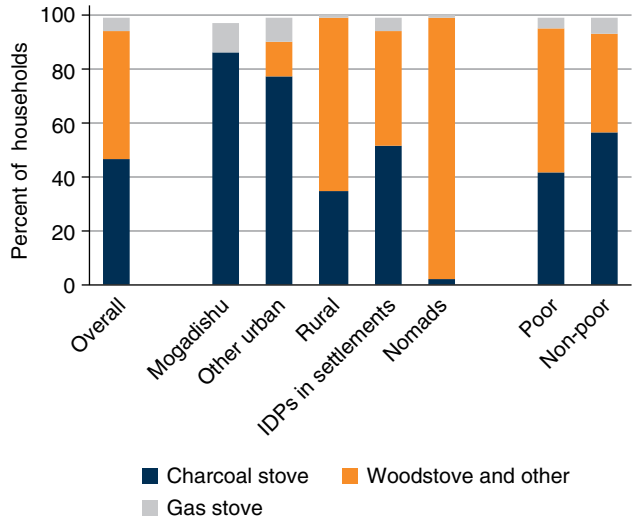
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.35 Type of roof



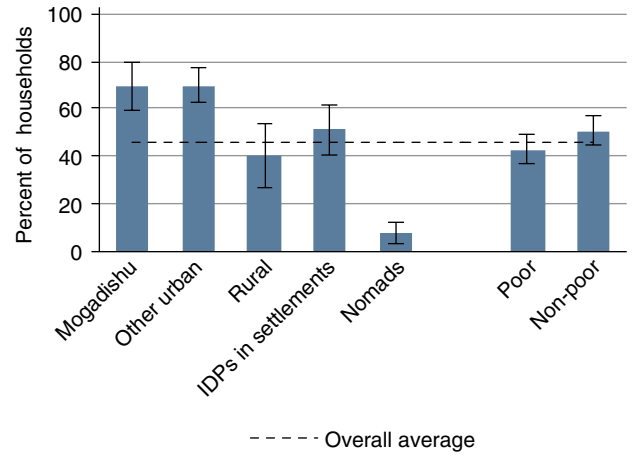
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.36 Type of cooking source



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.37 Access to improved sanitation



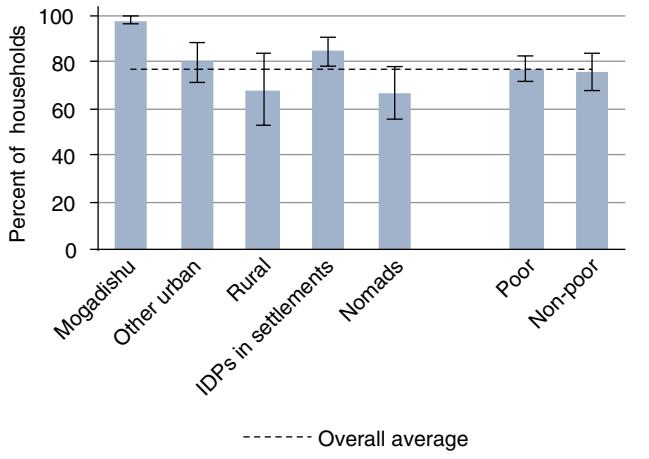
Source: Authors' calculations based on the SHFS 2017–18.

other urban 70 percent), followed by rural areas (40 percent, p<0.01 vs. urban areas) and IDPs in settlements (51 percent, at least p<0.05 vs. Mogadishu and other urban), and lowest for the nomadic population (8 percent, p<0.01). IDPs in settlements tend to have a different range of services and thus they do not rank lowest. Poor households are slightly less likely to have access to improved sanitation (43 percent) compared to non-poor households (51 percent, p<0.1).

Almost 8 of 10 households have access to improved water sources, but spatial differences are also large. Inadequate sources for improved drinking water increase the water-borne illnesses, which is particularly concerning for children given the impact health issues can have on their educational attainment and learning process.[52] Seventy-seven percent of Somali households have access

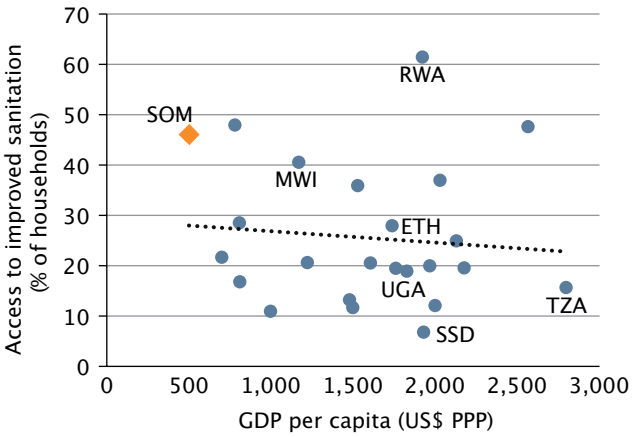
[52] HM Government (2014).

FIGURE 1.38 ■ Access to improved water sources



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 1.39 ■ Cross-country comparison of access to improved sanitation and GDP

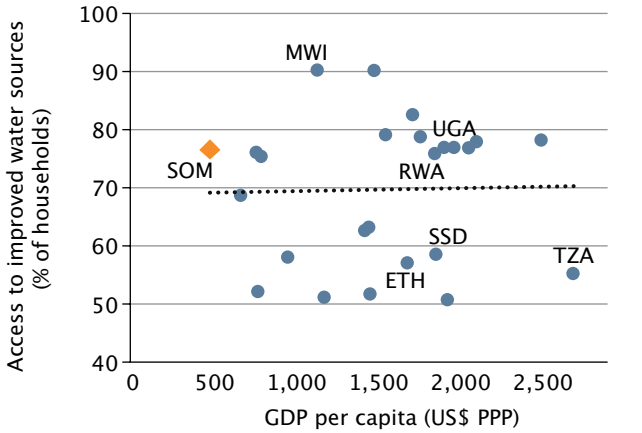


Source: Authors' calculations based on the SHFS 2017–18 and World Bank Open Data.

to improved drinking water sources (Figure 1.38).[53] Somalia is slightly above average in terms of access, after controlling for GDP per capita, compared to other low-income Sub-Saharan African countries (Figure 1.40). Access is almost universal for households in Mogadishu (98 percent, p<0.01).

[53] Access to an improved water source refers to using an improved drinking water source, which includes piped water on premises (piped household water connection located inside the user's dwelling, plot, or yard), and other improved drinking water sources (public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection).

FIGURE 1.40 ■ Cross-country comparison of access to improved water sources and GDP

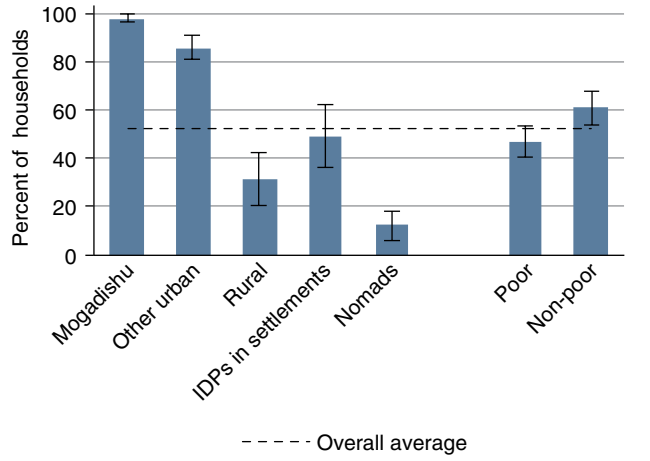


Source: Authors' calculations based on the SHFS 2017–18 and World Bank Open Data.

The share of households with improved drinking water sources is similar between other urban households and those living in IDP settlements (80 and 85 percent respectively), and between rural households and nomads (68 and 67 percent respectively). Compared to other urban areas and IDP settlements, access to improved water sources is lowest for the nomads (p<0.1 and p<0.01 respectively). Moreover, there are no significant differences between the share of poor and non-poor households with access. Variation in access seems to be determined by the location of the household rather than by their poverty status.

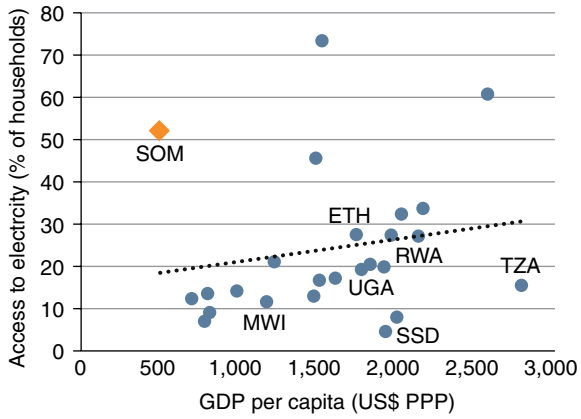
Half of the households have access to electricity, but access is concentrated among urban residents and the non-poor. Fifty-two percent of the households have electricity (Figure 1.41). In line with the access to other services, Somalia has a relatively high share of households with access to electricity for its level of GDP per capita. Countries in Sub-Saharan Africa with slightly higher GDPs per capita have less than 15 percent of their households with access to electricity (Figure 1.42). Access to this service also varies considerably across population, with almost universal coverage in Mogadishu (98 percent), followed by other urban areas (p<0.01 vs. Mogadishu), then IDP settlements (49 percent), rural areas (32 percent, p<0.05 vs. IDP settlements), and finally by nomads (12 percent, p<0.01 vs. rural areas). Moreover, poverty is correlated with access to electricity. Overall, 47 percent of poor households have access to electricity compared to 61 percent of non-poor

FIGURE 1.41 Access to electricity



Source: Authors' calculation based on the SHFS 2017–18.

FIGURE 1.42 Cross-country comparison of access to electricity and GDP

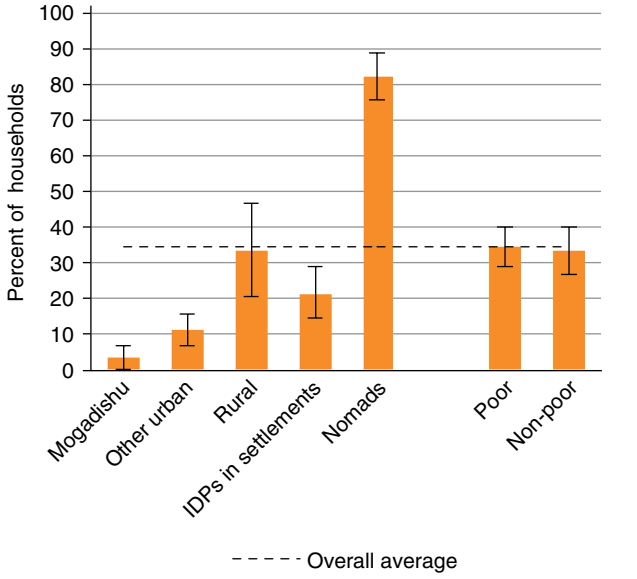


Source: Authors' calculations based on the SHFS 2017–18 and World Bank Open Data.

households (p<0.01). The difference between these two groups of households is also present in other urban areas (with a 7-percentage point difference, p<0.05), rural areas (18 percentage point difference, p<0.05) and IDPs in settlements (30 percentage points difference p<0.01). Nomadic poor and non-poor households have a similar share of households with access to electricity.

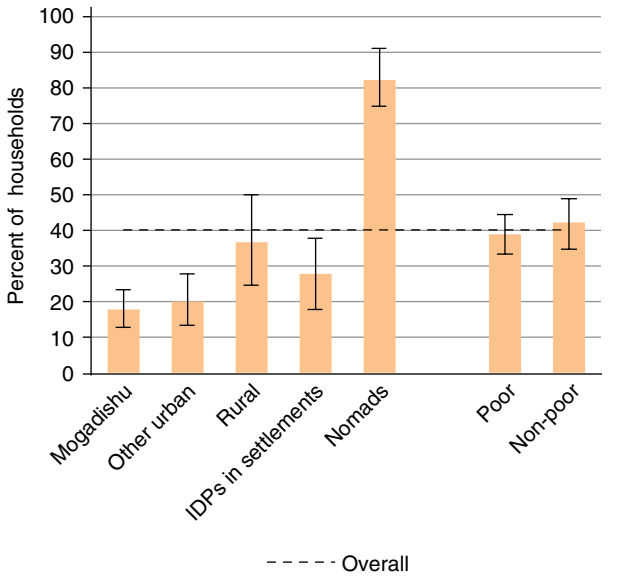
Markets and health clinics are far (more than 30 minutes away) for 34 to 40 percent of Somali households and for most of the nomads. Thirty-four percent of the Somali households are far from the closest market as it takes more than

FIGURE 1.43 Households more than 30 minutes away from the nearest market



Source: Authors' calculation based on the SHFS 2017–18.

FIGURE 1.44 Households more than 30 minutes away from the nearest health clinic



Source: Authors' calculation based on the SHFS 2017–18.

30 minutes to walk there (Figure 1.43).[54] A similar share (40 percent) are far from the closest health clinic or center (Figure 1.44). Due to the pastoralist

[54] Corresponds to how long it usually takes to walk one way.

lifestyle, 8 in 10 nomadic households walk at least 30 minutes to the closest food market (82 percent) and health clinic (83 percent), respectively.[55] At the national level, there are no differences between the share of poor and non-poor households located above the 30-minute threshold from a food market or health clinic. The accessibility of markets and health services seems to be associated with spatial differences and not the poverty status of households.

Multidimensional deprivations

Poverty is manifested along various dimensions beyond the monetary component as almost 9 of 10 Somali households are deprived in multiple dimensions. Due to the lack of data, the Human Development Index has not been constructed for Somalia.[56] However, the United Nations Development Programme (UNDP) estimates life expectancy at birth to be 56 years in 2015, which is similar to the life expectancy of countries that rank 178–180 (out of 188) in the Human Development Index. Deprivation of households is considered along five dimensions: education, water, sanitation, electricity, and monetary poverty (Box 6). Overall, 72 percent of households are deprived in two or more of these dimensions. Forty-three percent of households in Mogadishu and 47 percent of other urban areas are deprived in at least two dimensions, compared to 78 percent of IDPs in settlements, 96 percent of rural households and all the nomadic population (Figure 1.45). Between 5 and 11 percent of households are deprived in all the five dimensions among rural and IDPs in settlements. In addition, Wave 2 of the SHFS collected video testimonials from households that volunteered. Hundreds of video testimonials were recorded during fieldwork, capturing the voice of the world's least represented people and giving a face to the data. They have subtitles in English and can be accessed on the Somali Pulse website (Box 1).

Monetary poor households are more deprived than non-poor in many nonmonetary dimensions except water. The educational dimension considers school enrollment of children and the educational level of adults in the household. Other dimensions include access to improved sources of drinking water, access to improved sanitation, and access to electricity (Box 6). Sixty percent of households are deprived in education and 23 percent in improved drinking water, 56 percent in improved sanitation, and 48 percent in electricity. For all the dimensions, the highest levels of deprivations are found among the nomadic population and the lowest among urban residents. Also, poor households are slightly more deprived than non-poor ones in the educational dimension ($p<0.1$, Figure A.10).

Deprivation in multiple dimensions is consistent with monetary poverty. The average number of deprivations—excluding the monetary component—for households classified as monetary poor is 2.0, compared to 1.7 of non-poor ones ($p<0.01$). Monetary poverty is correlated with multiple deprivations, since around 40 percent of poor households are also deprived in at least one of the other four dimensions: education, water, sanitation, and electricity. For other urban areas, multiple deprivations are consistent with lower monetary poverty and higher access to services than in other regions. When considering other dimensions, IDPs in settlements do not rank last, as with monetary poverty, due to a larger share of households with access to services in IDP settlements. Contrary to this, nomads are more deprived beyond the monetary dimension since they lack access to most of these key services.

Multiple deprivations are correlated with the literacy and gender of the household head. The characterization of the monetary poor is similar to that of households deprived in various dimensions. A larger household size and age dependency ratio is associated with households deprived in education and the total number of deprivations, even after controlling for regional differences and other household characteristics (Table 1.5). Multiple deprivations are also more likely to affect households headed by men in every dimension except water dimension, as well as their total number of deprivations. Households headed by a literate member are less likely to be deprived in every dimension ($p<0.01$). The strong gender and educational effect of household heads on multiple deprivations confirms the existing inequalities among

[55] The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) define a water source 30 minutes or further as limited (see https://washdata.org/monitoring/drinking-water). Also, several studies like Fisseha, et al. (2017) and Dar and Khan (2011) consider 30 minutes as the cutoff for services being too far.

[56] http://hdr.undp.org/en/composite/HDI

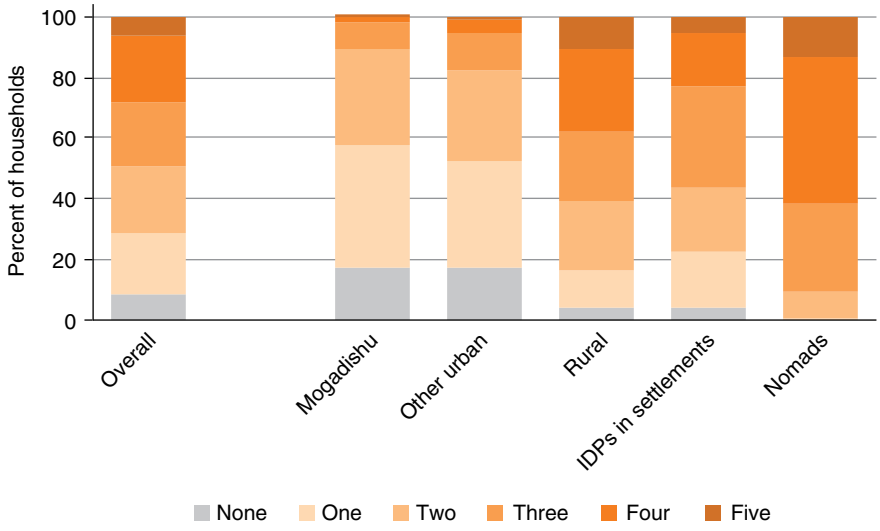
Box 6 ■ Multiple deprivations

Nonmonetary dimensions of poverty are considered to present a comprehensive profiling of welfare conditions. Poverty has more than one dimension and therefore households are assessed along several types of deprivations, beyond their monetary poverty status, in which a household is classified as poor if their daily per capita consumption expenditure is lower than the international poverty line of US$1.90 at 2011 PPP.

The education of children and adults in the household is another key dimension in which households can be deprived. Education is crucial to improve welfare conditions due to its associated externalities and a higher expected income. Households are considered deprived if (i) at least one child (aged 6–14 years) does not attend school, or if (ii) all the adults (aged 15 years or more) in the household have no education.

The other dimensions include access to improved water, improved sanitation and electricity. Access to improved sources of drinking water & sanitation are relevant for health outcomes, educational attainment and productive activities. If the household does not have access to improved sanitation and improved sources of drinking water, it's considered deprived in the particular dimension.

FIGURE 1.45 ■ Number of multidimensional deprivations



Source: Authors' calculation based on the SHFS 2017–18.

the Somali population that need to be considered in poverty reduction efforts.

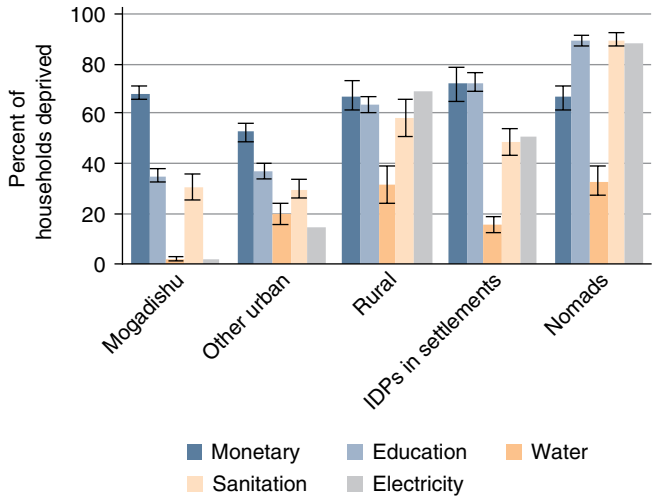
Nomadic households have more nonmonetary deprivations than other Somali households. Nomadic households have a high incidence of deprivation in improved sanitation (89.4 percent), education (88.7 percent), and access to electricity (87.7 percent) (Figure 1.46). Rural households and IDPs in settlements also experience high levels of deprivation in these dimensions, while urban residents have better access. Further, Mogadishu is least deprived in access to improved drinking water. Only 2 percent of households in Mogadishu do not have access to water, while 20 percent of households in other urban areas do not have access. Poor households are more deprived in nonmonetary dimensions than the non-poor (Figure 1.47). While 65 percent of the poor households are deprived in education, only 52.5 percent of the non-poor households are deprived. Poor households are 14 percentage points more deprived in access to electricity than the non-poor households.

TABLE 1.5 ■ Multiple deprivations and demographic attributes of poor households

Dependent variable: Multiple deprivation						
Independent variables	Education (1)	Water (2)	Sanitation (3)	Electricity (4)	Total no. of deprivations excluding monetary poverty (5)	Total no. of deprivations including monetary poverty (6)
Household size	0.262***	–0.106**	0.066	–0.055	0.069*	0.227***
Age dependency ratio	0.619***	–0.057	0.059	0.261**	0.267***	0.254***
Household headed by men	0.462**	0.171	0.419**	0.451**	0.476***	0.493***
Age of household head	0.001	0	0.006	0.008	0.004	0.003
Literate household head	–0.866***	–0.511**	–0.502***	–1.03***	–0.915***	–0.859***
Observations	6,050	6,050	6,050	6,050	6,050	6,050

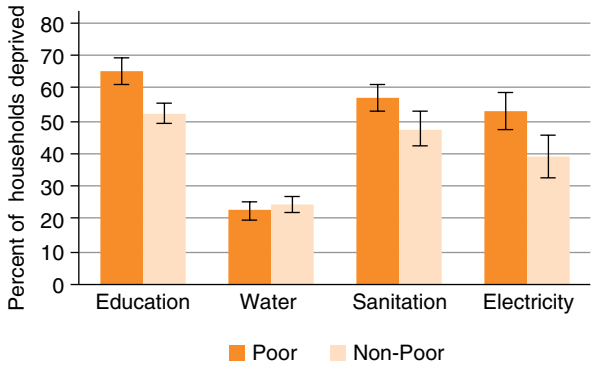
Source: Authors' calculation based on the SHFS 2017-18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Columns 1 to 3 refers to logistic regressions, while for column 4 and 5 to ordered logistic regressions. The coefficients correspond to the marginal effects and include population and region fixed effects.

FIGURE 1.46 ■ Deprivations in various dimensions



Source: Authors' calculation based on the SHFS 2017–18.

FIGURE 1.47 ■ Nonmonetary deprivations by poverty status



Source: Authors' calculation based on the SHFS 2017–18.

CHAPTER 2

Spatial Variation in Living Standards

KEY MESSAGES

Urban areas generally provide higher standards of living and better access to services than rural areas except for access to land and housing. Poverty incidence across urban areas is lower at 64 percent compared to the overall average of 69 percent, 72 percent in rural areas, and 76 percent among the IDPs. The only exception is Mogadishu, where poverty is higher than the overall average and is similar to rural areas. Food poverty is also lower in urban areas. Compared to the overall average of 49 percent and rural areas at 58 percent, urban areas fare better on average at 41 percent.

Cities consistently provide better access to services and more stable income sources than rural areas except for land and housing. Access to electricity, water, improved sanitation, health, education, improved housing, and the Internet, is consistently higher in urban areas irrespective of people's levels of poverty or whether they are IDP or female-headed households. The only area where rural areas fare better than urban areas is the tenure of land and housing. Due to land scarcity and high land values in urban areas, urban households are less likely to own their land and houses. Somali cities also provide more wage labor employment and better access to remittances. Fifty-two percent of the urban residents rely on wage labor as their main income source, except for Jubbaland, while 42 percent of the rural residents rely on agriculture and family businesses. Since urban wage labor is not climate dependent and provides a more stable stream of income, it is less risky than agriculture or family businesses. Urban households also have better access to remittances from abroad and better opportunities to borrow money.

The relatively better conditions in urban areas compared to rural areas, however, should not mask the low base cities are at. The situation is exacerbated by the influx of the IDPs. Even though urban areas perform relatively better in poverty and access to services than rural areas, Somali cities still struggle with high absolute poverty (64 percent), nonmonetary poverty (41 percent), hunger and low levels of access to services. With many new IDPs moving into cities, the pressure on land, housing, and services is increasing. In many cases, urban centers have ben unable to cope with the constant and large influxes of the displaced, and have been unable to keep up with the provision of land, housing and basic services that are acutely needed.

Significant interurban regional disparities exist as well, which are often greater than the urban-rural divide. While urban areas fare better than rural areas on average, Mogadishu, NE urban, and NW urban provide better access to services compared to Baidoa, Kismayo, and Central urban. Poverty is higher in Mogadishu than all urban areas except for Baidoa, but access to basic services such as electricity, water, sanitation, improved housing, education, and health is better in Mogadishu than in other urban areas. Kismayo has the lowest poverty incidence and poverty gap, yet fares poorly on other services. Strikingly, access to water, literacy, enrollment and employment are significantly better in IDP settlements than in Kismayo. Baidoa has high levels of monetary and nonmonetary poverty and correspondingly low levels of access to services. NE and NW urban fare relatively well in access to services, while Central urban lags. The likely explanation is that Mogadishu enjoys its economic capital and more assistance given its status as the capital city. North East and North West are more developed because they have been relatively free of violent conflict, public institutions are more established, and more aid has been flown in. Kismayo, Baidoa, and Central urban likely suffer from lower levels of development as they have only recently been liberated from Al-Shabab, and their subnational governments are still nascent.

IDPs in urban areas fare better than rural IDPs in terms of access to services, but still lag behind other non-IDP households. Within cities, urban IDPs that live outside of IDP settlements (non-settlement IDPs) fare as well as IDPs that live in IDP settlements (settlement IDPs), but both groups are better-off than rural non-settlement IDPs. Thus, irrespective of whether IDPs live in IDP settlements or not, so long as they live in urban areas, there is no significant difference in their standards of living. On the other hand, urban non-settlement IDPs are consistently worse off than other urban households. Urban non-settlement IDPs have less access to electricity, piped

—continued

KEY MESSAGES—continued

water, improved sanitation, improved housing, dwelling ownership, and the Internet compared to other non-IDP urban households. Moreover, urban non-settlement IDPs suffer from lower enrollment, literacy, and employment rates. They also tend to live further away from primary schools and food markets. Thus, urban non-settlement IDPs are worse off than the rest of the urban population as they have likely become deprived of their former livelihoods, assets, and social networks due to displacement and they have more limited access to services. Moreover, they are at a disadvantage in levels of education, which may prevent them from finding good jobs.

To ensure Somali cities can reap the benefits of urbanization, the government needs to invest in better land management and coordinated infrastructure investments, which are the fundamental elements of cities. For Somalia to reap the benefits of urbanization, the government needs to invest in two core elements of cities—land and coordinated infrastructure investments. The fundamental element in making Somali cities work is to establish a proper land administration system and effective land use planning. This will allow for a more controlled growth of the city and provision of security of tenure to the IDPs, many of whom prefer to settle in cities. The other important element is to make coordinated infrastructure investments—rather than ad hoc single sector interventions—aligned with the land use plan to take advantage of the synergy across different types of infrastructure.

Somalia's urban population is growing rapidly partly because of significant forced migration into urban areas caused by protracted conflicts, insecurity, and cyclical natural disasters. The current urban population is estimated at around 5.2 million people (42 percent) with a growth rate of around 4 percent per annum.[57] If the current trend persists, by 2030, Somalia will add another 4.5 million urban residents to its already constrained urban environment, nearly doubling current numbers.[58]

If managed well, urbanization can help manage risks and contribute to stability in Somalia. Yet, as urban areas fail to keep pace with the rapid urbanization, Somalia's cities are becoming more fragile. With a greater concentration of people, capital, and assets, cities are better equipped to provide anonymity and better access to security, services, and jobs than rural areas. Somali cities are growing rapidly as they serve as a safe haven for people who seek refuge. Yet, they have not been able to cope with the increased demands for land, housing, basic services, and jobs. As a result, Somali cities are expanding in a haphazard manner and slums are growing. Large influxes of people are also disrupting the social cohesion. Indeed, Mogadishu and Kismayo are considered two of the world's five most fragile cities in the world.[59]

This chapter seeks to examine the spatial variation in standards of living and inform how the government can better reap the benefits of urbanization in Somalia. The data compare the various aspects of living standards between urban and rural areas, the regional variation across different urban areas, and among different urban population groups.

Urban-rural comparison

Monetary and nonmonetary poverty

Poverty incidence is lower in urban areas compared to rural areas, except for Mogadishu, and North West has the largest intra-regional urban-rural divide. The poverty incidence across urban areas (including Mogadishu that has a poverty incidence of 72 percent) is lower at 64 percent compared to the overall average of 69 percent, 72 percent in rural areas, and 76 percent among the IDPs ($p<0.10$ vs. rural areas). The intra-regional urban-rural divide is the largest in the North West region at 15 percentage points followed by the

[57] United Nations Population Fund (UNFPA) (2014).
[58] World Bank staff calculation based on UN-Habitat and CIA World Factbook.

[59] World Economic Forum (12 January 2017). "These are the Fragile Cities in the World and This Is What We Have Learned from Them". (https://www.weforum.org/agenda/2017/01/these-are-the-most-fragile-cities-in-the-world-and-this-is-what-we-have-learned-from-them/)

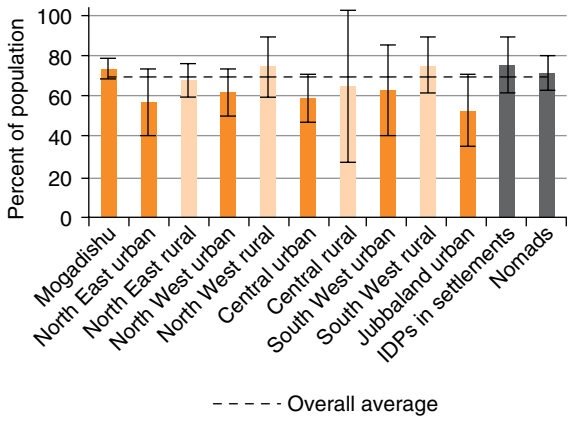
Box 7 ■ Hypotheses

Hypothesis 1: Cities provide more opportunities for the vulnerable. When there is no possibility of staying in rural areas because of conflict, drought or famine, people are likely to move to cities. Cities offer more diverse socio-economic opportunities for the poor.

Hypothesis 2: Cities lower uncertainty for the vulnerable. In addition to poverty, famine, health and safety issues, uncertainty is a major driver of concern for the most disadvantaged. Urban populations mostly enjoy a lower level of uncertainty than those living outside of the city: quality of information is higher, and security is better. Prices are more stable, there is more reliable access to food, services, dwelling tenure, easier access to remittances, and easier access to humanitarian aid.

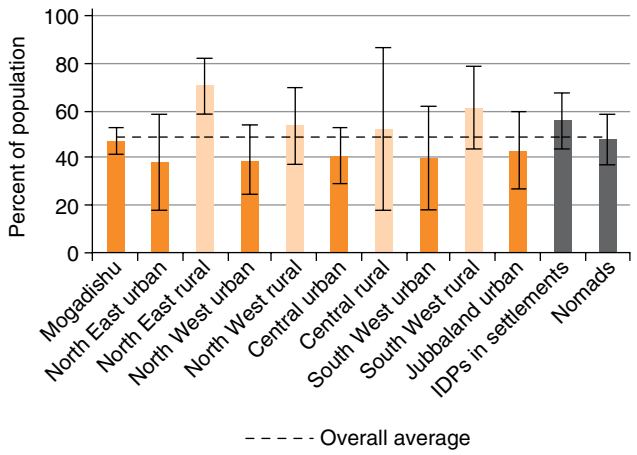
Hypothesis 3: Cities allow for risk reduction/diversification for the vulnerable. Since the city offers more options and opportunities, people do not need to rely on weather-dependent jobs such as agriculture. It is also easier to increase household income with a second (or multiple) jobs or better paying and more stable jobs. Risks of violence may be lower as security is better, the reach of government and state security would be higher, and residents can enjoy anonymity in urban areas which can improve their safety.

FIGURE 2.1 ■ Poverty incidence



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.2 ■ Food poverty incidence

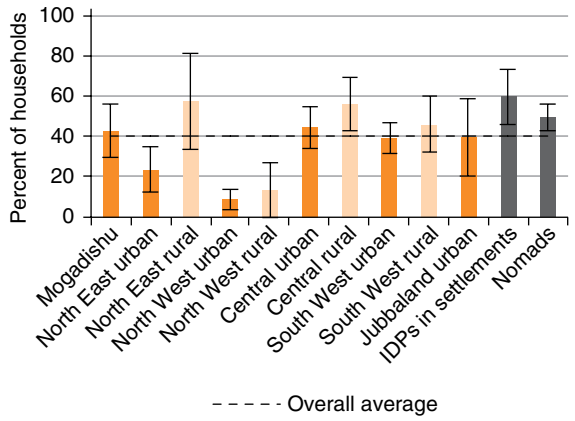


Source: Authors' calculations based on the SHFS 2017–18.

South West region at 12 percentage points. The North East region has the lowest divide at 4 percentage points. Poverty in Mogadishu, however, is higher than the overall average or in rural areas at 72 percent (Figure 2.1).

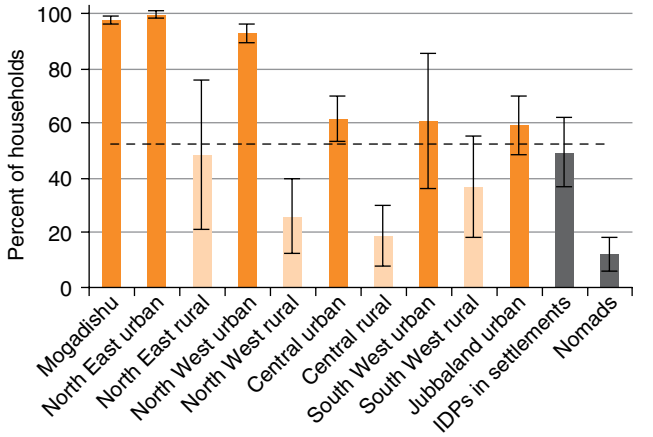
Urban areas also have lower food poverty compared to rural areas. Compared to the overall average of 49 percent and rural areas at 58 percent, urban areas fare better on average at 41 percent (Figure 2.2). Mogadishu has the highest food poverty among all the other urban areas, which corresponds to its high poverty incidence. Fewer people report being hungry in the past four weeks in urban areas compared to people in rural areas, although a significant regional disparity exists. Between 8 percent (North West urban) and 45 percent (Central urban) of the households in urban areas report having been hungry in the past four weeks (Figure 2.3) compared to between 24 percent (North West rural) and 58 percent (North East rural) among rural households. Unsurprisingly, lack of financial resources to buy food in the past week is higher in rural areas except in the North West urban. Rural households also report higher levels of difficulty in borrowing money compared to urban households to purchase food.

FIGURE 2.3 Hunger over the past four weeks



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.4 Access to electricity

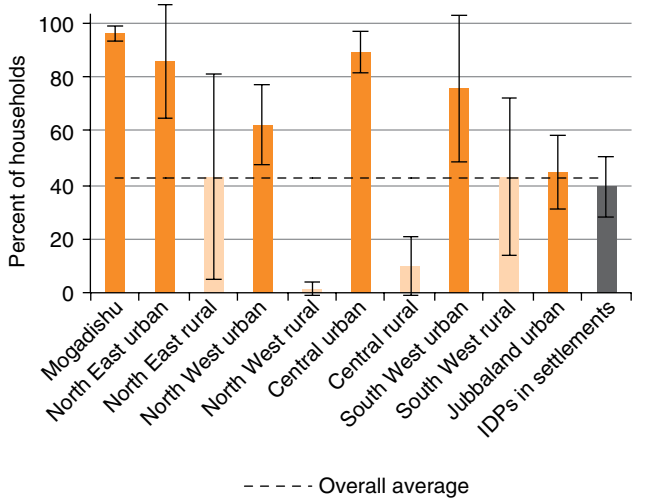


Source: Authors' calculations based on the SHFS 2017–18.

Access to services

In all regions, urban households have significantly better access to basic services compared to rural households, irrespective of their poverty status or whether they are IDPs or female-headed households. Specifically, urban households fare better in access to electricity, water, and improved sanitation than rural households. On average, 79 percent of urban households have electricity at home compared to 32 percent among rural households. Access to electricity is the highest among North East urban households (99 percent). In rural areas, access is much lower with a minimum of 19 percent in Central and a maximum of 48 percent in the North East (Figure 2.4). The urban-rural divide in access to electricity is most severe in the North West. Moreover, access to electricity is correlated with poverty, where the poor (the bottom 40 percent) have less access compared to the non-poor households (the top 60 percent).

FIGURE 2.5 Access to piped water

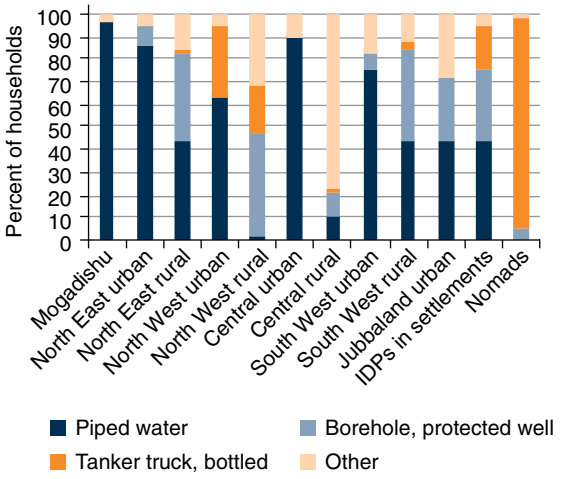


Source: Authors' calculations based on the SHFS 2017–18.

Between 45 percent (Jubbaland) and 96 percent (Mogadishu) of urban households have access to piped water at home. This is considerably higher than rural households' access, which ranges from 1 percent (North West rural) to 43 percent (South West and North West rural) (Figure 2.5). There are no significant differences between the top 60 percent and the bottom 40 percent that have access to piped water in urban areas. For both urban and rural households, the main alternatives to potable piped water are boreholes and water trucks (Figure 2.6). Sixty-seven percent of the households have access to improved sanitation in all urban areas compared to only about 39 percent of rural households (Figure 2.7). While access to improved sanitation is not correlated with the levels of poverty, urban households are more likely to have access to improved sanitation compared to other population groups.

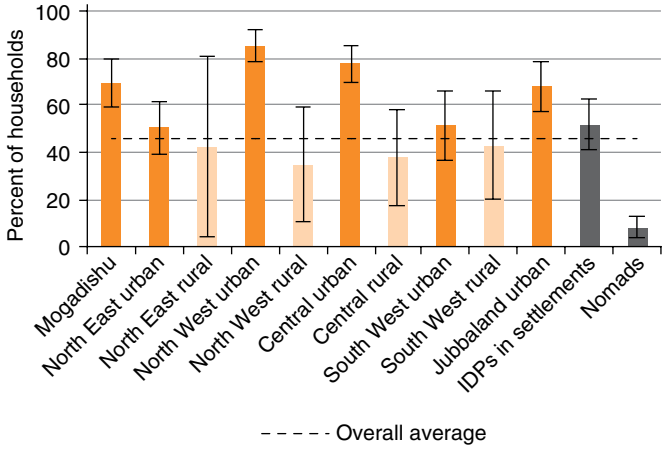
Urban households have better access to education and health than rural households although Central, South West, and Jubbaland lag behind. Literacy and enrollment rates are significantly higher among the urban households compared to the rural households. Proportion of households

FIGURE 2.6 Source of potable water



Source: Authors' calculations based on the SHFS 2017–18.

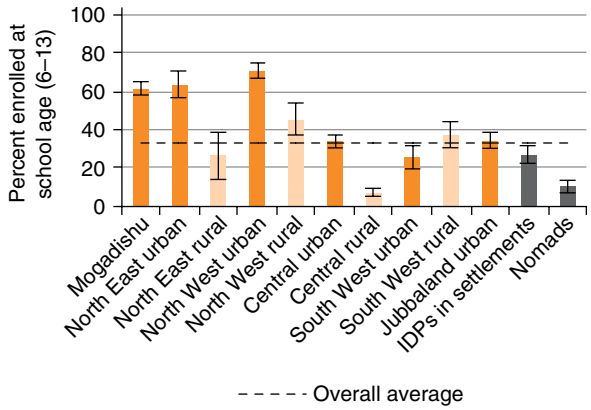
FIGURE 2.7 Access to improved sanitation



Source: Authors' calculations based on the SHFS 2017–18.

with literate household members is higher in urban areas (68 percent) than in rural areas (41 percent). On average, households with household members enrolled in school in urban area are significantly higher (54 percent) than in rural areas (32 percent). Disparities in enrollment rates, however, are large across regions as well as between urban and rural areas. The highest enrollment rate in primary education is in North East urban with 71 percent among children aged 6–13, while the lowest is 7 percent in Central rural against the overall average of 33 percent (Figure 2.8). Curiously, South West rural has a higher enrollment rate than its urban area. North

FIGURE 2.8 Primary school enrollment rate

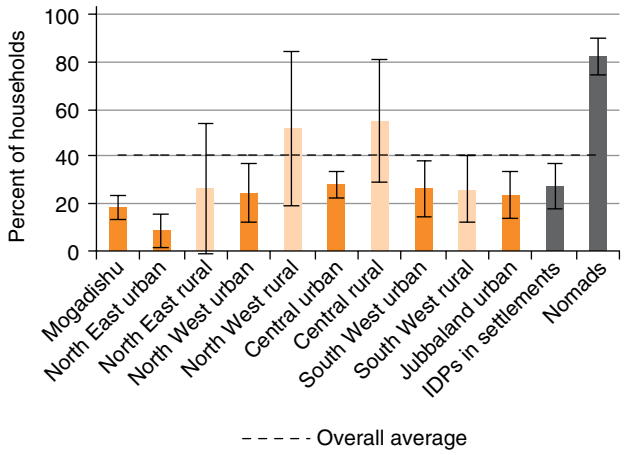


Source: Authors' calculations based on the SHFS 2017–18.

East rural, Central rural, IDPs, and nomads all fall below the overall average. Secondary school enrollment rates among children aged 14–17 show a similar picture. Average enrollment rate in urban areas is 69 percent as opposed to 46 percent in rural areas. North East urban has the highest enrollment rate of 90 percent, while the lowest is in Central rural at 14 percent. This means that to address the structural constraint of overcoming poverty, there is a need to improve educational opportunities for children, particularly in rural areas and among IDPs and nomads. While poverty does not seem to be correlated with enrollment in urban areas, belonging to the bottom 40 percent is negatively correlated with literacy rate. Access to health facilities is better in urban areas as well, where on average, 80 percent of the urban residents live within a 30-minute walk to a health facility compared to 37 percent of rural residents and 40 percent of the overall average (Figure 2.9).

Satisfaction over the quality of primary education and health services is higher in urban areas. Satisfaction over the quality of primary education is generally higher in urban areas, with the highest satisfaction level of 95 percent in Mogadishu compared to the lowest satisfaction rate of 70 percent in Central rural. Satisfaction over the quality of health facilities is marginally higher in urban areas as well, ranging from 81 percent (Central urban) to 92 percent, compared to that of rural between 76 (South West rural) and 83 percent (North East rural).

FIGURE 2.9 Distance to health facilities (>30 minutes)

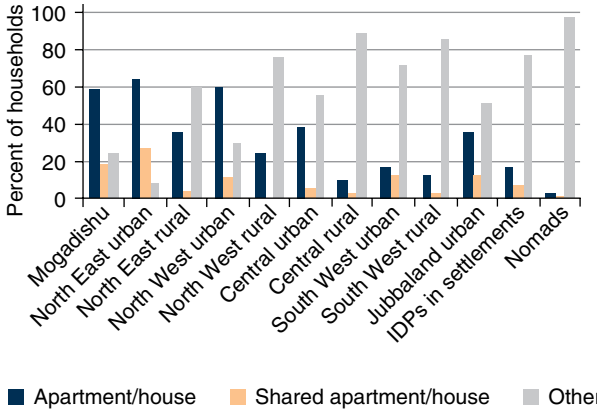


Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.10 Dwelling type

Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.11 Living arrangement



Source: Authors' calculations based on the SHFS 2017–18.

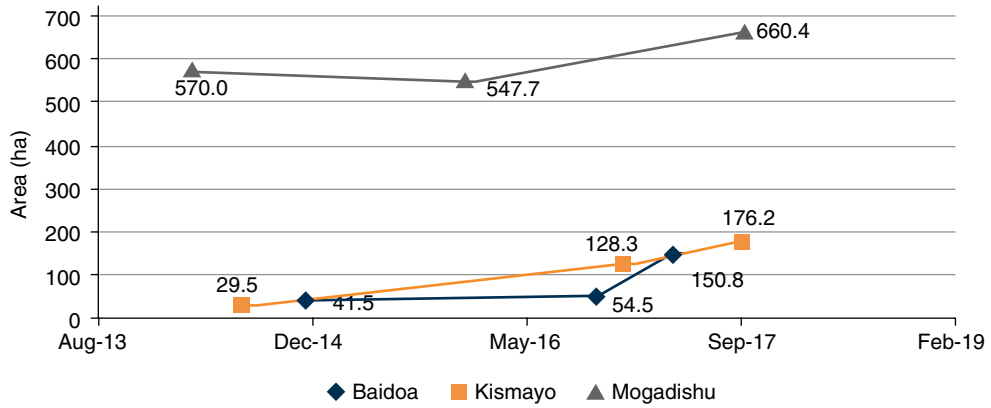
Dwelling

Access to land and housing is more constrained in urban areas. Since land is scarce in urban areas, it is not surprising that urban households are statistically less likely to own land and housing compared to rural households. About 42 percent of urban households live in rented dwellings compared to 12 percent in rural areas. The proportion of renters is the highest in Mogadishu at 71 percent, where land values are also the highest (Figure 2.10). South West is an exception where a significant portion of rural households live in temporary shelters provided by aid agencies (Figure 2.11). That said, on average, urban households have better access to improved housing than the rural households.[60]

Access to land and housing has been further constrained by the recent influx of the IDPs to cities. Seventy-five percent of IDPs in Somalia are thought to reside in urban centers, settling on public and private lands within and in the outskirts of cities. The majority of the returnees from neighboring countries such as Kenya and Yemen are considered to have settled in cities as well. In Mogadishu, areas occupied by IDP settlements increased by 16 percent between 2013 and 2017. In Kismayo, the IDP-occupied area increased over seven-fold (Figure 2.12 and Figure 2.14), and in Baidoa, it has more than tripled (Figure 2.12 and Figure 2.13).[61] In the absence of security of land tenure, IDPs are highly vulnerable to forced eviction. For example, over 109,000 IDPs living in informal settlements across the country have been forcefully evicted between January and August 2017, 77 percent of which are concentrated in Mogadishu.[62] Due to forced eviction, many IDPs have shifted to the outskirts of cities, causing uncontrolled urban sprawl. Fifty-five percent of IDPs in Mogadishu now reside in the periphery of the city. The area occupied by IDP settlements in the fringes of Baidoa has increased by 177 percent in 2017. The number of IDPs in Kismayo tripled in 2017, and most of them have settled outside of the city.[63] Such spatial sprawl makes service

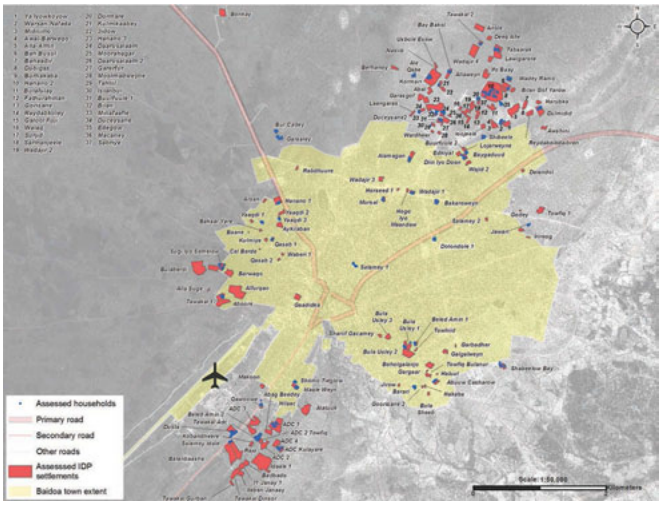
[60] Improved housing is defined as living in apartments, shared apartments, separate houses or shared houses.
[61] World Bank (2018c).
[62] Norwegian Refugee Council (2018).
[63] World Bank (2018e). Urban chapter.

FIGURE 2.12 ■ Area occupied by IDP settlements



Source: UNOSAT and UN-Habitat.

FIGURE 2.13 ■ New IDP settlements in Baidoa



Source: REACH.

FIGURE 2.14 ■ New IDP settlements in Kismayo

Source: Ipsos.

provision difficult and costly as new settlements are disconnected from the existing urban centers and infrastructure networks. Spatial fragmentation also inhibits IDPs' access to jobs and prevents cities from reaping the scale and agglomeration benefits.

Access to finance

Only 10 percent of Somali households have access to a bank account, while the majority of both urban and rural households have access to mobile bank accounts. Reflecting the lack of banking sector development, very few Somali households have access to a bank account. Urban households have better access (16 percent) than rural households (3 percent). In the absence of the formal banking sector, mobile banking has filled the void for Somali households to receive remittances. Seventy percent of urban households and 55 percent of rural households have mobile bank accounts. Surprisingly, South West rural (83 percent) has higher access to mobile bank accounts than South West urban (64 percent). The urban-rural divide in access to mobile bank accounts is the largest in North East at 41 percentage points and smallest in Central at 5 percentage points. Interestingly, central and southern regions in Somalia, which tend to be less developed than the northern regions, have higher access to mobile bank accounts on average

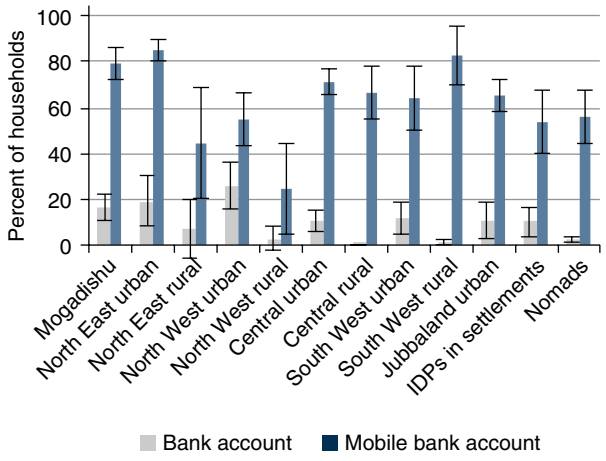
(Figure 2.15). The explanation could be due to lack of access to formal bank accounts, where the more developed regions of Mogadishu, North East and North West have better access to formal banking than the central and southern regions.

Very few households have managed to save money in the past 12 months. On average, only 9 percent of both urban and rural households could save money in the past 12 months (Figure 2.16). As more urban households engage in wage labor, it is not surprising that more urban households could save (13 percent) compared to rural households (3 percent). North East urban has the highest proportion of households that managed to save, while 0 percent managed to save in North West rural and North East rural. Rural households in these regions fare worse in terms of savings than the IDPs living in IDP settlements (9 percent). This is likely because 75 percent of the IDPs live in urban areas, and they are more likely to be engaged in wage labor (even if informal) than rural households. This does not reflect the amount saved however.

Employment

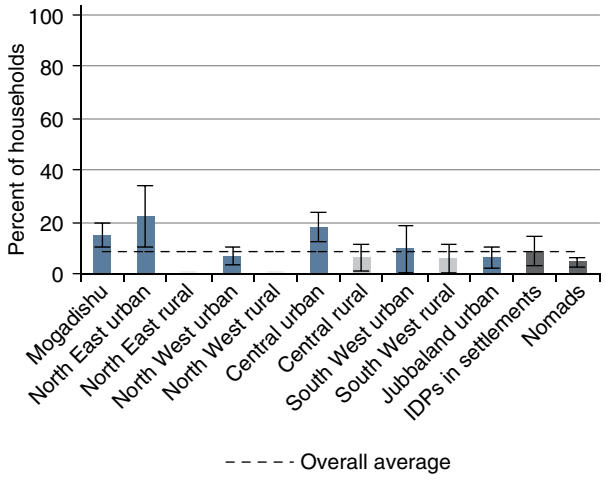
Urban households rely on wage labor and remittances from abroad while rural households rely on agriculture and small family businesses. On average, urban households are more likely to be employed than rural households. Fifty-two percent of the urban households rely on wage labor as their main income source, except for Jubbaland urban where there is a relatively large share of households (43 percent) that engage in small family business as the main livelihood. Urban households tend to receive more remittances from abroad than rural households except for the South West region. Twenty-six percent of the rural households rely on agriculture and fishing while another 16 percent rely on small family businesses (Figure 2.17). On average 8 percent of both urban and rural households count on remittances as their main source of income. Perception on employment opportunities is more positive across regions in urban areas where households report that their employment prospects are "better" or "much better" than six months before (Figure 2.18). Satisfaction over employment is equally higher among urban households compared to rural households.

FIGURE 2.15 ■ Access to bank accounts



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.16 ■ Households that saved money

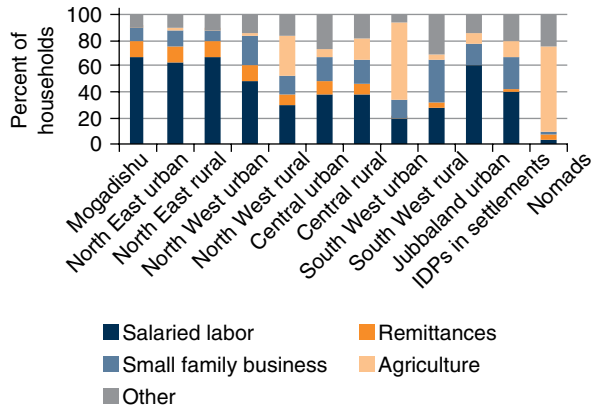


Source: Authors' calculations based on the SHFS 2017–18.

Perception on living standards

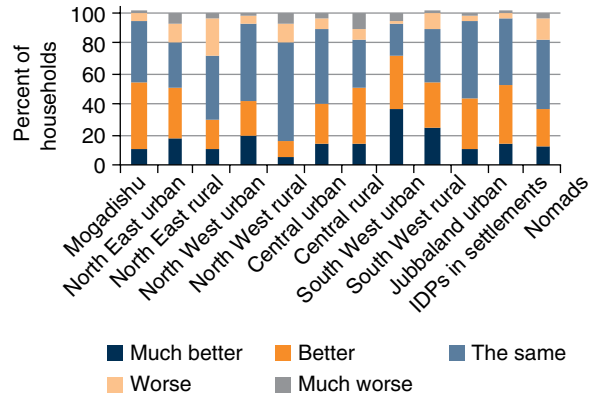
Urban and rural households' perceptions on safety do not differ between urban and rural areas. The perception that they feel "very safe" from crime and violence is virtually the same between urban (48 percent) and rural households (49 percent). North West stands out as an outlier where both urban and rural households feel much safer than other regions. Perception of safety is lower among Jubbaland urban residents compared to the IDPs (Figure 2.19).

FIGURE 2.17 Main sources of income



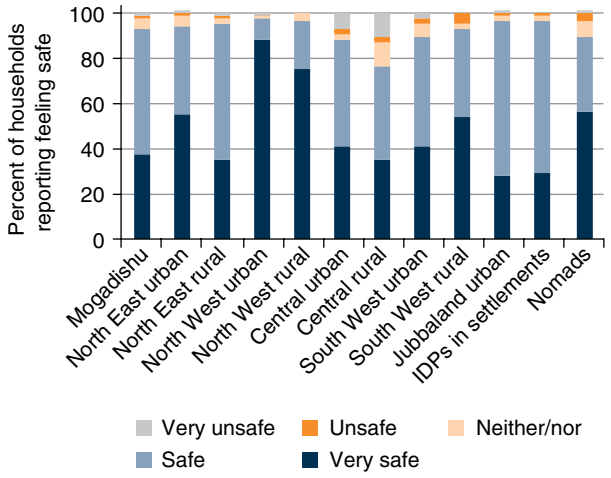
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.18 Perception of employment opportunities



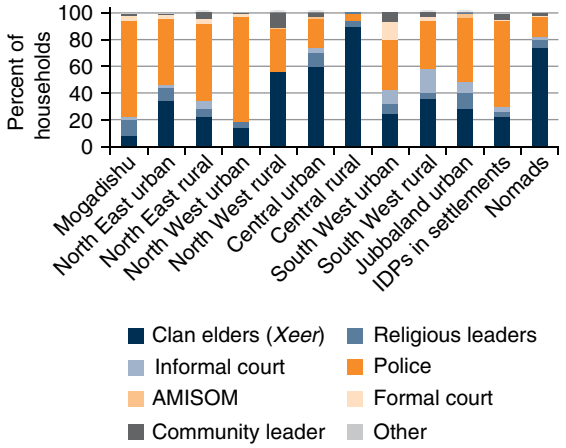
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.19 Safety from crime and violence



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.20 Dispute resolution



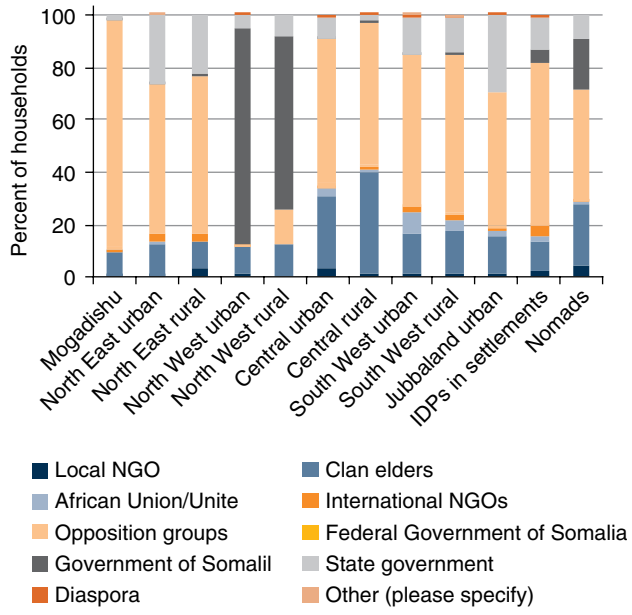
Source: Authors' calculations based on the SHFS 2017–18.

Trust

Urban households tend to rely more on police for dispute resolution, while rural households rely more on clan elders. On average, 44 percent of all urban and rural households rely on police for dispute resolution compared to 39 percent of all urban and rural households that rely on clan elders. A more nuanced picture emerges with a closer look, however. Central rural households have the lowest dependence on the police (12 percent) followed by nomads (14 percent). Most of the households in North West urban (77 percent) and Mogadishu (67 percent) rely on the police. In general, rural households tend to rely less on police compared to urban residents. Conversely, the majority of Central rural (78 percent) and nomads (73 percent) rely on clan elders for dispute resolution. Only 9 percent of the Mogadishu residents and 13 percent of North West urban residents rely on clan elders. In terms of regions, both urban and rural households in South West (39 percent) and Central (45 percent) have the lowest reliance on police, though regional disparity is not as large as rural versus urban (Figure 2.20). This signifies that where people rely on the police, people are less dependent on informal institutions such as clan elders and vice versa.

Levels of trust in different government institutions vary along the urban-rural divide as well as along the regional divide. Mogadishu has the

FIGURE 2.21 Trust in institutions



Source: Authors' calculations based on the SHFS 2017–18.

highest level of trust in the Federal Government of Somalia (87 percent) while the overall level of trust among both urban and rural households is 50 percent. Urban residents generally have a higher trust for the federal government (62 percent) compared to the rural households (47 percent).[64] Trust in the federal government is the lowest in Jubbaland (51 percent) and Central (55 percent). The state government enjoys the highest levels of trust in Jubbaland urban (29 percent) followed by North East urban (26 percent). The lowest is in Mogadishu (2 percent) though this could have been because they do not have a state government per se, but rather the Banadir Regional Administration.[65] On average, urban residents across regions have higher trust in the state government (16 percent excluding Mogadishu and North-West urban) compared to rural residents (12 percent).[66] Central has the lowest trust in the state government across both rural and urban residents (5 percent) compared to the highest in Jubbaland urban (29 percent) followed by North East (24 percent). Trust in clan leadership is higher among rural households (20 percent) than among urban households (15 percent), which is unsurprising (Figure 2.21).

General levels of trust are higher in rural areas compared to urban areas. On average, 71 percent of rural households claim they trust other people compared to 66 percent in urban areas. This is not surprising as rural areas tend to be more socially cohesive while urban areas tend to be a mix of people from different origins. However, when broken down by regions, South West rural has the highest levels of trust (73 percent) followed surprisingly by Mogadishu (73 percent). Jubbaland urban and Central rural have the lowest levels of trust for others (59 percent). In terms of regions, Jubbaland has the lowest levels of trust (59 percent), followed by Central urban and rural (61 percent). North East urban and rural have the highest level of trust at 78 percent.

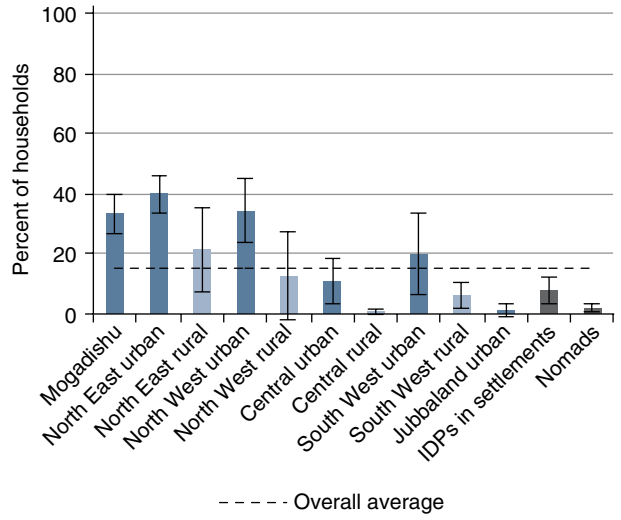
Taxes

Urban households generally pay more taxes than rural households. About 23 percent of all urban households across regions pay taxes of some sort compared to only 10 percent of rural households. The largest proportion of residents that pay taxes are in North East urban (40 percent) followed by North West urban (34 percent) and Mogadishu (33 percent). Jubbaland urban is an outlier with a very low proportion of households claiming to pay taxes (1 percent). This is lower than the nomads (2 percent) or the IDPs (8 percent). The highest proportion of rural households paying taxes are in North East (21 percent) while the lowest is in Central rural (0.8 percent). In terms of regional average that combines both urban and rural areas in respective regions, Mogadishu scores the highest (33 percent), followed by North East (30 percent). The lowest is in Jubbaland (1 percent) followed by Central (6 percent) (Figure 2.22).

More rural households pay taxes to the federal government while more urban households pay taxes to the local government. Thirty-seven percent of the rural households across regions pay taxes to the federal government compared to 31 percent of the urban households. Conversely, 59 percent of the urban households across regions pay taxes to the local government (district government) compared to 36 percent of the rural households. One possible reason could be that local governments and decentralized tax regimes are more developed in urban

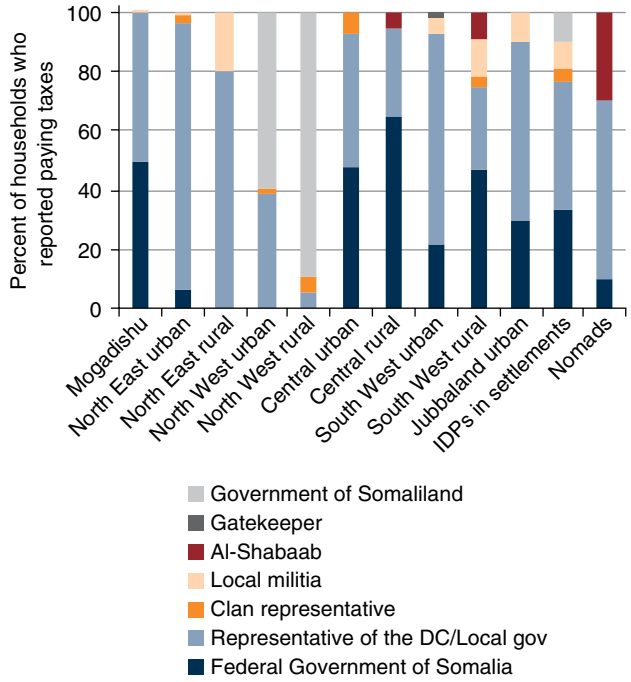
[64] This figure excludes that of North West urban residents who have 0 percent trust in the federal government for political reasons.
[65] North West is excluded as they see Somaliland government as the only legitimate political representative.
[66] Excluding North West rural.

FIGURE 2.22 ■ Payment of taxes



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.23 ■ Institutions that collected taxes



Source: Authors' calculations based on the SHFS 2017–18.

areas compared to rural areas. Interestingly, the proportion of households that pay taxes to the federal government is highest among the rural households in Central (65 percent) followed by urban households in Mogadishu (50 percent). The lowest is in North East rural (0 percent) and North East urban (6 percent).[67] Percentage of households that pay taxes to the local government is highest among North East urban (90 percent), followed by North East rural (80 percent) and South West urban (71 percent). The lowest is in South West rural (28 percent), which is in contrast with South West urban where 71 percent of the households pay taxes to the local government. Sixty percent of North West urban and 89 percent of North West rural households pay taxes to Somaliland government which is no surprise. Few households (0.7 percent) reported that they pay taxes to Al-Shabaab (Figure 2.23). An in-depth political economy analysis is warranted to better understand the variation in who people pay taxes to.

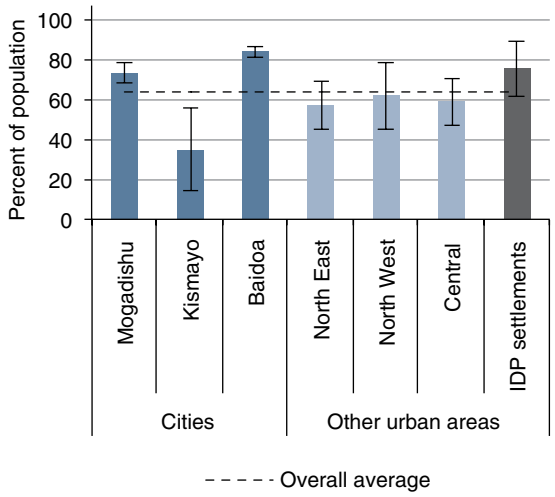
Inter-urban comparison[68]

Monetary and nonmonetary poverty

Baidoa has the highest poverty level followed by Mogadishu, while Kismayo has the lowest poverty level. Average poverty incidence across all urban areas is 64 percent, lower than that of rural areas at 72 percent. Yet there is significant regional variation among different urban areas. Baidoa city has the highest proportion of poor households (84 percent), followed by Mogadishu (73 percent), which are both higher than the overall average of 69 percent or the rural average of 72 percent. Kismayo, on the other hand, has the lowest poverty incidence of 35 percent (Figure 2.24). A similar pattern follows for the poverty gap with Baidoa having the highest poverty gap (36 percent), higher than that of IDPs, followed by Mogadishu (27 percent; Figure 2.25). Kismayo has the highest percentage of households who report that they have experienced hunger in the past four weeks despite the lowest poverty incidence (Figure 2.26). Correspondingly, fewer households in Kismayo along with North West urban and North East urban households report lower food poverty incidence. Baidoa has the highest food poverty incidence at 69 percent, even higher than that of the IDPs (56 percent; Figure 2.27). Gini coefficient is the lowest in Mogadishu, meaning there is least inequality, compared to the highest in Central urban.

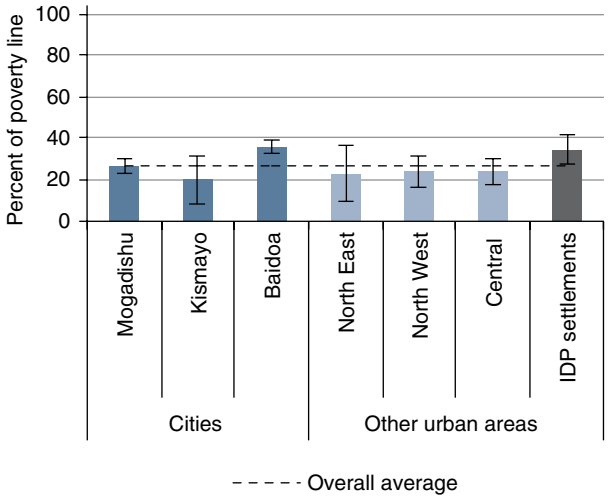
[67] North West urban and rural households do not pay any taxes to the federal government due to political issues.
[68] All the findings listed in this section are statistically significant with a p-value<0.05 unless otherwise stated.

FIGURE 2.24 ■ Poverty incidence



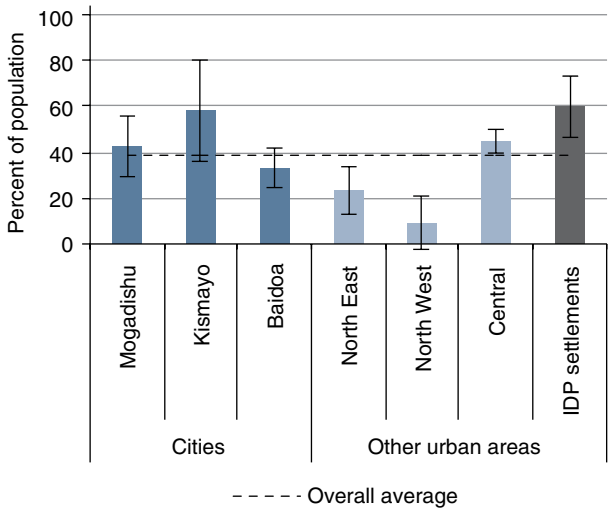
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.25 ■ Poverty gap



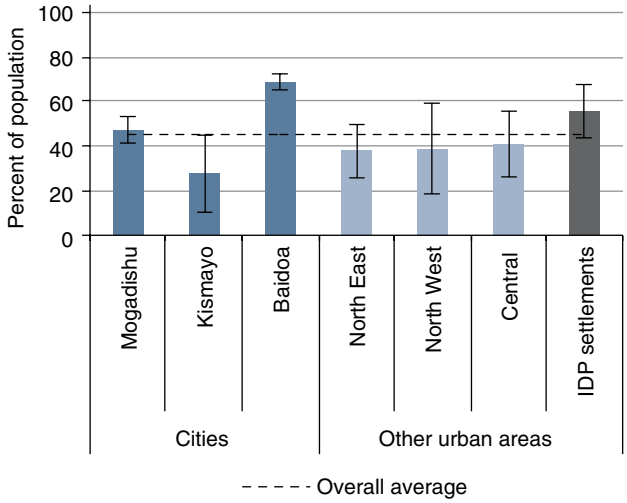
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.26 ■ Hunger



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.27 ■ Food poverty incidence

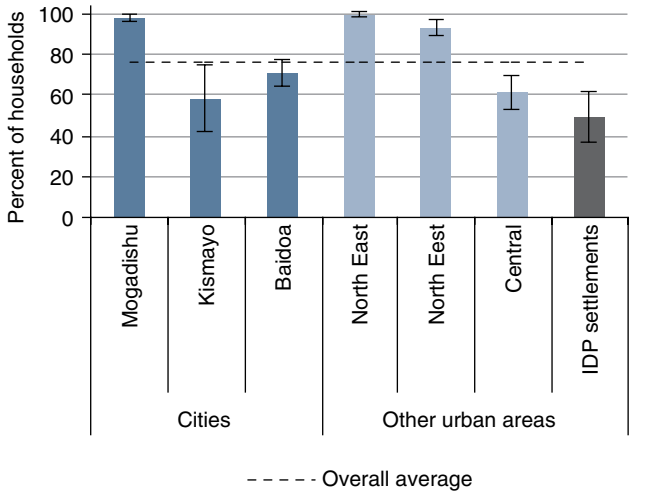


Source: Authors' calculations based on the SHFS 2017–18.

Access to services

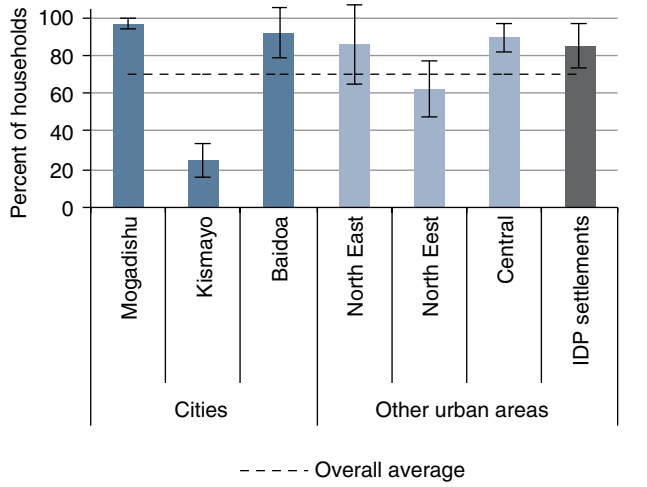
Virtually all households in urban North East and Mogadishu have access to electricity. In other urban areas, access to electricity is more limited, for example, with only 61 percent in Central urban and 58 percent in Kismayo having access to electricity. The level of electricity access in Kismayo is not much higher than that of IDP settlements at 49 percent (Figure 2.28). Electricity is provided by private service providers across all urban areas as there is no public sector capacity. The prices are the highest in North West urban (US$23/month) followed by Kismayo (US$20/month) and the lowest in Baidoa (US$11/month). Urban residents have electricity for on average 15 hours a day with Mogadishu and North West urban having access for the longest time at 20 hours. Baidoa is an outlier where residents have only four hours of electricity a day. This is much worse than for IDPs who have access for an average of 14 hours a day. The urban bottom 40 percent are less likely to have access to electricity than the urban top 60 percent irrespective of which cities they live in.

FIGURE 2.28 ■ Access to electricity



Source: Authors' calculations based on the SHFS 2017–18.

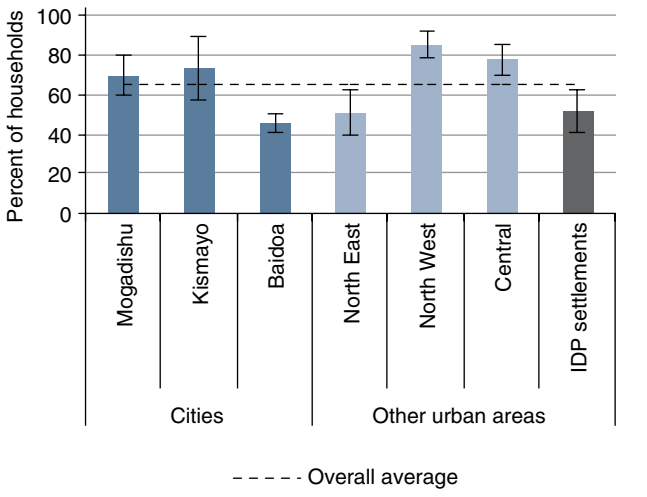
FIGURE 2.29 ■ Access to piped water



Source: Authors' calculations based on the SHFS 2017–18.

Piped water is available at home for 75 percent of the urban residents across all regions, but Kismayo is an outlier with a very low access to piped water. Mogadishu has the highest access (96 percent) followed by Baidoa (92 percent) while only 25 percent of households in Kismayo do, which is lower than that of IDPs (39 percent) (Figure 2.29). The low level of access to piped water in Kismayo is in stark contrast with its low poverty incidence. In Kismayo (32 percent) and Baidoa (19 percent), the main alternative water source is boreholes, whereas in North West urban, 35 percent of the residents rely on water trucks.

FIGURE 2.30 ■ Access to improved sanitation

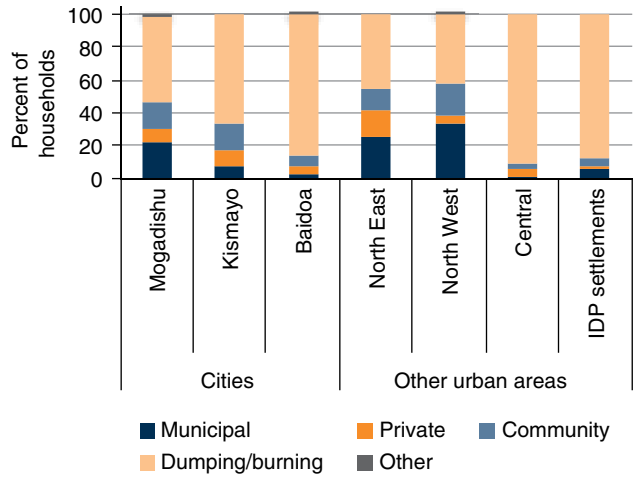


Source: Authors' calculations based on the SHFS 2017–18.

Improved sanitation is available to 9 of 10 urban households with Baidoa as an outlier where only 6 of 10 households have access. This estimate is lower than that of IDPs (91 percent) (Figure 2.30). This likely reflects the fact that IDPs in camps have access to sanitation facilities provided by the humanitarian agencies. Such facilities are often shared among many households. Yet, both IDPs and residents in Baidoa on average have four families sharing one facility compared to other urban areas where they have two households sharing. Of these, over 48 percent of the urban residents use septic tanks and 31 percent rely on informal sewage connection. It is only in Baidoa (37 percent) where the largest proportion of residents are connected to official sewage. Unless septic tanks and informal sewage networks are maintained properly, this situation can cause serious hygiene and health issues.

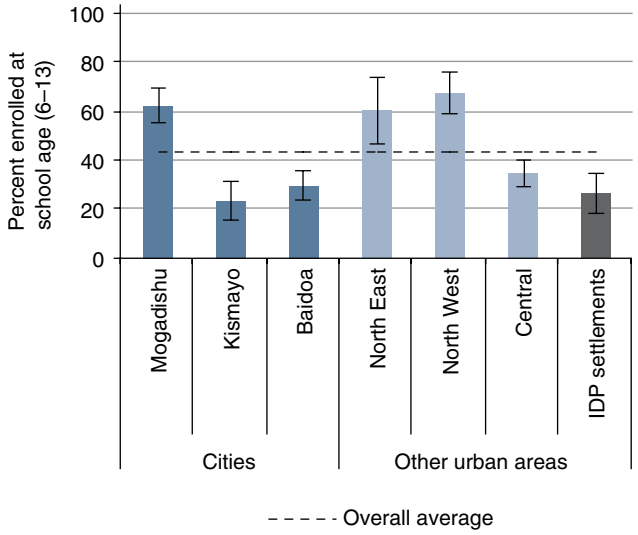
Other municipal services, such as roads, solid waste management, and street lighting are limited across all urban areas. Solid waste management is virtually nonexistent. Lack of solid waste management is a major source of hazard, as solid waste scattered across the streets clog existing drainage systems exacerbating the flash floods caused by torrential rain. They also pose serious environmental and health issues. Sixty-seven percent of the urban households across regions rely on burning or dumping waste, and only 14 percent rely on a municipal waste management system. In Central urban (91 percent) and Baidoa

FIGURE 2.31 Solid waste management



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.32 Primary school enrollment rate



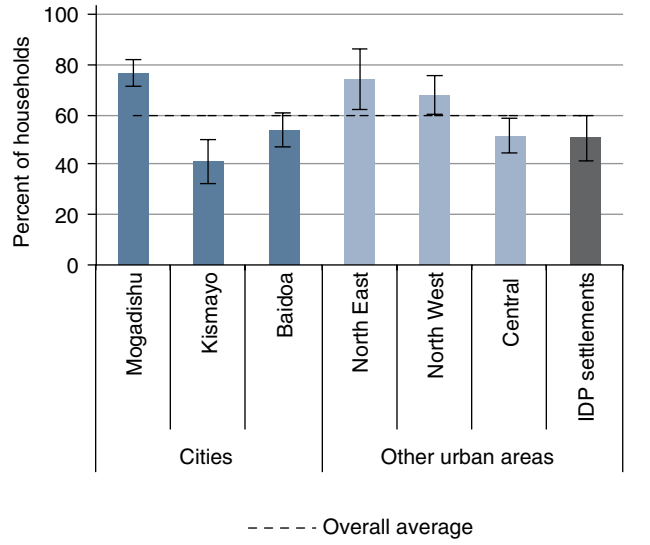
Source: Authors' calculations based on the SHFS 2017–18.

(85 percent), almost all the households rely on burning or dumping (Figure 2.31). Only 46 percent of the urban residents have access roads that are usable during the rainy season most of the time, whereas another 46 percent have roads that are some of the time usable during the rainy season. Eight percent of the urban households on average rarely have access to all-weather roads, and the situation is worse in Baidoa (15 percent), North West urban (12 percent) and Central urban (10 percent). Street lights, which play an important role in improving safety, are rare in Somalia. Access to functioning streetlights ranges from 35 percent in Mogadishu to 6 percent in North East urban.

Both primary and secondary school enrollment rates for children aged 6–17 are higher in North East urban, North West urban, and Mogadishu, while Kismayo has the lowest enrollment rates. Disparities in school enrollment rates are large across regions. Primary school enrollment rates among children aged 6–13 are the highest in North West urban (67 percent) and Mogadishu (62 percent), while Kismayo lags at 23 percent. Kismayo's primary school enrollment rate is lower than that of IDPs, which is 26 percent (Figure 2.32). Urban households are less likely to be poor (both monetarily and non-monetarily) if household heads have some education. The low enrollment rate in Kismayo may be due to the long distance children must travel to schools. In Kismayo, over 48 percent of the children need to travel over 30 minutes to get to the closest school, which is much greater than the IDPs (23 percent) and almost eight-fold compared to Mogadishu that has one of the highest primary school enrollment rates and low proportion of households that are above the 30-minute threshold. Travelling for over half an hour in Somalia, and particularly in Kismayo, poses a serious security threat which may dissuade the parents from sending their children to school. Education is important to address the structural cause of poverty. Indeed, households with household heads that have complete primary or incomplete secondary education are less likely to be poor. The secondary school enrollment rate among children aged 14–17 is the highest in North East urban (90 percent) followed by North West urban (79 percent) and Mogadishu (78 percent). Kismayo again has the lowest enrollment rate of 40 percent, which is the same as among the IDPs.

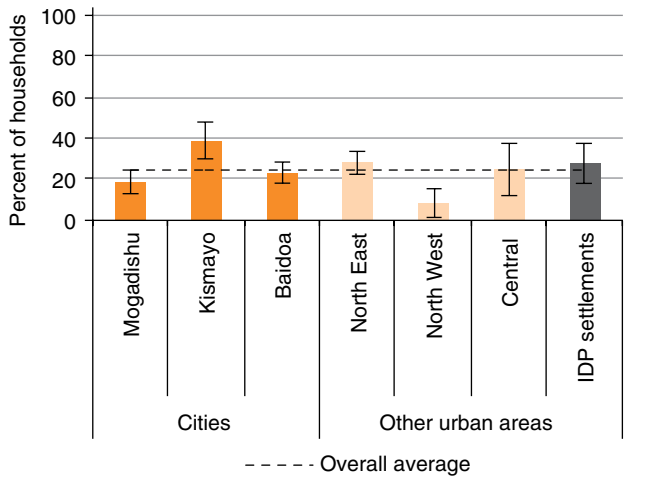
Satisfaction for the quality of primary education is highest in Mogadishu (94 percent) and lowest in Central urban (77 percent). Despite the low enrollment rate, satisfaction levels are relatively high among those that send their children to school in Kismayo (88 percent). The literacy rate is the highest in Mogadishu (76 percent) followed by North East urban (74 percent). Kismayo has the lowest literacy rate (41 percent) among all urban areas, and even lower than that of the IDPs (51 percent) (Figure 2.33). Urban households are less likely to be poor if there is a higher proportion of literate household members. However, there is

FIGURE 2.33 Literacy rate



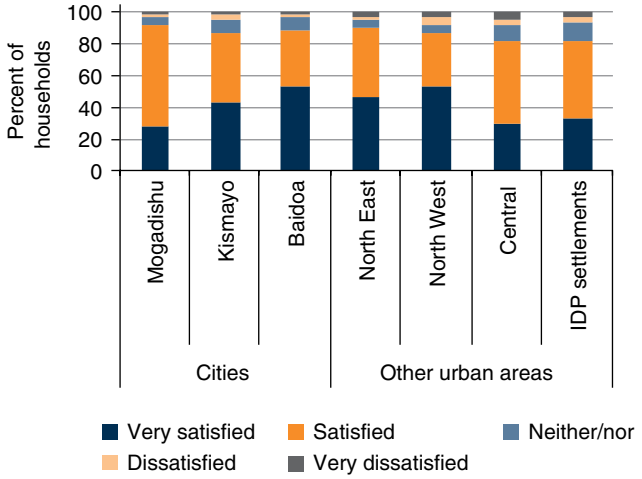
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.34 Distance to health facilities (>30 min)



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.35 Satisfaction on health service quality



Source: Authors' calculations based on the SHFS 2017–18.

no significant difference between the poor and the non-poor, or whether they are displaced or not, in terms of literacy rate in Kismayo.

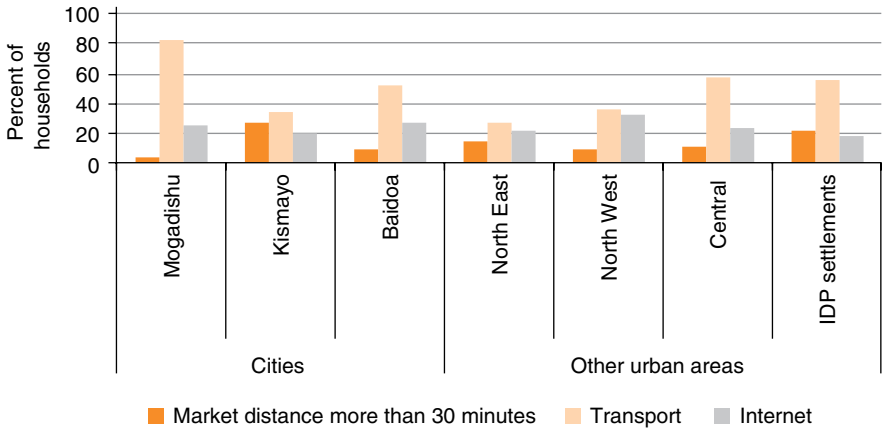
Access to health facilities is poor in Kismayo though satisfaction over their quality of services is high across the board. The proportion of households whose distance to the closest health centers is over 30 minutes is the highest in Kismayo (39 percent)—higher than that of IDPs (28 percent)—while North West urban (9 percent) has the best accessibility (Figure 2.32). Despite the distance to the health facilities, residents of Kismayo, along with other urban areas, seem to be satisfied with the quality of the health services they are receiving (Figure 2.33).

Access to other services differs significantly with Kismayo worse off than the IDPs in some services. While Mogadishu demonstrates the highest proportion of households with access to public transport (86 percent), other urban areas lag. North East urban (27 percent), Kismayo (34 percent), and North-West urban (37 percent) have low access to public transport. Internet access is still not as prevalent at 24 percent on average. Internet access is almost the same between Kismayo (20 percent) and the IDPs (19 percent). It is the highest in North West urban (33 percent). In Kismayo, the proportion of households that live more than 30 minutes away from a food market is the highest at 28 percent, again worse off than the IDPs at 22 percent (Figure 2.36).

Land and housing

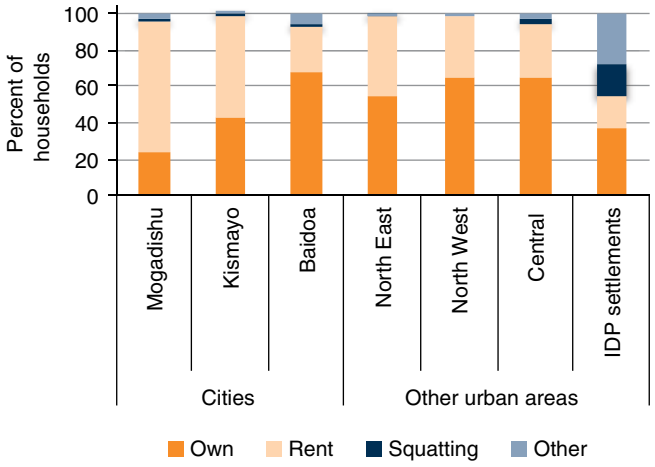
Mogadishu and Kismayo have the highest proportion of renters, and three-quarters of urban residents have registered land certificates. Seventy-one percent of Mogadishu residents reside in rented space followed by 56 percent in Kismayo. In Baidoa, where it is more sparsely populated than other cities, ownership of the housing is the highest among all urban areas at 68 percent, and

FIGURE 2.36 Access to market, public transport, Internet



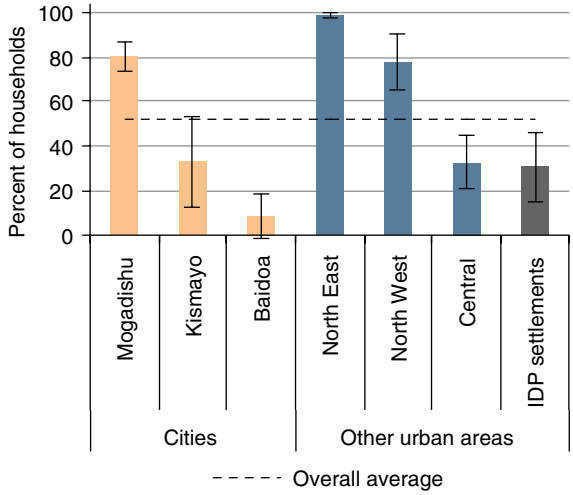
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.37 Tenure status



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.38 Access to improved housing

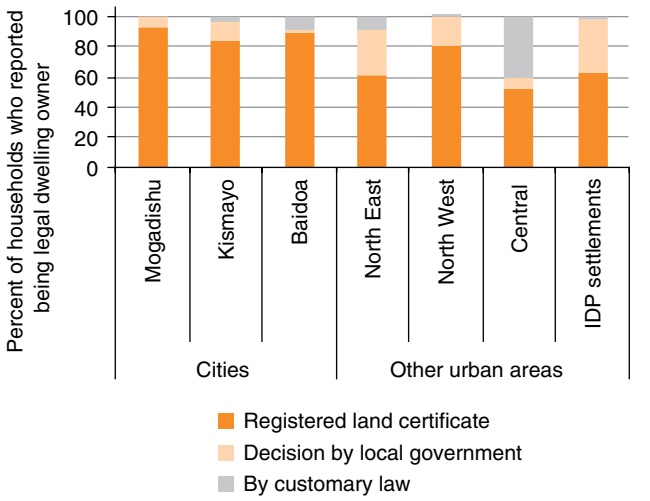


Source: Authors' calculations based on the SHFS 2017–18.

only 24 percent rent. It is only the IDPs that have a high proportion of households that are squatting in others' dwelling (17 percent; Figure 2.37). Majority of the households in all urban areas live either in apartments or shared houses. Access to improved housing is available for 99 percent of the residents in North East urban, followed by 80 percent in Mogadishu.[69] It is only available for 9 percent of the people in Baidoa, which is much lower than the IDPs (31 percent; Figure 2.38). Most of the urban residents (75 percent) claim to have registered land certificates, with Mogadishu (94 percent), Baidoa (89 percent), and Kismayo (85 percent) all scoring high. This is a significant finding as anecdotally it has been assumed that households do not possess any legal documents for their properties. It would be useful to understand under which administration these registered land certificates were issued. Central urban, however, seems to rely on customary law (41 percent) as much as registered land certificates (52 percent) to establish the tenure. On average, only 16 percent of the urban households across the region rely on decisions by the local government to establish their tenure (Figure 2.39). A high proportion of households in Baidoa (77 percent) and North West urban

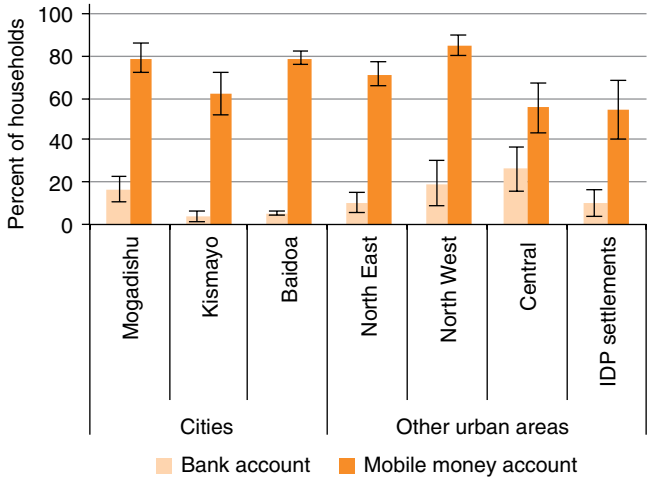
[69] Improved housing is defined as living in apartments, shared apartments, separate houses or shared houses.

FIGURE 2.39 Legal recognition of land and housing



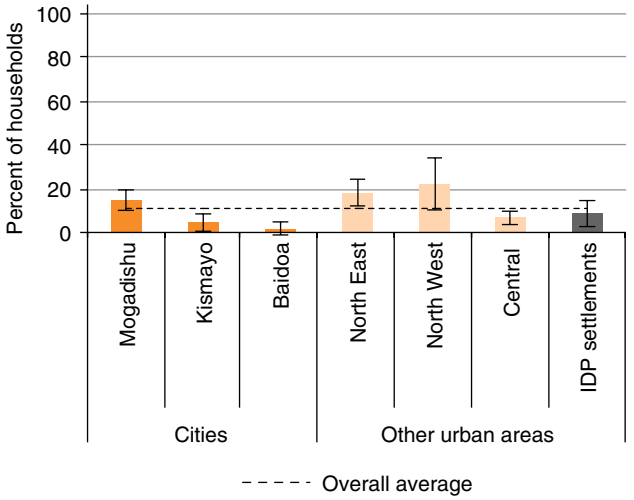
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.40 Access to bank accounts



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.41 Households that saved money



Source: Authors' calculations based on the SHFS 2017–18.

(66 percent) have written formal agreements on tenancy, while only 5 percent in Kismayo do. Only 24 percent of the household in Mogadishu have written agreements.

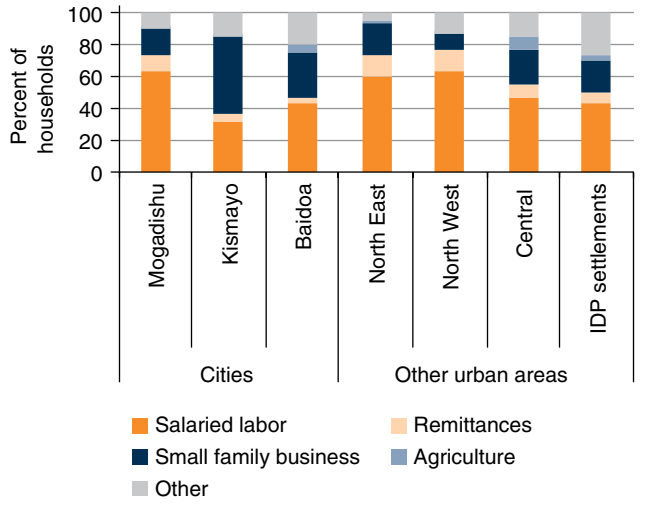
Access to finance

A high proportion of urban households (69 percent) have access to mobile bank accounts. This is not surprising given the amount of international and domestic remittances received. North West urban has the highest proportion of households that have mobile bank accounts (85 percent) while Central urban has the lowest (55 percent). Interestingly, 54 percent of IDPs have mobile bank accounts (Figure 2.40). Penetration of traditional bank accounts, on the other hand, is limited, ranging from 26 percent in Central urban to 4 percent in Kismayo. This is in line with the lack of availability of commercial banks within the country. However, the proportion of urban households that could save money in the past 12 months was a meager 11 percent on average across all urban areas, with North West urban (22 percent) and Central urban (18 percent) scoring the highest, while Baidoa scores the lowest (22 percent; Figure 2.41). This does not reflect the amount saved however. Most of the households rely on their relatives (64 percent) and friends (24 percent) to borrow money from. People have yet to borrow from private money lenders (2 percent). This could be due to cultural reasons or since private money lenders are not very popular yet.

Employment

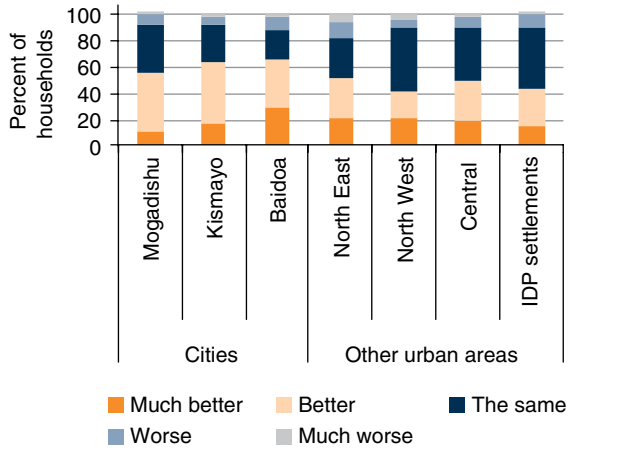
Households mostly rely on wage labor and small family businesses. On average, 50 percent of urban households across regions rely on wage labor for their livelihood. Mogadishu (64 percent) and North West urban (64 percent) have the highest proportion of households making their living on wage labor. Kismayo is an exception where small family business is the main income source for 50 percent of the households, whereas only 32 percent rely on wage labor. In Baidoa, close to 30 percent of the households rely on a family business. Remittances

FIGURE 2.42 Main sources of income



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.43 Perception on employment opportunities



Source: Authors' calculations based on the SHFS 2017–18.

represent a small portion of income sources in all areas ranging from 3 percent in Baidoa to 14 percent in North East and North West urban (Figure 2.42). Employment satisfaction is high in general, where 70 percent of the households or more report to be "very" or "somewhat" satisfied with their employment. Perception on standard of living prospects is also positive in all urban areas, with at least 60 percent of the households reporting them to be "better" or "much better" than six months before. However, perception on employment opportunities is less positive. North West urban (42 percent) has the lowest level of positive perception—even lower than that of the IDPs (44 percent)—while the highest in Baidoa (66 percent) and Kismayo (64 percent; Figure 2.43).

Across the country, people generally have a high-risk appetite toward economic activities. North East urban and Mogadishu households are the most willing to take risks to invest in high profit but risky business (72 percent) followed by Kismayo (67 percent) compared to the average of 62 percent across all urban areas. North West urban has the lowest risk appetite at 40 percent. Interestingly, 70 percent of the IDPs are also willing to take risks in risky business. The relatively high-risk appetite may be an indication that Somalis are willing to take more risks for higher profit given the longer-term uncertainty.

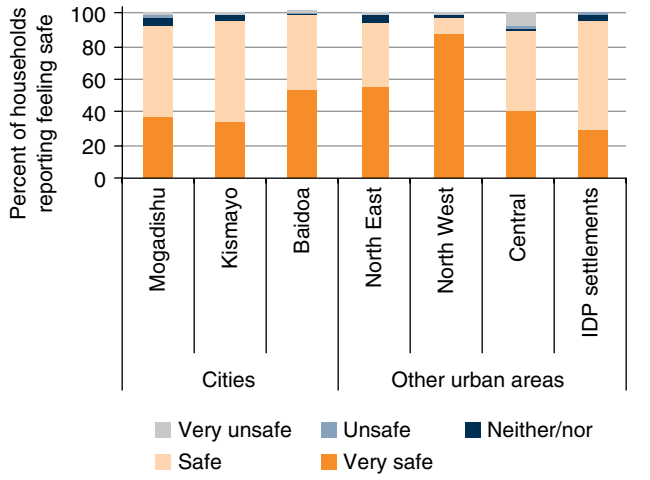
Safety and freedom of movement

Kismayo has the lowest proportion of people feeling "very safe" from crime and violence closely followed by Mogadishu. In Kismayo (35 percent), Mogadishu (38 percent), and Central urban (41 percent), urban households' perception that they are "very safe" is lower than the overall average across all urban areas. While these are much higher than that of the IDPs (29 percent), it demonstrates that people in central southern regions of Somalia still feel unsafe compared to the more stable North West and North East. Baidoa, however, has a relatively high proportion of people feeling very safe (53 percent) (Figure 2.44). Such perceptions of safety are not aligned with the people's perception of freedom of movement. Mogadishu households report the highest level of freedom of movement among all urban areas compared to IDPs who report the lowest level of freedom of movement (Figure 2.45).

Trust

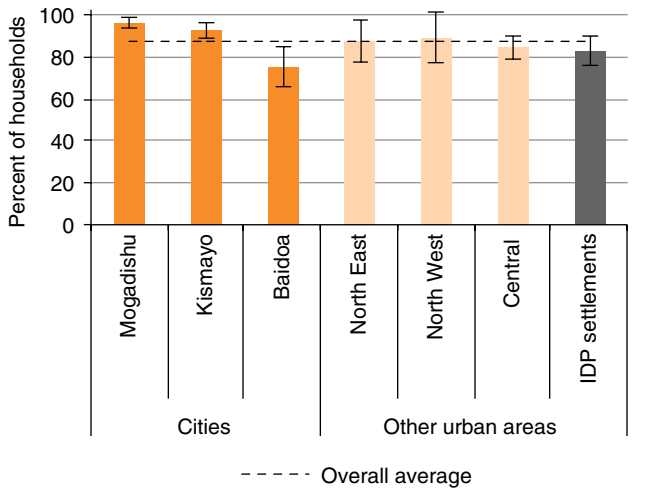
The more households rely on police for dispute resolution, the less rely on clan elders. On average, 56 percent of the households rely on police to settle disputes though there is a significant regional disparity. It is the highest in North West urban (77 percent) and Mogadishu (69 percent), while it is less than half of that in Central urban

FIGURE 2.44 Safety from crime and violence



Source: Authors' calculations based on the SHFS 2017–18.

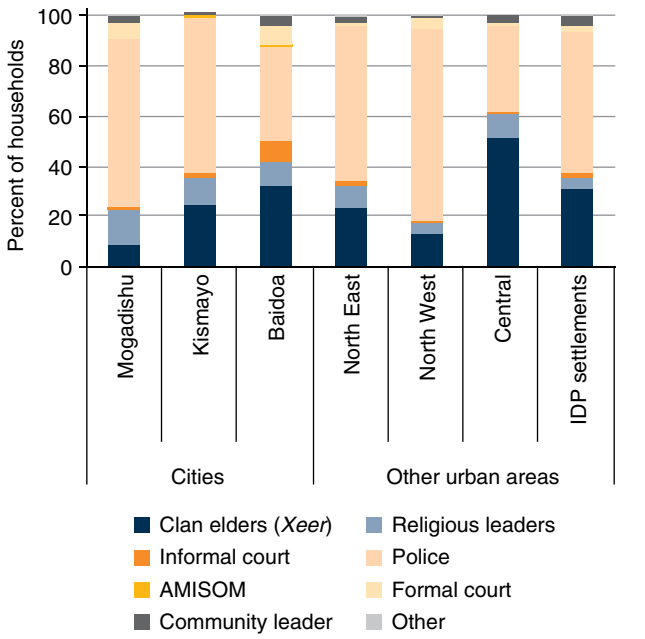
FIGURE 2.45 Freedom of movement



Source: Authors' calculations based on the SHFS 2017–18.

(33 percent) and Baidoa (37 percent). In Central urban (51 percent) and Baidoa (32 percent), a higher proportion of households rely on clan elders compared to Mogadishu (9 percent) and North West urban (13 percent). Reliance on religious leaders was at a low average of 8 percent (Figure 2.46). On average, 62 percent of the urban households have confidence that the police will protect them from crime and violence. This is the highest in North West urban (76 percent) and Baidoa (70 percent), while lowest in North East urban (54 percent). In Mogadishu, Kismayo, North East urban, and Central urban, levels of people's

FIGURE 2.46 Dispute resolution



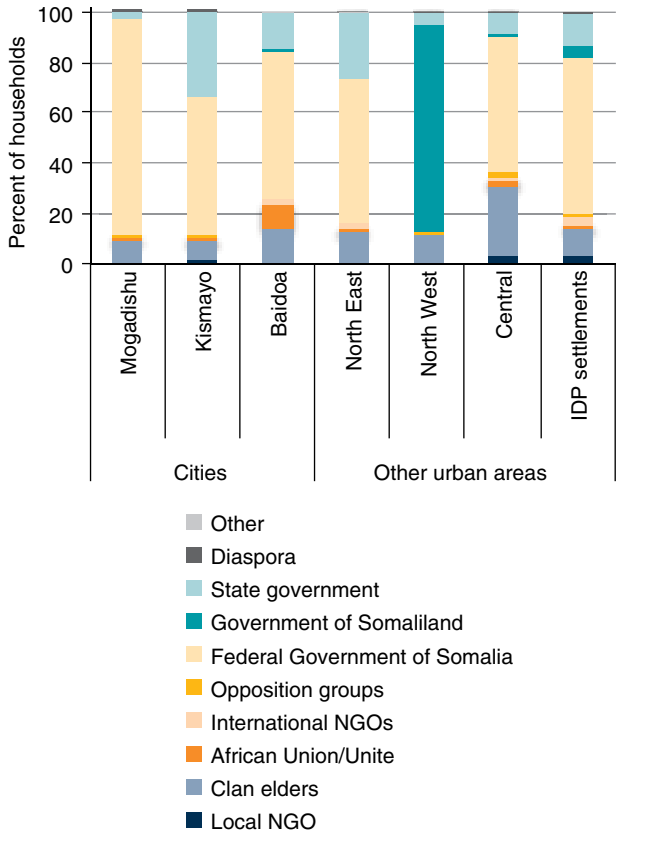
Source: Authors' calculations based on the SHFS 2017–18.

confidence in police are lower than the overall urban average and lower than that of the IDPs (65 percent). This disparity is likely due to how much outreach the police have, i.e., relatively lower outreach in rural areas than in urban areas, rather than a reflection of the levels of trust in police.

People's trust in various state institutions differs across regions. Sixty-two percent of the average urban people believe that the federal government best represents their interests.[70] Mogadishu is the highest with 87 percent followed by IDPs at 63 percent. Other regions hover around the average except for North West urban where none of the households believe that the federal government represents their interest. This is understandable given that Somaliland is a highly autonomous state. Instead, 83 percent of the North West urban residents believe that Somaliland government best represents their interests. Trust in the state government is 15 percent on average ranging from 34 percent in Kismayo to 2 percent in Mogadishu. In Kismayo, there is a strong state government and political independence, which explains that while

[70] This average has omitted North West urban households where 0 percent voted for the federal government due to the political contexts.

FIGURE 2.47 Trust in institutions



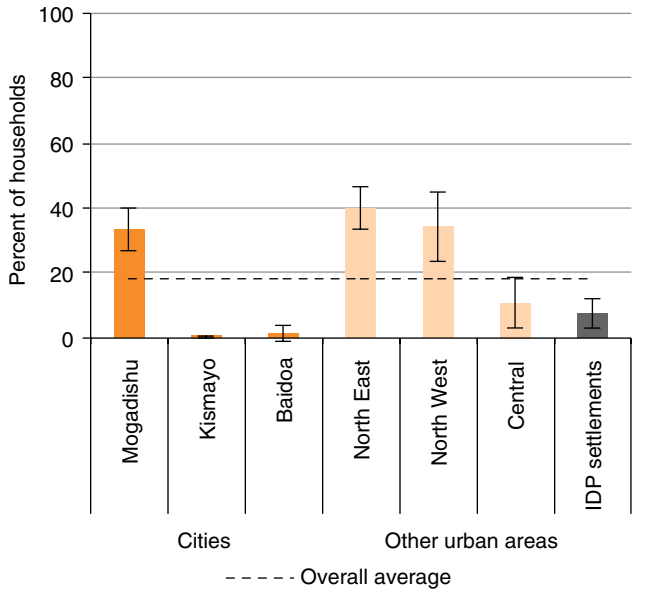
Source: Authors' calculations based on the SHFS 2017–18.

Mogadishu's low confidence in its regional government may be due to the high political turnover, or potentially, people did not associate Banadir Regional Administration as state government (Figure 2.47).

General levels of trust are the highest in Baidoa and the lowest in Kismayo. On average, urban residents' level of trust in other people is above 60 percent. Eighty-seven percent of the households in Baidoa believe that most people can be trusted, while in Kismayo only 47 percent do. Levels of trust in Mogadishu and North East urban are both relatively high at 73 percent. Interestingly, 67 percent of IDPs believe that most people can be trusted, a higher proportion than in North East urban, Central urban, and Kismayo.

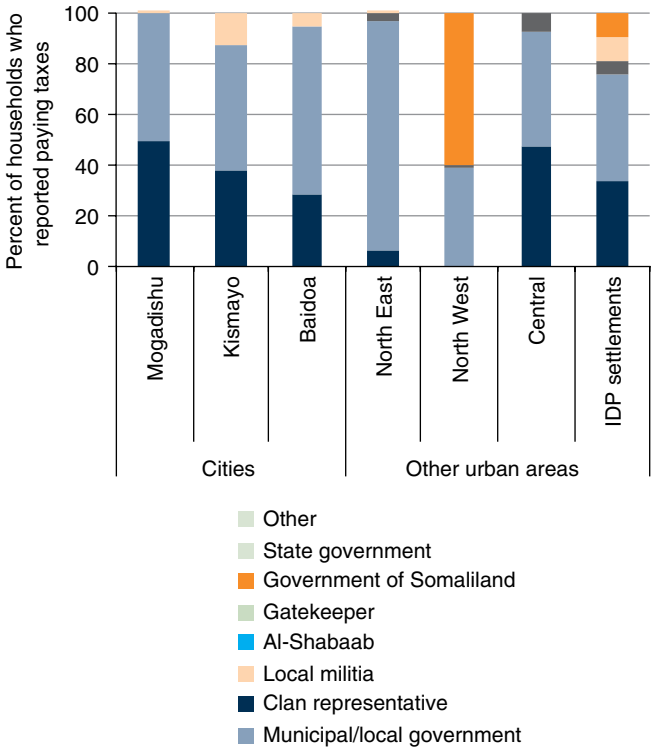
A limited number of households currently pay taxes, and among them, the majority pay to the local government. The Somali government currently only collects minimal taxes and fees, such as business tax, customs, cargo fee, and birth

FIGURE 2.48 Payment of taxes



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.49 Institutions that collected taxes



Source: Authors' calculations based on the SHFS 2017–18.

certificate fees. Indeed, only 18 percent of the urban households currently pay taxes, ranging from 40 percent in North East urban to 0.3 percent in Kismayo (Figure 2.48). Among them, the majority (55 percent) of the households pay taxes to the local government with North East urban being the highest at 90 percent followed by Baidoa (60 percent). Only 29 percent of the urban households on average pay taxes to the federal government with Mogadishu (50 percent) and Central (48 percent) being the highest. In North West urban, 60 percent of the urban households pay taxes to the Somaliland government (Figure 2.49). Judging from the level of trust in different institutions, the amount of taxes paid to different institutions is not correlated with the levels of trust. Rather, it seems like people pay taxes to whoever is more able to enforce it. Local governments have the advantage as they are the closest to their constituents. None of the households responded that they pay taxes to Al-Shabab. This may well be the case since Al-Shabaab does not have strongholds in urban areas anymore. Alternatively, people may not be willing to acknowledge even if they do.

Intra-urban comparison

Variations among urban IDPs, rural IDPs, and settlement IDPs

There are no significant differences between urban IDPs, rural IDPs and settlement IDPs in poverty incidence, poverty gap, or food consumption poverty incidence. This does not change even when controlling for literacy rate, proportion of working age household members, gender of the household head, and share of male members in the household. The proportion of working age household members, however, lowers the poverty indicators across the different IDP groups. There are also no significant differences across different groups of IDPs in hunger experienced in the last four weeks or facing a shortage of money to buy food. The levels of monetary and nonmonetary poverty are similar across all IDP groups.

Urban IDPs are better off than rural IDPs in access to certain services. Urban IDPs have better access to electricity, improved housing, and improved

Box 8 ■ Intra-urban comparison

While the previous sections focused on the spatial variations, this section focuses on the variations among different population groups that reside in urban areas. Urban residents can broadly be categorized into: IDPs that live in IDP settlements which are all in urban areas (settlement IDPs), IDPs that live outside the IDP settlements and are integrated into urban areas such as informal settlements mostly in downtown areas (urban non-settlement IDPs), urban communities that host IDPs in their neighborhood (urban host communities), and urban communities that do not have any IDPs in their neighborhood (urban non-host communities). Given the small sample size, the groups cannot be broken down into different regions. The section thus analyzes whether there are any significant differences across these population groups.[71]

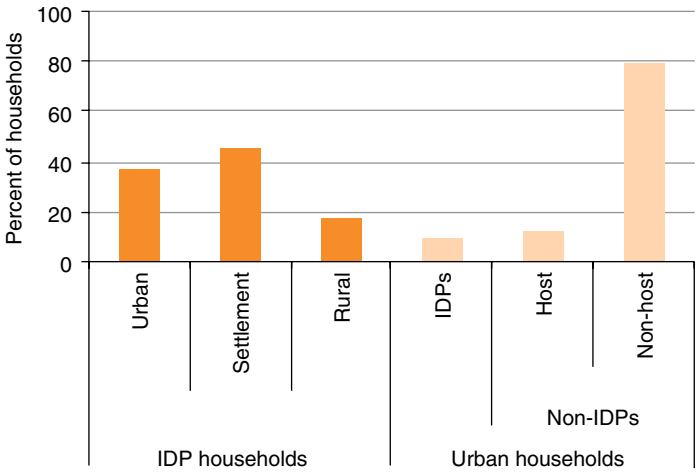
1. **Urban IDPs versus rural IDPs versus settlement IDPs.** This comparison will examine whether urban IDPs, those who reside outside of IDP settlements and in urban areas, are better off than rural IDPs who live in rural areas or IDPs that live in IDP settlements located in urban areas.

2. **Urban IDPs versus other urban households (both host and non-host communities).** This comparison examines whether urban IDPs that do not live in IDP settlements are worse off than other urban non-IDP households, irrespective of whether the households host or do not host IDPs.

3. **Urban host communities versus urban non-host communities.** This comparison examines whether urban communities that host urban non-settlement IDPs living in the geographical proximity are worse off than urban communities that do not host IDPs.

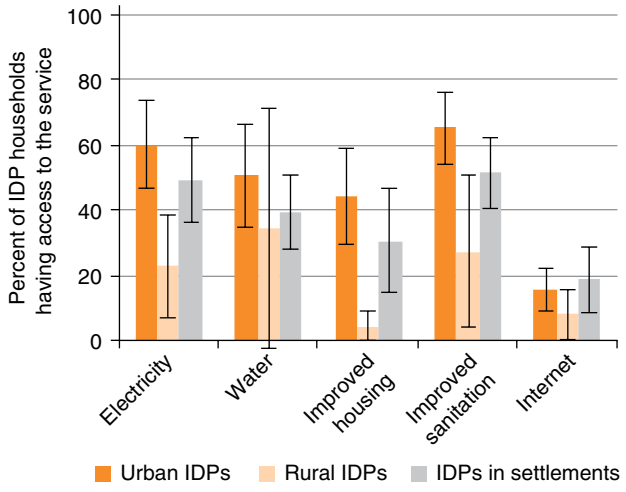
[71] This section describes the results of OLS and logit regression analyses, controlling for different variables such as access to services. Nonsignificant results are not described unless necessary and explicitly stated.

FIGURE 2.50 Distribution of IDPs and urban population



Source: Authors' calculations based on the SHFS 2017–18.

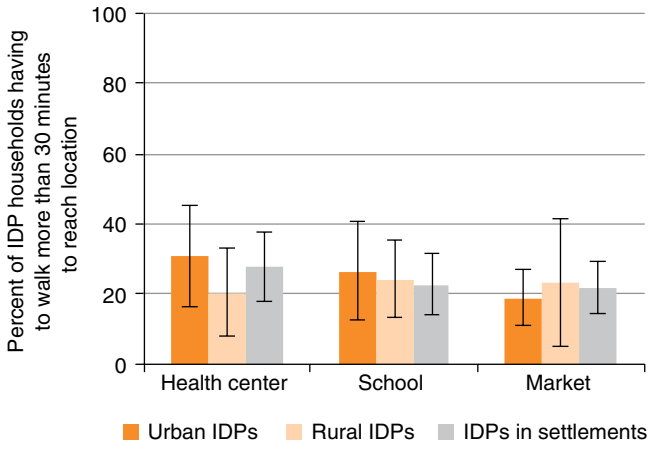
FIGURE 2.51 IDPs' access to services



Source: Authors' calculations based on the SHFS 2017–18.

sanitation than rural IDPs. However, there are no significant differences between urban and rural IDPs in access to piped water, distance to health facilities, distance to primary schools, distance to food markets, literacy, employment, tenure of the dwelling, or access to Internet. Urban IDPs are not better off than settlement IDPs who live in urban areas in access to services, housing, or employment. There are no significant differences across these two groups of IDPs in access to basic services, housing, or employment. This means that irrespective of whether IDPs live in IDP settlements or not, so long as they live in urban areas,

FIGURE 2.52 IDPs' access to key facilities



Source: Authors' calculations based on the SHFS 2017–18.

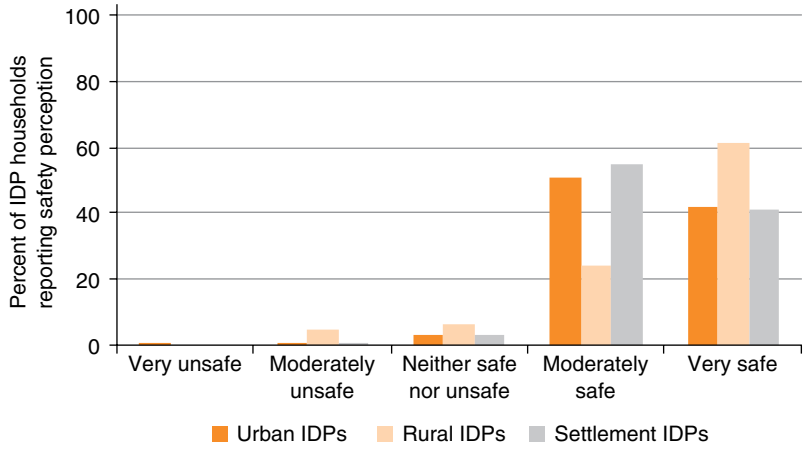
there is no significant difference in their standards of living. They are both better off than rural IDPs (Figure 2.51, Figure 2.52).

Urban IDPs feel less safe and are more risk averse than settlement IDPs. The only significant differences between urban IDPs and settlement IDPs are the perception of safety from crime and violence and risk aversion. Urban IDPs, who live outside of IDP settlements, feel less secure. This is intuitive as IDPs residing in organized settlements have gatekeepers that provide certain levels of protection and are served by NGOs or humanitarian agencies. IDPs residing outside any settlements, however, do not have access to any protection network, especially as they are removed from their own clan structure that normally serves to provide security. This seems to indicate that safety is not a function of the spatial location but rather on the availability of a protection mechanism (Figure 2.53).

Variations among urban IDPs and other urban non-IDP households

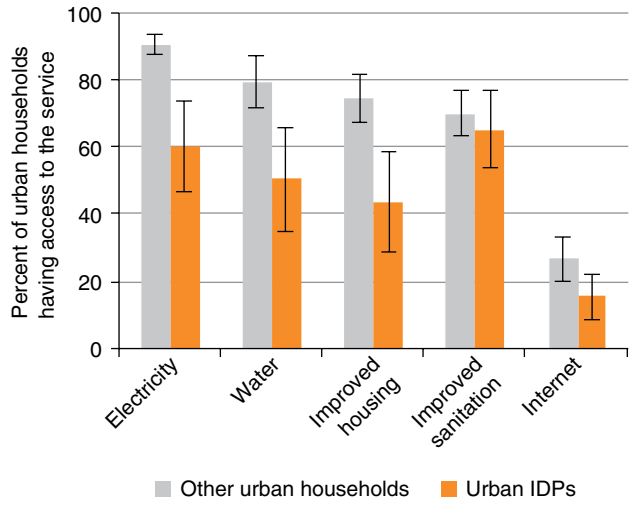
Although urban IDPs are not any poorer than other urban households, they are more likely to have experienced hunger and lack money. There are no significant differences between urban IDPs and other urban households in poverty incidence, poverty gap, and food consumption poverty incidence. Nonetheless, urban IDPs are more likely to have experienced hunger in the past four weeks and lack the money to buy food compared to other urban households.

FIGURE 2.53 IDPs' perception of safety



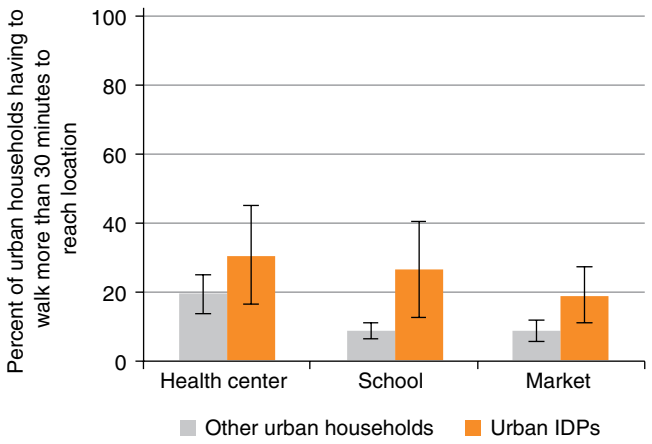
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.54 Urban IDPs' access to services



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 2.55 Urban IDPs' access to key facilities

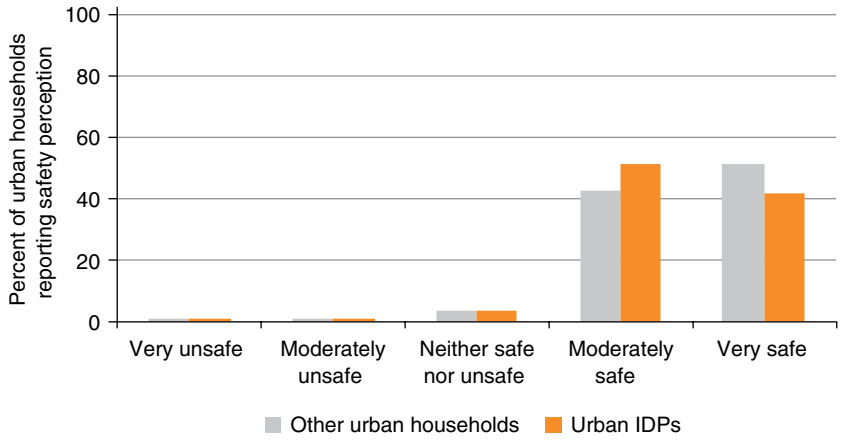


Source: Authors' calculations based on the SHFS 2017–18.

Urban non-settlement IDPs are consistently worse off than other urban households. Urban non-settlement IDPs have less access to electricity, piped water, improved sanitation, improved housing, dwelling ownership, and internet compared to other non-IDP urban households. Moreover, urban non-settlement IDPs suffer from lower enrollment, literacy, and employment rates. They also tend to live further away from primary schools and food markets. Thus, urban non-settlement IDPs are worse off than the rest of the urban population as they have likely become deprived of their former livelihoods, assets, social networks due to displacement and they have more limited access to services. Moreover, they are at a disadvantage in levels of education, which may prevent them from finding good jobs. Accordingly, without any concerted support, urban non-settlement IDPs are likely to remain worse-off across many dimensions compared to other urban non-IDP households. (Figure 2.54, Figure 2.55).

Urban IDPs face more limited freedom of movement compared to other urban households. This could be due to urban IDPs' general lack of money to be able to afford public transportation. Their perception of safety from crime and violence, trust in other people, trust in police, and levels of risk

FIGURE 2.56 ■ Urban IDPs' perception of safety



Source: Authors' calculations based on the SHFS 2017–18.

aversion are not significantly different from other urban households. This signifies that the main barrier urban IDPs face is adequate access to money, services, land and housing, and job opportunities, but they do not face any major social or psychological obstacles compared to other urban households (Figure 2.56).

Variations among urban host and urban non-host communities

Urban host communities are marginally poorer than urban non-host communities. Anecdotally, urban host communities—defined as communities who live in close geographical proximity with urban non-settlement IDPs—are believed to be worse off than urban non-host communities as they will be deprived of services, face more competition over limited resources and jobs, and have their social cohesion disrupted with the influx of IDPs. Yet, the data show that urban host communities and urban non-host communities share similar rates of poverty. There are also no significant differences in the poverty gap or proportion of households experiencing hunger in the last four weeks.

Urban host and non-host communities also appear to have a similar profile in access to services. Urban host and non-host communities have very similar levels of access to electricity, piped water, improved housing, own dwellings, improved sanitation, distance to health facilities, distance to primary schools, distance to markets, and access to Internet. There are no significant differences in literacy and enrollment rates, either.

Urban host communities have marginally higher trust in police and freedom of movement. However, there are no significant differences on the other indicators such as perception of safety from crime and violence and trust in other people.

To conclude, there are almost no differences in the standards of living between urban host and non-host communities. What can be derived from these findings is either that the effect of hosting IDPs has not yet materialized as the duration has been too short, as the average period of displacement of IDPs is 2 years, or that hosting IDPs does not result in deteriorated access to services, as the IDPs are self-contained in the settlements and have basic services provided for. The picture may change if the IDPs' stay in urban areas is prolonged and the levels of support from the humanitarian agencies declines.

Policy recommendations

Urban areas provide higher standards of living and better access to services than rural areas. But they lag in access to land and housing, which has been further constrained by the recent influx of the IDPs to cities. Seventy-five percent of the IDPs in Somalia reside in urban centers, settling on public and private lands within and in the outskirts of cities. The majority of returnees are considered

to have settled in cities as well. In Mogadishu, areas occupied by IDP settlements increased by 16 percent between 2013 and 2017. In Kismayo, the IDP-occupied area increased over seven-fold, and in Baidoa, it has more than tripled.[72] In the absence of security of land tenure, IDPs are highly vulnerable to forced eviction. For example, over 109,000 IDPs living in informal settlements across the country have been forcefully evicted between January and August 2017, 77 percent of which are concentrated in Mogadishu.[73] Due to forced eviction, many IDPs have shifted to the outskirts of cities, causing uncontrolled urban sprawl. Fifty-five percent of IDPs in Mogadishu now reside in the periphery of the city. The area occupied by IDP settlements in the fringes of Baidoa has increased by 177 percent in 2017. The number of IDPs in Kismayo tripled in 2017, and most of them have settled outside of the city.[74] Such spatial sprawl makes service provision difficult and costly, as new settlements are disconnected from the existing urban centers and infrastructure networks. Spatial fragmentation also inhibits IDPs' access to jobs and prevents cities from reaping the scale and agglomeration benefits.

For Somalia to reap the benefits of urbanization, the government needs to invest in two core elements of cities—land and coordinated infrastructure investments. The fundamental element in making Somali cities work is to establish a proper land administration system and effective land use planning. This will allow for a more controlled growth of the city and provision of security of tenure to the IDPs, many of whom prefer to settle in cities. The other important element is to make coordinated infrastructure investments. Data show that cities are better off in terms of infrastructure and service delivery compared to rural areas. However, the absolute level of infrastructure and service delivery is still low across urban areas. To make a dent in the soaring demand, cities need coordinated investments—rather than ad hoc single sector interventions—aligned with the land use plan to take advantage of the synergy across different types of infrastructure. For example, the government can maximize the benefits of infrastructure investments by coupling road construction that link the new satellite townships and the existing urban fabric with the extension of basic services and housing.

Investments in cities need to be spatially differentiated to better address the regional disparities. Given the significant regional disparities and idiosyncratic development needs across different urban areas, interventions in cities will need to be prioritized and sequenced according to local contexts. For example, Mogadishu has high monetary poverty but relatively good access to services, while Kismayo has very low poverty incidence but lacks most of the basic services. Thus, detailed assessments at the city level are necessary to better understand the symptoms and the drivers of constraints to urbanization in each city to derive the most appropriate solutions. Political economy must be considered in crafting and implementing any policies. It is essential to foresee the opportunities, risks, winners, and losers of any specific policies, and anticipate challenges to enforce the policies.[75]

Within cities, the needs of non-settlement IDPs should be addressed along with the needs of settlement IDPs. Such assistance should be provided through area-based approaches to ensure equity among different vulnerable urban population groups. Much of the attention to date has focused on assisting urban IDPs living in settlements as they were deemed the most deprived. Nevertheless, the data show that urban non-settlement IDPs are equally deprived of access to services as IDPs in settlements. Moreover, they consistently fare worse on all development outcomes compared to other urban households. The urban non-settlement IDPs are difficult to track as they have integrated into local areas. It would therefore be important to ensure that urban interventions take an area-based approach that prioritizes areas that have a high concentration of the non-settlement IDPs as well as the urban poor, rather than a population group-based approach focusing solely on IDPs in settlements, so that all vulnerable urban population can benefit from development interventions. In so doing, it is essential to ensure that any development is aligned with the broader urban development plans.

[72] UN-Habitat calculation (2017).
[73] Norwegian Refugee Council (2017).
[74] World Bank, Somalia Drought Impact and Needs Assessment (2018c). Urban chapter.
[75] Lall, et al. (2017)

It is important to continue to help strengthen the state institutions, particularly at the subnational level. People's confidence in state institutions is relatively high. Given Somalia's nascent political history, it would be critical for all development partners to continue to help strengthen the government institutions by channeling development assistance and resources through them rather than through parallel structures. In doing so, more focus can be shifted to the subnational governments, namely the state and municipal governments, as they are ultimately accountable for providing services to their constituents.

CHAPTER 3

Drought Impact

KEY MESSAGES

Several consecutive seasons of poor rainfall led to a severe drought in Somalia, as one in two Somalis faced acute food insecurity and close to 1 million were displaced in 2017. Four consecutive below-average rainy seasons between April 2016 and December 2017 resulted in a severe drought. The drought exacerbated food insecurity among Somalis, with 6.2 million, half the population, facing acute food insecurity in 2017. Lack of water and pasture decimated livestock herds and threatened livelihoods, as 1 million Somalis were displaced due to the drought. Swift humanitarian interventions averted famine in 2017.

The drought affected Somalis in rural areas severely, who were 24 percent more likely to be poor and 17 percent more likely to experience hunger. The drought led rural households' consumption to decline by 18 percent, corresponding to an increase of 24 percent in the probability of being poor. The effect was stronger for wealthier households. Rural drought-affected households were also 17 percent more likely to experience hunger. High drought exposure did not lead to an increase in poverty or hunger among urban households.

Rural households are vulnerable to further income shocks. The drought's impact on rural households indicates that these households are vulnerable to income shocks. A renewed shock of the same magnitude as the current drought would increase poverty in rural areas by 11 percentage points, from 65 percent to 76 percent.

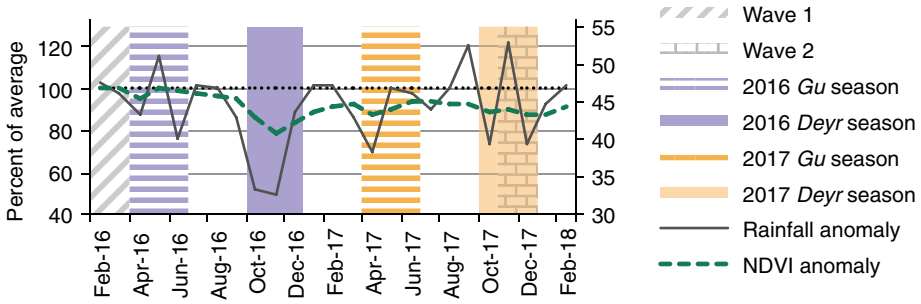
Investment in resilience is key to prevent loss of livelihood of the most vulnerable rural households. Rural households relying on agriculture for their income and those lacking access to financial services and infrastructure are the most vulnerable to income shocks. Investing in the resilience and access of these households is key to prevent loss of livelihoods. Measures may include providing insurance products, enabling households to diversify their sources of income, and improving access to infrastructure.

The Horn of Africa is experiencing a severe drought, triggering a regional humanitarian crisis including elevated levels of food insecurity and malnutrition.[76] At least three consecutive seasons of poor rains between March 2016 and December 2017 resulted in a drought that left 14.6 of 120 million facing severe food insecurity as of late 2017.[77] Large-scale humanitarian interventions provided critical relief to affected populations and reduced the risk of famine. Slightly improved rains in late 2017 and early 2018 eased the drought condition, but food insecurity in the Horn of Africa remains a serious concern.[78]

High seasonal weather variability and El Niño-La Niña events make droughts a recurrent phenomenon in this region. In Somalia, for example, drought conditions have developed at least 13 times since 1964, with varying durations and intensities.[79] Several of these droughts—coupled with prolonged conflict and insecurity, governance failures, and inadequate intervention—resulted in famines. This led the international and donor communities to initiate two early warning and monitoring projects, the FAO-managed Food Security and Nutritional Analysis Unit (FSNAU) in 1995 and the USAID-funded Famine Early Warning Systems Network (FEWSNET) in 1985. These two projects collaborate to build resilience and facilitate humanitarian

[76] The Horn of Africa comprises four countries: Djibouti, Eritrea, Ethiopia, Somalia.
[77] UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs) (2017b); FEWSNET (2017).
[78] FSNAU and FEWSNET (2018).
[79] Centre for Research on the Epidemiology of Disasters (CRED) (2017).

FIGURE 3.1 ■ Rainfall and NDVI anomaly and overview of rainy seasons, all regions



Source: FEWSNET, WFP-VAM, and authors' calculations based on the SHFS 2017–18.

response in the event of impending drought and food insecurity crises in the Horn of Africa.

Famines proceeded the droughts in 1992 and 2011, as armed conflict impeded humanitarian interventions. In 1992 and 2011, consecutive seasons of poor rainfall largely concentrated in south and central Somalia led to droughts and declines in food and livestock production. Civil conflict and insecurity compounded the food shortages, as food resources were either destroyed or looted and many local markets were disrupted, cutting people off from food supplies. Informal coping mechanisms were eroded, and humanitarian relief operations were impeded from accessing the populations most in need. The 1992 crisis started in the immediate aftermath of the disintegration of the central state in 1991, which was accompanied by widespread civil and sectarian strife. In 2011, Al-Shabaab and clan militias controlled the most affected regions. The resulting famines claimed 220,000 lives in 1992 and 260,000 lives between 2011 and 2012.[80]

The 2016/17 drought and its effects

Weather conditions in 2016/17 have been particularly extreme and erratic in Somalia. Somalia has two main rainy seasons; the main *Gu* rains from April to June and the short *Deyr* rains from October to December. The drought started with the 2016 *Gu* rains, which were below average, erratic, or shorter than usual, especially in southern and central regions (Figure 3.2).[81] Subsequently, the 2016 *Deyr* rains performed very poorly with most regions experiencing less than 40 percent of average rainfall (Figure 3.3).[82] This particularly severe rainfall deficit exacerbated pre-existing food insecurity. The 2017 *Gu* rains were around normal in intensity and duration in northern regions, but altogether well below average in southern and central regions. The 2017 *Gu* rains thus further aggravated food insecurity in the affected regions.[83] Most recently, the 2017 *Deyr* rainy season was erratic, and total rainfall ranged between 10 to 60 percent below average in most regions (Figure 3.1).[84]

One in two Somalis faced acute food insecurity in 2017, while one in four required urgent humanitarian assistance. Each successive failed rainy season in 2016 and 2017 exacerbated the food insecurity among Somalis. By the mid-2017, 6.2 million Somalis, half the population, faced acute food insecurity based on the Integrated Phase Classification (IPC) for food insecurity (Table A.1).[85] Among those facing acute food insecurity, 2.4 million people needed humanitarian assistance to avert loss of livelihoods and reduce acute malnutrition (IPC Phase 3—Crisis). 866,000 people required urgent food assistance to avert famine (IPC Phase 4—Emergency), among whom 300,000 children below five

[80] Salama, et al. (2012); FSNAU and FEWSNET (2013).

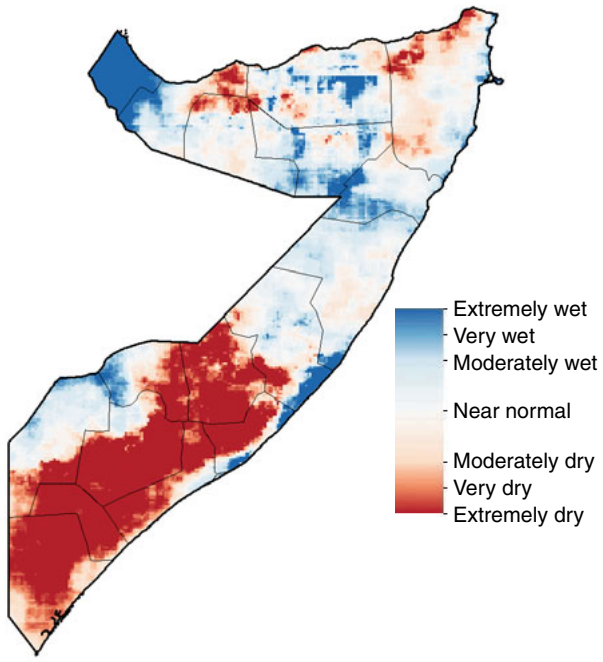
[81] FEWSNET (2016).
[82] FSNAU and FEWSNET (2017b).
[83] FSNAU and FEWSNET (2017a).
[84] FSNAU and FEWSNET (2018).
[85] The Integrated Phase Classification (IPC) is a harmonized and internationally comparable system of classification of severity and magnitude of food insecurity, which was first developed in 2004 and revised in 2012. Food insecurity is classified in five phases: Phase 1—Minimal; Phase 2—Stressed; Phase 3—Crisis; Phase 4—Emergency; Phase 5—Famine (Table A.1).

were acutely malnourished.[86] Humanitarian interventions averted a famine in 2017. The combination of humanitarian assistance and slightly better rains led to an improvement in food security, with 4.4 million Somalis facing acute food insecurity in early 2018 (Figure 3.6). Vulnerable rural, nomadic, and IDP populations remain at risk given the higher prevalence of hunger. Forty-four percent of rural, 50 percent of nomadic, and 60 percent of IDP households experienced hunger at least on a few occasions in December 2017 (Figure A.1).

The drought severely affected livestock, a key source of livelihood for Somalis. Livestock body conditions worsened atypically in early 2017 as water stocks and pasture deteriorated, leading to a decline in the market value of livestock and poor milk production. Low birth rates, high livestock deaths, and distress selling caused pastoralists to lose between 25 and 75 percent of their herds in the first half of 2017.[87] Given low livestock supply, livestock market prices increased in the second half of 2017. Improved water availability in July 2017 induced a slow recovery of herd sizes and body conditions, though several consecutive favorable rainy seasons will be necessary for herd sizes to fully recuperate.[88] The drought-related damages and losses in the livestock sector were estimated at US$1.6 billion and an additional US$400 million in losses from reduced livestock exports was expected for 2018.[89]

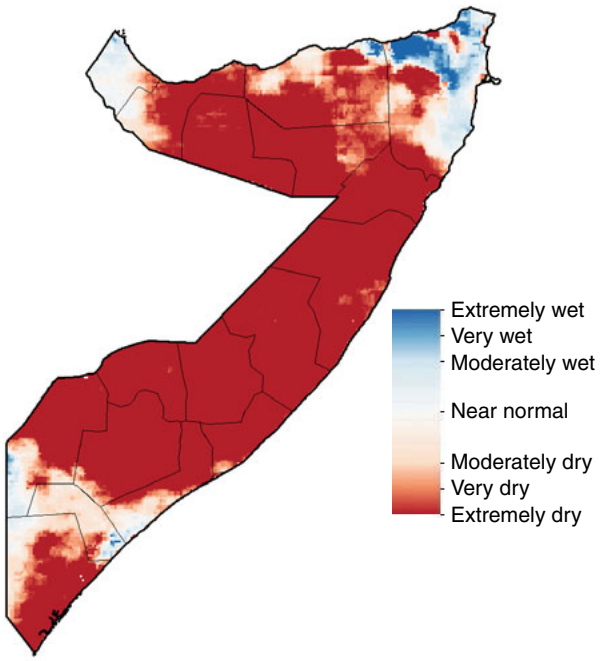
Food production fell below average and prices for food and water rose in 2016 and 2017. Cereal harvest was at least 10 percent below average in the southern main crop producing areas for four consecutive seasons. The post-*Deyr* harvest in 2017 was one of the poorest on record at 68 percent below 1995–2015 average, though harvest yields were expected to improve somewhat in 2018. Cereal production in the North West also performed poorly, particularly in 2017.[90] In combination, the drought has caused crop production damages and losses estimated at above US$300 million.[91] In the first half of 2017, local cereal prices increased between 32 and 70 percent above the long-term

FIGURE 3.2 ■ 2016 *Gu* precipitation



Source: USGS/FEWSNET/Funk, et al. (2015).

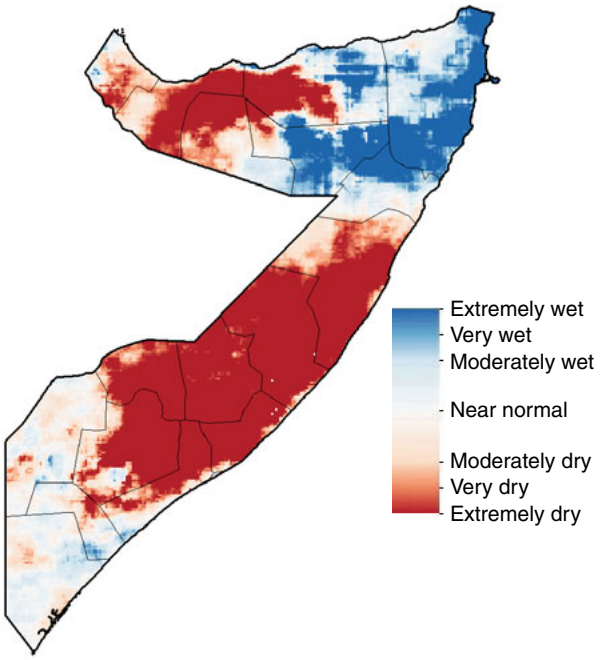
FIGURE 3.3 ■ 2016 *Deyr* precipitation



Source: USGS/FEWSNET/Funk, et al. (2015).

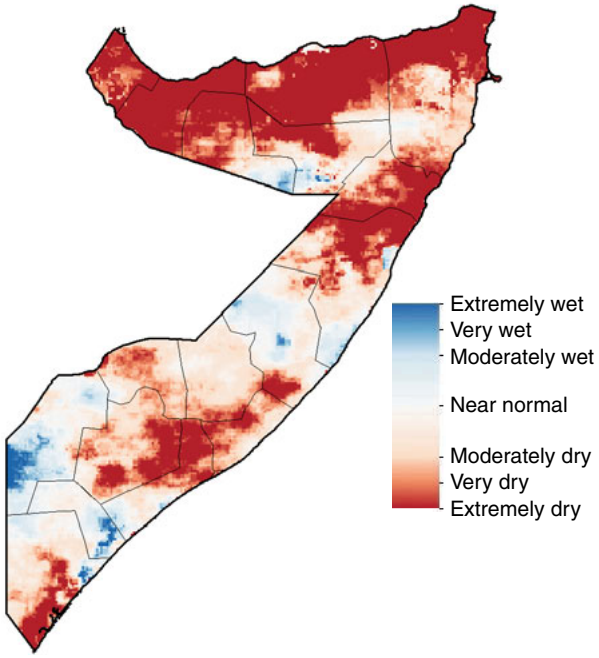
[86] FSNAU and FEWSNET (2017b).
[87] FSNAU and FEWSNET (2018).
[88] FSNAU and FEWSNET (2018).
[89] World Bank (2018c).
[90] FSNAU (2016b); FSNAU (2016a); FSNAU (2017); FSNAU and FEWSNET (2017c); World Bank (2018c).
[91] World Bank (2018c).

FIGURE 3.4 ■ 2017 *Gu* precipitation



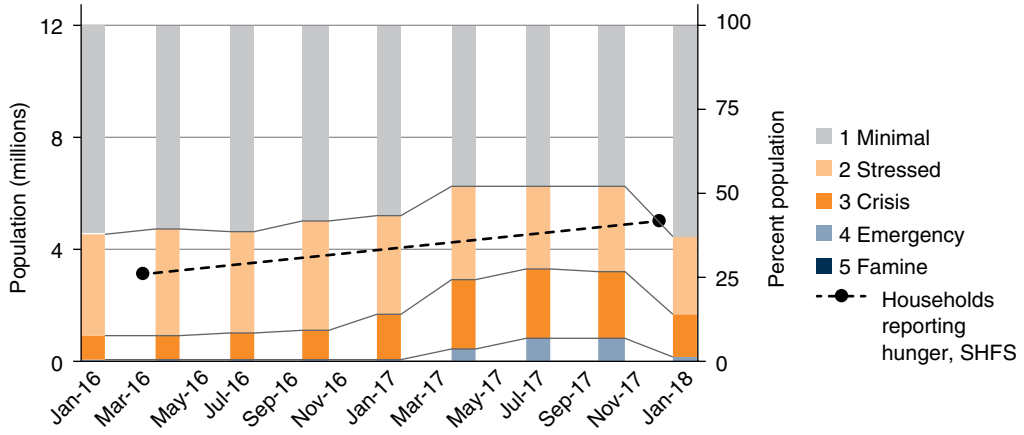
Source: USGS/FEWSNET/Funk, et al. (2015).

FIGURE 3.5 ■ 2017 *Deyr* precipitation



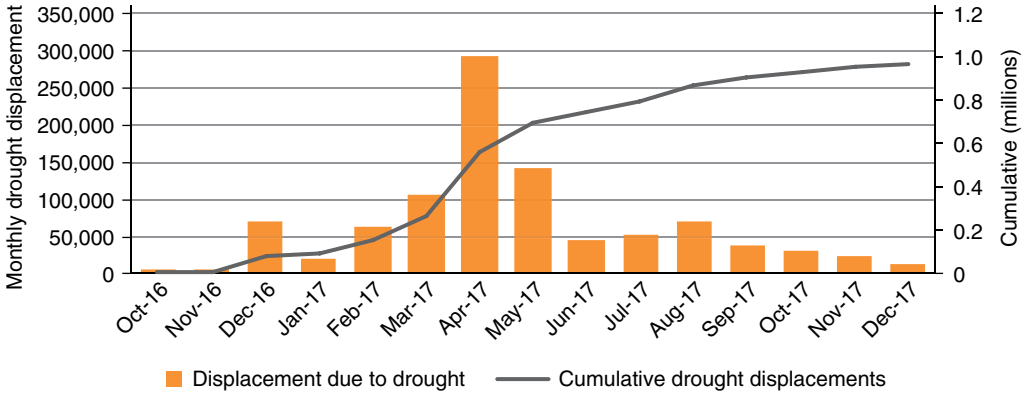
Source: USGS/FEWSNET/Funk, et al. (2015).

FIGURE 3.6 ■ Population facing food insecurity, all regions



Source: FSNAU data, authors' calculations based on the SHFS 2017–18.

FIGURE 3.7 ■ Internal displacement due to drought



Source: UNHCR (2018a).

average in central and southern regions and between 12 and 27 percent above average in northern regions. Humanitarian supply alleviated some shortages and imported cereal prices remained mostly stable. Local cereal prices stabilized somewhat in early 2018, though they remained up to 17 percent above average. The drought further drove up water prices in 2017, which remained between 11 and 56 percent above average in early 2018.[92]

Higher food prices, lower wage levels, and depleted assets diminished the purchasing power and coping abilities of Somali households. Weak demand for labor in the agricultural sector reduced wage levels in 2017.[93] As household incomes declined, food stocks and livelihood assets depleted in 2017. Combined with higher food and water prices, this significantly worsened households' purchasing power.

Lack of clean water and sanitation created conditions for large-scale outbreaks of diseases like cholera and measles. Drought conditions reduced the availability of water necessary for proper hygiene and sanitation and increased the risks of remaining water being contaminated. These factors contributed to large-scale outbreaks of measles and acute watery diarrhea (AWD)/cholera. Inadequate access to health facilities worsened this epidemic. At the end of 2017, there were around 20,000 reported cases of measles and close to 80,000 reported cases of AWD/cholera.[94] However, the spread of AWD/cholera slowed considerably in the second half of 2017, with no fatalities related to the disease reported since August (Figure A.3).[95]

Close to one million Somalis were displaced between 2016 and 2017. With the drought threatening livelihoods, more and more households have been forced to leave their permanent place of residence in search of assistance from the government and international actors. Before the onset of the drought in 2016, an estimated 1.1 million IDPs already lived across Somali regions. The drought forced an additional 1 million people into displacement between 2016 and 2017. Drought-driven displacement surged when the effects of the drought were particularly severe, in the aftermath of the 2016 *Deyr* and 2017 *Gu* rainy seasons (Figure 3.7).

The humanitarian response to the current crisis was coordinated and swift, reaching up to 3 million people through 2017. Humanitarian access is better than in previous crises in 1992 and 2011, where conflict and insecurity impeded humanitarian efforts and led to famine. Early warning systems and monitoring enabled government actors and humanitarian partners to intervene and mount a response program of US$1.2 billion in cash and livelihood support and health, nutrition, and WASH

[92] FSNAU and FEWSNET (2017a); FSNAU and FEWSNET (2018).
[93] FSNAU and FEWSNET (2017c).
[94] UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs) (2017b).
[95] UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs) (2017b).

Box 9 ■ The World Bank's response to the drought

Emergency Drought Response and Recovery Project. The World Bank mobilized US$50 million in grants through IDA's Crisis Response Window to respond to the crisis in 2017. The World Bank partnered with the International Committee of the Red Cross (ICRC) and the UN Food and Agriculture Organization (FAO), supporting ICRC with US$20 million and FAO with US$30 million. The project's objective was to address the immediate needs of drought-affected Somalis and support resilient recovery by providing livelihood support and aid the restoration of agricultural and pastoral production. The effort was estimated to directly support up to 523,000 Somalis through food in-kind and unconditional cash transfers, as well as 109,800 persons from rural areas through Cash-for-Work and unconditional cash transfers paired with emergency livelihood inputs. It also aimed to provide safe drinking water for up to 656,000 Somalis by rehabilitating water sources and providing water storage and treatment, and improved access to health care. The response further treated, vaccinated, and fed up to 8.5 million livestock.

Drought Impact and Needs Assessment and Recovery and Resilience Framework. The World Bank, along with the UN and the EU, supported the Somali government in carrying out a Drought Impact and Needs Assessment (DINA) and a subsequent Recovery and Resilience Framework (RRF). The goal is to assess and value the impact of the drought on lives and livelihoods in Somalia, identify the root causes of recurrent drought, and develop a strategy for recovery and resilience.

interventions.[96] The effort reached up to 3 million Somalis per month and contained food insecurity, water shortages, and the further spread of communicable diseases (Figure A.3). Funding requirements for 2018 are US$1.5 billion, of which 85 percent are so far unmet.[97]

Drought impact on welfare and livelihoods

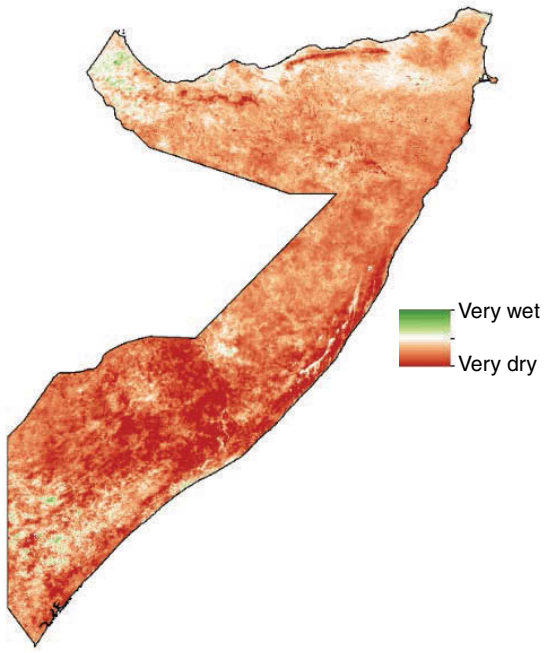
The Somali High Frequency Survey provides unique data to quantify the drought's impact on poverty, consumption, and livelihoods. Wave 1 collected data in February 2016, immediately before the drought, and Wave 2 was implemented in December of 2017 when the drought had taken hold of Somali regions, interviewing households in severely and less drought-affected regions. Both waves collected high-quality household data, especially information on consumption and poverty. The breadth of information and the timing of data collection facilitated an in-depth assessment of the effect of the drought crisis on poverty by comparing outcomes from more and less drought-affected households before and during exposure to drought.

Measuring the drought's impact

The Normalized Deviation Vegetation Index is used to determine households' level of drought exposure. The Normalized Deviation Vegetation Index (NDVI) is a measure of vegetation health for any given region over time. It is used here to quantify drought severity in surveyed areas, as below-average NDVI values imply dry conditions and below-average vegetation health. NASA's MODIS Terra and Aqua platform provides the daily global NDVI data at 250m resolution, which serves as the source of data for this analysis.[98] The percentage deviation of the NDVI during the 2016 *Deyr* and 2017 *Gu* rainy seasons, relative to the pre-drought 2012–2015 average, in a 25 kilometer radius around each household, determines each household's level of drought exposure (Figure 3.8, Figure 3.9). The 2016 *Deyr* and 2017 *Gu* rainy seasons are the evident choice for quantifying drought exposure, as weather anomalies in the 2016 *Deyr* and 2017 *Gu* rainy seasons were the key drivers of the current drought (see above). Households' level of drought exposure ranges from NDVI values of 6 percent above average to 20 percent below average in

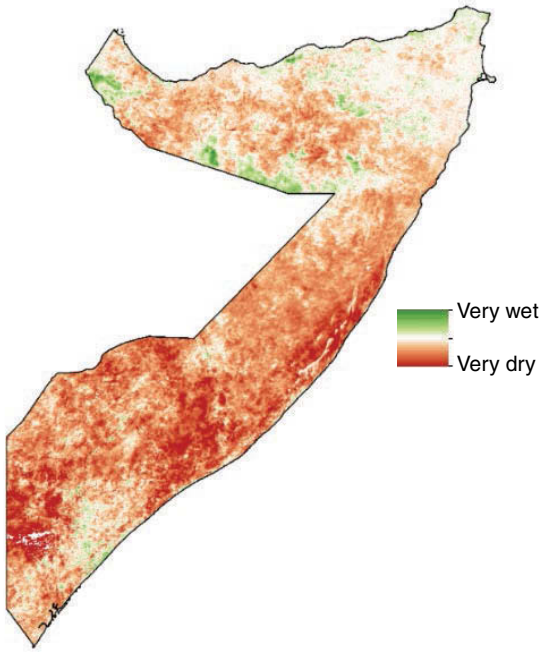
[96] FAO (Food and Agriculture Organization of the United Nations) (2012).
[97] FAO (2012); Food Security Cluster (2018); UNOCHA (2018c).
[98] Schaaf (2015).

FIGURE 3.8 ■ NDVI deviation, 2016 *Deyr* season



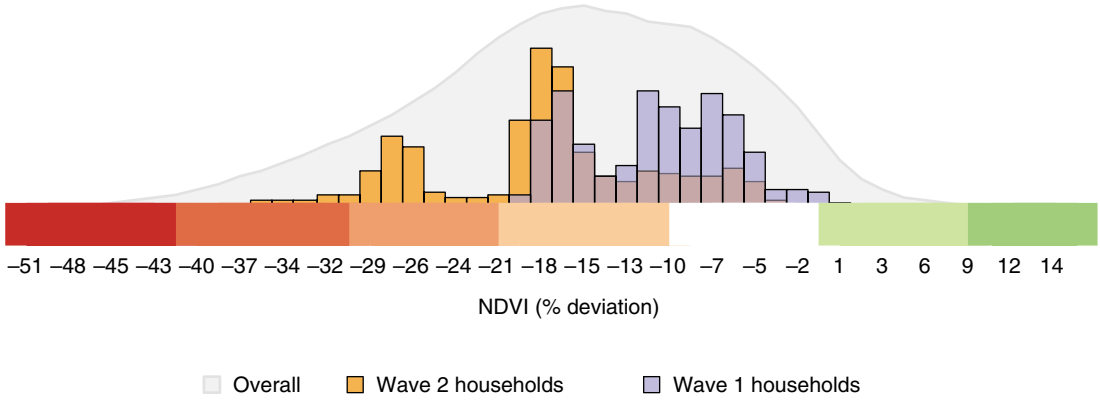
Source: Authors' calculations based on MODIS NDVI.

FIGURE 3.9 ■ NDVI deviation, 2017 *Gu* season



Source: Authors' calculations based on MODIS NDVI.

FIGURE 3.10 ■ Distribution of drought exposure, Overall, Wave 1, Wave 2

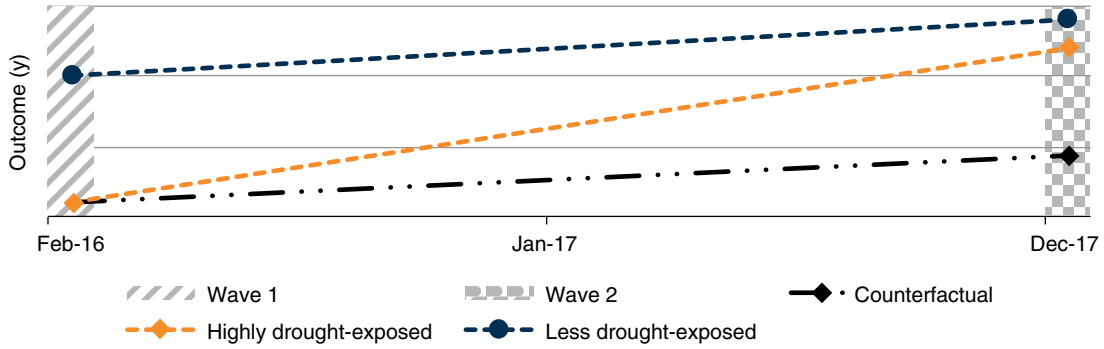


Source: Authors' calculations based on MODIS NDVI and the SHFS 2017–18.

Wave 1, and from 4 percent above average to 36 percent below average in Wave 2, reflecting the overall spectrum of drought severity (Figure 3.10). The NDVI measure also correlates significantly with households' self-reporting to be drought affected.

The drought impact is estimated using a difference-in-differences model. The difference-in-difference approach is used to compare households' level of poverty, consumption, and other outcomes of interest before and after exposure to the drought. Wave 1 captured household outcomes before the beginning of the drought in early 2016. Hence, none of the households interviewed in Wave 1 were affected by the drought. Wave 2 captured outcomes after the drought had set in in late 2017. The approach relies on the fact that some households in Wave 2 were more drought-exposed than others, because the intensity of the drought differed across Somalia (Figure 3.10). To assess the impact

FIGURE 3.11 ■ Illustration of difference-in-differences approach



Source: Authors' calculations based on the SHFS 2017–18.

of the drought on poverty and consumption, the difference-in-difference approach compares how much poverty and consumption changed between Wave 1 and Wave 2 for households in highly drought-exposed areas, to how much poverty and consumption changed for households in less drought-exposed areas over the same period of time. That is, if households in highly drought-exposed areas experienced a larger increase in poverty than households in less drought-exposed areas, the interpretation is that the drought made these households poorer (Figure 3.11).[99] The validity of this interpretation rests on the assumption that changes in poverty, and other outcomes of interest, between Wave 1 and Wave 2 would be similar for the compared households had the drought not happened. To make this comparison more credible, the estimation controls for various observable characteristics of, and factors affecting, households (Appendix C). The drought effect is estimated in a regression, using ordinary least squares (OLS) or Probit as appropriate (see Appendix C).

The drought impact is estimated for urban and rural households in regions covered in Wave 1 and Wave 2. The analysis focuses on urban and rural households. It excludes IDP and nomadic households to make Wave 1 and Wave 2 households credible comparison groups. Large-scale drought-related displacement implies that IDP populations before the drought in Wave 1 were different from IDP populations surveyed during the drought in Wave 2. Nomadic households do not have a permanent place of residence, so a geographical treatment assignment is meaningless. The analysis sample consists of urban and rural households in all regions covered in Wave 1 and Wave 2. Geographical coverage across waves is different, as additional regions were surveyed in Wave 2. The lack of complete geographical overlap impedes controlling for regional idiosyncrasies of regions covered in Wave 2 only at baseline. This implies that a common trend between these regions and others must be assumed rather than controlled for. As a robustness check, the analysis will include a specification of only overlapping Wave 1 and Wave 2 areas, allowing for a genuine region fixed effect. The additional specification restricts the analysis to urban households in Mogadishu and North West and to rural households only in North West. This limits the appeal of the additional specification because it reduces the analysis to estimating a localized rather than global drought-effect.

Drought impact on poverty, consumption, and hunger

Highly drought-exposed rural households are 24 percent more likely to be poor. In rural areas, an increase in drought exposure of one standard deviation led to a decline in consumption of 19 percent, where one standard deviation means a 7 percentage-point loss in NDVI. The reduction in consumption corresponds to an increase of 24 percent in the probability of being poor. The drought had no effect on poverty and consumption among urban households (Table 3.1).

The drought's impact on consumption is larger for less poor rural households. Implementing the difference-in-differences model with controls through quantile regressions allows assessing

[99] Imbens and Wooldridge (2007).

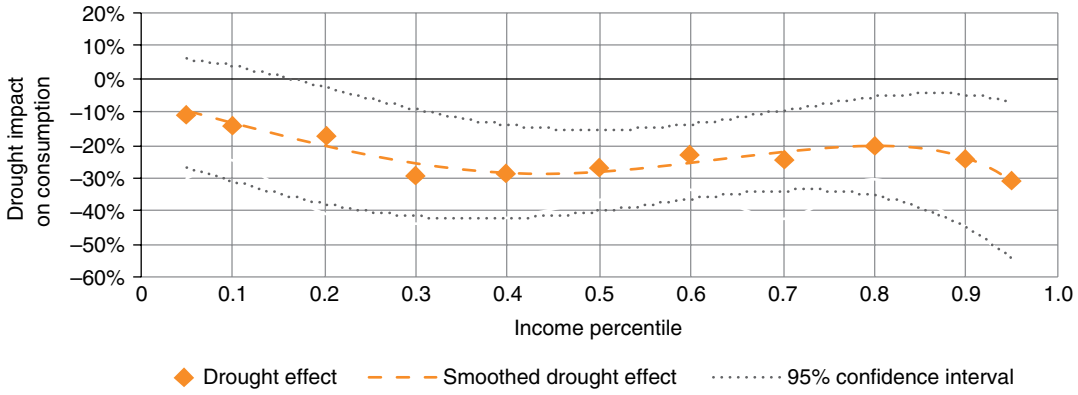
TABLE 3.1 ■ Drought impact on poverty and consumption

	(I)	(II)	(III)
Sample	**Full urban + rural sample**	**Full urban sample**	**Full rural sample**
Outcome variable		Poverty status	
Drought impact	0.00635	0.00696	0.238***
S.E.	(0.0485)	(0.0562)	(0.0880)
Outcome variable		ln (core consumption)	
Drought impact	0.00478	0.00461	–0.189**
S.E.	(0.0370)	(0.0338)	(0.0876)
Controls	Yes	Yes	Yes
Observations	7,214	5,678	1,536
R-squared	0.348	0.347	0.520

Source: Authors' calculations based on the SHFS 2017–18.

Note: ***p<0.01, **p<0.05, *p<0.1. Poverty status results estimated using Probit, Consumption results estimated using OLS. Drought effect expressed in standard deviations of NDVI loss. Standard errors (S.E.) are reported in the table.

FIGURE 3.12 ■ Drought effect along the income distribution, rural areas

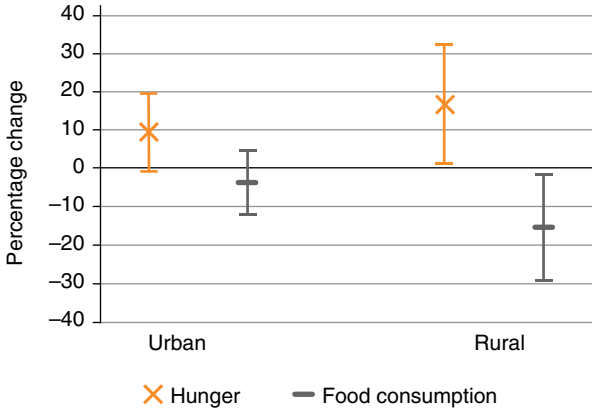


Source: Authors' calculations based on the SHFS 2017–18.

the drought's impact on consumption at different points along the income distribution. In urban areas, that impact is around zero at all points of the income distribution (Figure A.4). In rural areas, the drought affected poorer and wealthier households heterogeneously: higher drought exposure had no significant impact on consumption for the poorest 10 percent of rural households, reduced consumption by 17 percent for rural households at the twentieth percentile, and by between 20 and 30 percent for the top 80 percent of rural households (Figure 3.12). Varying levels of drought exposure along the income distribution do not explain these differences, as the median drought intensity among the poorest 10 percent of households is similar to the overall average. With an average poverty gap of 72 percent, this group is very poor. It is unlikely that these households were able to cope with the drought shock more effectively than wealthier households. Instead, it is more plausible that the drought affected them to the extent that they could not sustain their livelihoods and were driven into displacement.

Highly drought-exposed rural households are more likely to experience hunger. As levels of hunger rose across all Somali regions (Figure 3.6), rural households in highly drought-exposed areas were most severely affected. Higher drought exposure led to a 13 percent decrease in food consumption,

FIGURE 3.13 ■ Drought effect on hunger and food consumption



Source: Authors' calculations based on the SHFS 2017–18.

accompanied by a 19 percent increase in the probability of experiencing hunger in December 2017. Urban households were not similarly affected (Figure 3.13).

Policy recommendations

The drought affected rural households severely, indicating vulnerability to income shocks. Higher levels of drought exposure had no significant consumption effect among urban households, regardless of their level of income. Drought intensity was similar in urban and rural areas. This indicates that drought-exposed urban households, including poor urban households, more effectively coped with this shock than rural households, who were more likely to be poor and experience hunger. The drought further had a larger impact on wealthier rural households, while the poorest rural households may have lost their livelihood and become displaced. It affected rural households across all Somali regions, as the impact on poverty and consumption was significant and similar in magnitude in different regional specification (Table A.4, Table A.5). The drought's impact on poverty and consumption among rural households shows that they are vulnerable to income shocks. The analysis in Chapter 4 provides further insight into rural households' vulnerability to shocks.

Another income shock could increase rural poverty by 11 percentage points. The detailed results from difference-in-differences analysis allow an assessment of how a renewed income shock of the same magnitude as the 2016/17 drought would affect rural households. To model another income shock, the quantile regression estimates of the drought's effect on household consumption at different points along the income distribution (Figure 3.12) are applied to the 2017 Somali High Frequency Survey data. Based on this simulation, a renewed income shock could increase rural poverty by 9 percentage points, from 65 to 76 percent (Figure 3.14).

Box 10 ■ Assessing the robustness of the difference-in-differences estimates

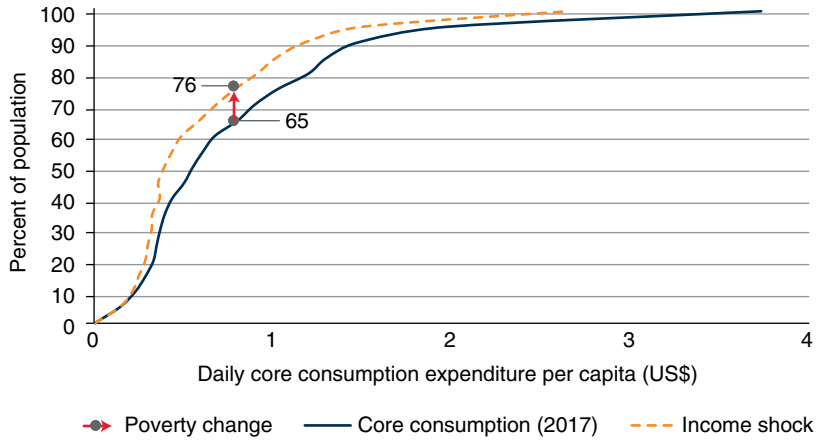
The main results were tested for robustness in several ways. The robustness of the results of this chapter were tested for the inclusion and exclusion of control variables, the exclusion of various Somali regions, and with overlapping Wave 1 and Wave 2 regions only.

Inclusion and exclusion of control variables. The drought has a significant effect on poverty and consumption among rural households regardless of which group of the defined control variables is included, and also without any controls (Table A.3).

Exclusion of regions. The drought's effect on poverty and consumption is not driven by any one region. The results hold up in several reduced samples, in which any one region covered in Wave 2 only was excluded at a time (Table A.4). Estimates are of similar magnitude.

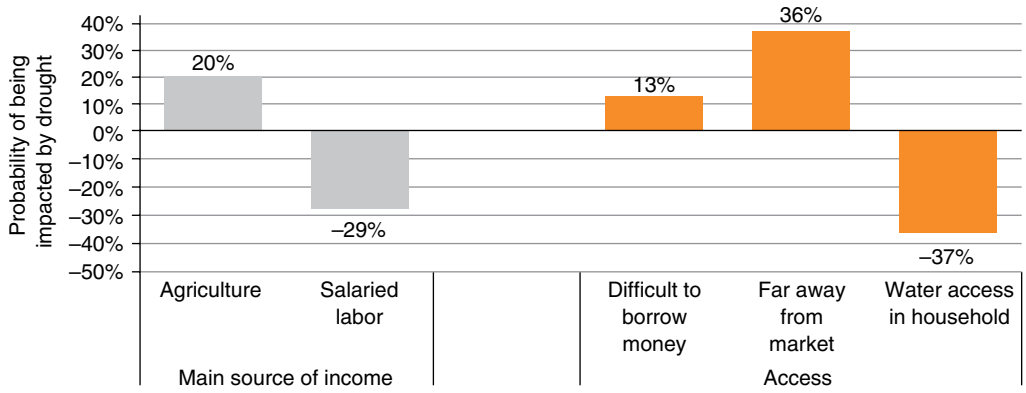
Overlapping sample only. All presented results hold in the overlapping sample as well. The various estimated drought effects of interest are slightly more pronounced than in the full sample (Table A.5).

FIGURE 3.14 ■ Simulation of income shock among rural households



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 3.15 ■ Correlates of drought-impacted rural households



Source: Authors' calculations based on the SHFS 2017–18.
Note: Coefficients from Probit regression with self-reporting to be impacted by the drought as dependent variable. Regression with controls for drought exposure measured by NDVI, household income, and region. All reported results significant at the 5% level.

Vulnerable rural households rely on agriculture and lack access to infrastructure and services. Rural households in Wave 2 more often reported being impacted by the drought than urban households. Among rural households, those relying on agriculture as their main source of income were 20 percent more likely than average to be impacted by the drought, even when controlling for location, income, and households' level of drought exposure as measured with NDVI. In contrast, rural households relying on salaried labor were 29 percent less likely than average to be impacted. Rural households without access to water in the dwelling, agricultural households more than an hour away from the nearest food market, and households who struggle to borrow money in an emergency were also more likely to be impacted by the drought. Agricultural households and those lacking in access to infrastructure and services are thus particularly vulnerable to income shocks.

Investment in rural resilience is paramount to avoid loss of livelihoods among vulnerable households. The drought made rural households worse off and thus likely exacerbated existing vulnerabilities. A renewed income shock could threaten livelihoods of the most vulnerable. Investing in resilience is key to reduce vulnerabilities and avoid livelihood loss. Agricultural households may benefit insurance products as well as measures facilitating the diversification of income sources. Investment in infrastructure and basic services could further improve rural households' resilience.

CHAPTER 4

Displacement

KEY MESSAGES

IDPs and refugees are overwhelmingly young. Over one in two IDPs is under 15 years old, and less than 1 percent are above 64 years old. The large proportion of children drives high dependency ratios—IDP households have dependency ratios larger than one, indicating that for each working-age member there is a child who must be provided for.

IDPs are poorer and have worse living conditions than the average Somali resident. Although almost 7 in 10 Somali residents are poor, over three in four IDPs live on less than $1.90 per day, and more than one in two IDP households go hungry. Large numbers of IDPs must share essential amenities such as toilets, crowding out the improved WASH facilities in settlements. Compared to host communities, IDPs in settlements are also further away from essential facilities such as primary schools, health centers, and markets.

IDPs also have lower human capital than others. IDPs of school-going age (6 to 17 years old) are less likely to attend than urban residents. Adult IDPs are less likely than urban residents to be able to read and write. The educational outcomes of the IDP population are closer to rural outcomes and lag urban ones. However, most IDP households (three in four) are in urban areas. These gaps in educational attainment are particularly crucial since half the Somali population is less than 15 years old. As the young population matures, there is a risk that these lags in educational attainment for IDPs will translate to persistent, lifelong gaps not only in education, but also in employment and overall well-being.

Urban livelihoods today differ significantly from IDPs' and refugees' pre-displacement livelihoods, indicating a need for adjustment as agricultural income is squeezed out. IDP livelihoods before displacement consisted of a mix of salaries, small businesses, and agriculture, while urban livelihoods today consist largely of salaries, followed by remittances. Agricultural income has been squeezed out over the course of displacement, and many IDPs are employed in helping with businesses, indicating an adjustment into the employment landscape of their new locations. IDPs today rely on a mix of salaries, small family businesses, and aid for household income. The contrast in livelihoods is even more stark for refugees, who have gone from a majority reliance on agriculture before displacement to virtually no agricultural income today, instead depending on aid.

IDPs receive relatively low remittances, indicating a lack of safety nets. Only 7 percent of IDP households rely on remittances as the primary source of livelihood. The average IDP household receives half the remittances of the average urban household. IDP households were as likely to rely on remittances after displacement as before, indicating that remittances do not serve as a safety net for displacement.

Some IDPs are better off than others. IDPs displaced by climate events are poorer and have worse housing quality than those displaced by conflict. IDPs who are in protracted displacement—mostly in urban areas—have better access to health care. IDP households headed by a woman get only one-sixth the amount of remittances that IDP households headed by a man get.

Most IDPs report a preference to stay in their current locations, but this would require substantial urban investment. More than 7 in 10 IDPs want to remain in their current location, and 9 in 10 have not visited their original residence since they were displaced. Intentions to stay are likely motivated by security—a majority of IDPs cited security as the reason for choosing their current location, and 8 in 10 IDPs report feeling safe or very safe where they currently are. IDPs also perceive positive social relations with host communities, with 9 in 10 IDP households agreeing that they have good dealings with their surrounding communities. However, successful local integration for IDPs would require substantial investment in strained urban centers, which can currently only offer subpar living conditions to the displaced. The challenge of ensuring sustainable livelihoods for IDPs, who have come to urban centers and seem to be adjusting away from agriculture, also needs to be addressed.

—continued

KEY MESSAGES—continued

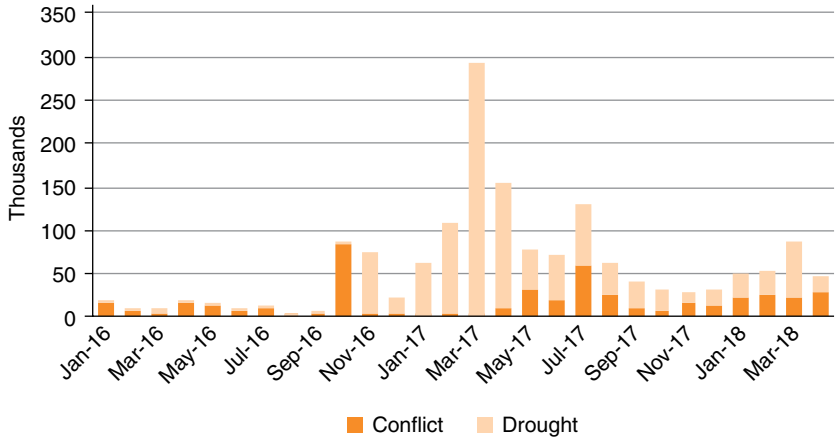
Somali refugees in Ethiopia do better than IDPs on certain current living conditions but worse on sustainable solutions. While refugees have lower poverty rates and poverty gap and better health outcomes, they do worse on parameters such as access to shared sanitation and electricity to charge phones. They also have lower adult literacy than IDPs and urban and rural residents. Their predominantly agricultural pre-displacement livelihoods have been wiped out, to be replaced by aid. The heavy dependence on aid and large levels of low participation in the labor force places refugees in a situation that may be addressing humanitarian needs but still leaves uncertainty on sustainable developmental solutions, especially for livelihood, education and resettlement/return.

Forced displacement is a massive humanitarian and development challenge in Somali regions. Over 926,000 people were displaced by drought between November 2016 and October 2017; and 171,000 were displaced by conflict. This represents only the latest wave of forced displacement in the country, adding to a pre-existing caseload of 1.1 million people estimated in 2014, who accounted at the time for almost 9 percent of the total population (FGS 2018). Additionally, over 877,000 Somali refugees live in neighboring countries, making them one of the largest refugee populations in the world.[100] Most Somali refugees reside in Yemen, Kenya, and Ethiopia.[101] Refugee returns to Somalia have increased in recent years, in part due to the Government of Kenya's decision to close Dadaab Refugee Camp in 2016, but the numbers remain low: over 52,000 Somalia refugees have been supported to return to Somalia since 2014, of whom 29,000 returned between January and June 2017. Forcibly displaced populations in Somali regions are thus a complex mix of IDPs, returnees, and the caseload of refugees seeking asylum within the country.

Addressing this challenge is complex and requires development as well as humanitarian policy responses. The longstanding development deficits and vulnerabilities of Somali regions, including in host communities, render it challenging to address the needs of forcibly displaced populations effectively. The persistent and cyclical nature of the drivers of migration and conflict contribute to entrenched conditions, which require a developmental, resilience-based approach to help affected populations cope with these shocks and stresses, combined with continuing humanitarian assistance to shore up basic needs.

[100] UNHCR (United Nations High Commissioner for Refugees) (2018b).
[101] Ibid.

FIGURE 4.1 ■ Number of displacements occurring by month, Jan 2016–Apr 2018



Source: UNHCR-PRMN, Jan 2016–Apr 2018.

Box 11 ■ Data on Somali refugees in Ethiopia comes from the Skills Profile Survey 2017

Data about IDPs, collected in the Somali High Frequency Survey (SHFS) is supplemented by data on Somali refugees in Ethiopia from the Skills Profile Survey (SPS) 2017. The SPS was conducted across Ethiopia in regions with high numbers of refugees. The survey population consists of refugees (South Sudanese, Eritrean, Somali, and Sudanese) living in camps in Ethiopia, and Ethiopian host communities within a 5-kilometer radius of a camp. The sampling frame was the list of all refugee camps in the four main regions of the country that host refugees: Tigray and Afar (hosting mostly Eritreans), Gambella (hosting South Sudanese), Benishangul Gumuz (hosting both Sudanese and South Sudanese), and Somali (Somalis). Refugees do not enjoy rights of freedom, nor possibility to work. A total of 871 Somali refugee households were surveyed, along with 303 host community households (Table 4.1).

TABLE 4.1 ■ Skills Profile Survey (SPS) 2017, Ethiopia

Stratum	Tigray Afar	Gambella	Benishangul Gumuz	Somali	Total
Refugees	894	439 *(438 South Sudanese)*	1423 *(399 South Sudanese)*	871	3627 *(837 South Sudanese)*
Host community	412	0	975	303	1690

Source: Authors' calculations based on the SPS 2017.

This chapter seeks to inform such approaches by examining the multiple dimensions of poverty among IDPs in Somali regions, as well as among Somali refugees in Ethiopia. The data highlight the micro effects of displacement across several dimensions, including poverty, health, food security, education, jobs, gender, housing, and services. The analysis considers the heterogeneity of affected populations, comparing several subsets of IDPs (those living in and out of settlements, displaced by conflict and climate, in male and female-headed households, recently displaced and in protracted displacement, displaced once and multiple times, and in rich and poor households), as well as host and non-host communities in urban areas, urban and rural residents, and the national population. This information provides a more comprehensive picture of displacement-related impacts and dynamics in Somali regions to better inform development-oriented, area-based solutions. The chapter also compares the situation of IDPs in Somali regions to that of the sizable Somali refugee population in Ethiopia, one of the largest recipient countries for Somali refugees.

Displacement profile

Demographic profile and household characteristics

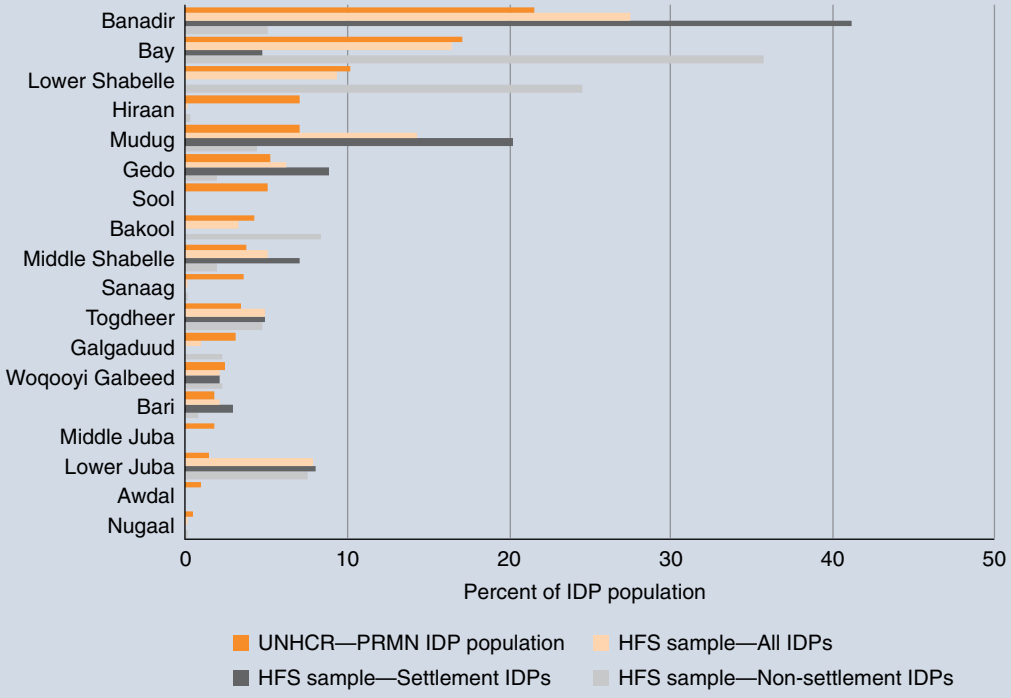
IDPs, non-IDPs, and Somali refugees alike are overwhelmingly young and skew slightly male. The demographic structure of IDPs and non-IDPs is almost identical. About 1 in 2 national residents[102] and IDPs, both in and out of settlements, are under 15 years of age (national residents: 47 percent; IDPs: 51 percent; settlement IDPs: 50 percent; non-settlement IDPs: 51 percent). About 2 in 3 are under 25 (national residents: 62 percent; IDPs: 65 percent). The majority of IDPs are thus children and youth. IDP and non-IDP households alike have slightly fewer women than men: women make up 48 percent of national residents, non-settlement IDPs, and settlement IDPs (Figure 4.3). Somali refugees in Ethiopia are even younger: 63 percent of such refugees are under 15.

[102] References to 'National residents', the 'national population', the 'urban population', 'urban residents', the 'rural population', 'rural residents', 'host communities', and 'non-host communities' in this chapter exclude IDPs and nomads.

Box 12 ■ Where are the IDPs? Timing of survey sampling and interpretation of spatial results

The chapter examines IDPs across Somali regions, and is nationally representative; however, the regional distribution of IDPs in the survey sample differs from that of other estimates. According to the SHFS data, IDPs are clustered in Banadir, Bay, Lower Shabelle, Mudug, and Lower Juba. This differs, however, from UNHCR's current PRMN data, which have IDPs clustered in Banadir, Bay, Lower Shabelle, Hiraan, and Mudug. In the SHFS sample, certain regions with substantial numbers of IDPs, including Hiraan and Sool, (which have 7 percent and 5 percent of the total IDP population, respectively) are under-sampled, while others such as Banadir, Mudug, and Lower Juba are oversampled (for instance, Banadir has 22 percent of the actual population but 28 percent of the SHFS sample, Figure 4.2).

FIGURE 4.2 ■ Regional distribution of IDPs, SHFS sample, and UNHCR PRMN data



Source: Authors' calculation based on the SHFS 2017–18 and UNHCR-PRMN 2016–18.

These differences are methodological. The SHFS sample of settlement IDPs was drawn using IDP location data from 2016, before the most recent drought event. The bulk of drought-related displacements (about 1 million IDPs) occurred from January to October 2017, influencing the spatial distribution of IDP households today.[103] Further, the SHFS set of non-settlement IDPs were households in the rural and urban samples, who self-identified as having been displaced. Thus, it was not possible to stratify these households by region ex ante. Because of this, the chapter does not cut the sample of IDPs by region. The results on the regional distribution of IDPs (Figure 4.2) are presented here but are compared with that of the latest PRMN data and should be interpreted with caution.

These differences do not affect how the broader survey results are interpreted. The survey itself was conducted from December 2017 to January 2018, after drought conditions improved, and its findings are nationally representative. The survey results further capture impacts of the drought. The timing of the sampling thus does not affect the accuracy or representativeness of the survey results themselves, which capture the impact of the

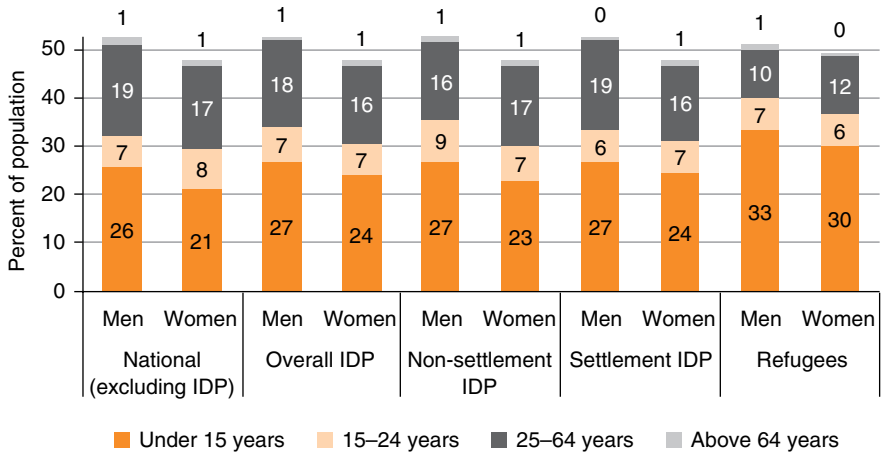
[103] UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs) (2017a).

Box 12 ■ Continued

drought, but does mean that the results on the spatial distribution of IDPs presented in Figure 4.2 should be interpreted with caution.

Host communities in the survey consist of households living around the IDP camps. Host communities, as defined in the SHFS 2017–18, were households found in areas that surround IDP camps. Thus, the host communities in this survey refer to resident communities surrounding IDP camps, rather than communities that house IDPs within their households or within the resident community. Results in this chapter are interpreted accordingly.

FIGURE 4.3 ■ Population structure for IDP, non-IDPs and refugees by gender and age



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

TABLE 4.2 ■ Age dependency ratios and household size by gender of household head

	Non-settlement IDP			Settlement IDP			Refugee			National		
	Man headed	Woman headed	Overall	Man headed	Woman headed	Overall	Man headed	Woman headed	Overall	Man headed	Woman headed	Overall
Percentage of households	62.7	37.3	100.0	45.6	54.4	100.0	60.7	39.3	100.0	51.7	48.3	100.0
Dependency ratio	1.5	1.1	1.4	1.2	1.5	1.4			1.2	1.2	1.3	1.2
Household size	5.9	5.5	5.8	5.1	5.7	5.4				5.1	5.0	5.1

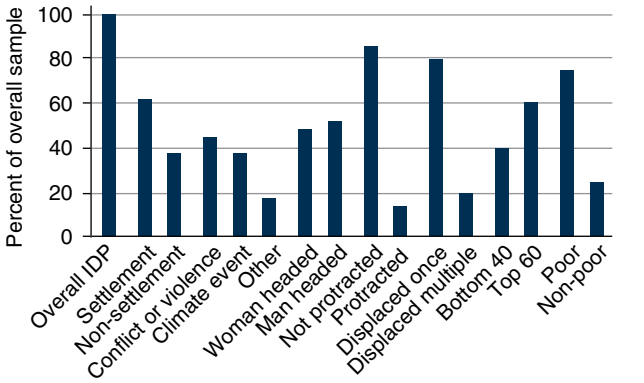
Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

As with the national population, every second IDP household is headed by a woman. About 48 percent of IDP households overall are headed by a woman, which is the same as in the national population IDP households living in settlements are more likely to be headed by a woman (54 percent) compared to IDP households outside settlements (37 percent, <0.01, Table 4.2). This may be because women are seeking the higher levels of security often present in more formal settlements, or because displaced women are separated or disconnected from family/social networks and have fewer housing options outside formal settlements. Somali refugees in Ethiopia are more likely to be headed by a man (61 percent).

IDP and non-IDP households have similar characteristics. Households have similar numbers

of dependents for every working age adult: IDP households both in and out of settlements have an average of 1.4 each, compared to 1.2 nationally. The exception is female-headed IDP households outside settlements, which have only 1.1 dependents for every working age adult, compared to 1.5 in male-headed IDP households outside settlements ($p<0.05$). Household sizes are also mostly similar, except that IDP households outside settlements are slightly bigger, with 5.9 people on average compared to the overall average of 5.1. Female-headed IDP households in settlements are also larger, with 5.7 people on average, compared to 5.1 in male-headed IDP households in settlements. Other differences between households are not statistically significant (Table 4.2).

FIGURE 4.4 ■ IDP profile



Source: Authors' calculations based on the SHFS 2017-18.[104]

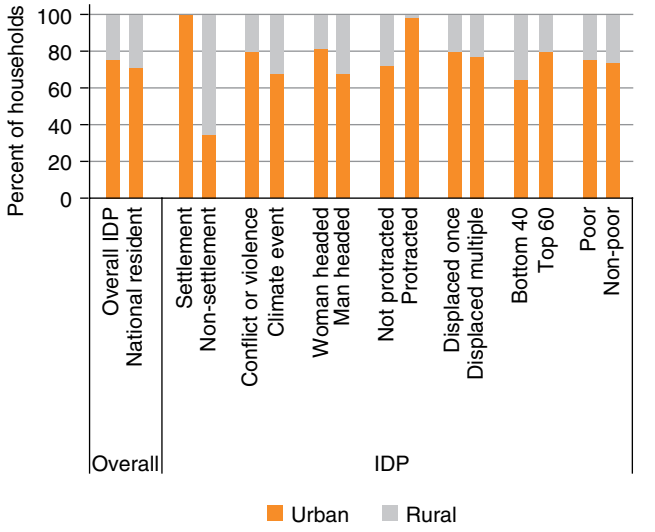
Displacement profile

Most IDP households are in urban areas and in formal settlements. Three in four IDP households overall (75 percent) are in urban areas (Figure 4.5). Six in ten IDPs (62 percent, Figure 4.4) live in formal settlements. All such settlement IDPs, in the SHFS sample, are in urban areas (Figure 4.5).

Most IDPs have not gone far from home. About 7 in 10 IDP households live in the same districts as they did originally, and fewer than 1 in 10 are in a different region, federated member state, or country. Those who are displaced multiple times are more likely to travel out of their districts than those displaced only once ($p<0.01$). Households headed by a woman are significantly more likely to stay in their districts than those headed by a man (female-headed households: 61 percent; male-headed households: 86 percent, $p<0.01$). The limited distances traveled could be linked to limited freedom of movement for women, proximity of available humanitarian resources or secure settlements, or possibly due to security risks linked to traveling long distances from home and outside environments with available clan protection (Figure 4.7).

Most IDPs have been displaced only once and have traveled to their current locations with their families, though this finding should be interpreted with caution. Approximately four in five IDPs (75 percent of non-settlement IDPs and 81 percent of settlement IDPs) report being displaced once, and only a tiny minority of IDPs report being displaced more than twice (Figure 4.4). However, these findings

FIGURE 4.5 ■ Urban/rural composition of IDPs

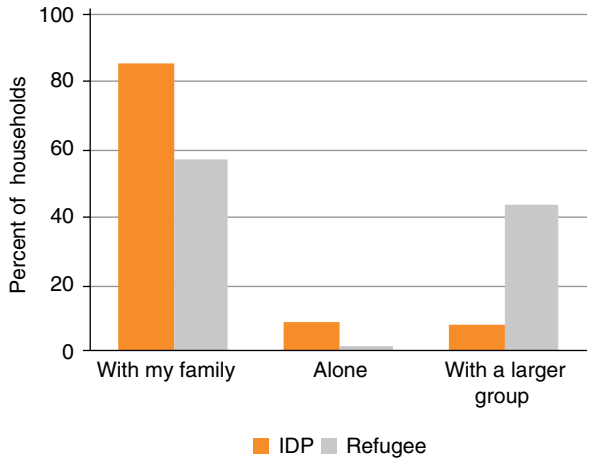


Source: Authors' calculations based on the SHFS 2017–18.

should be interpreted with some caution, since they run counter to more common understandings of forced displacement in Somali regions, in which displaced populations often experience multiple displacements, due in part to forced evictions

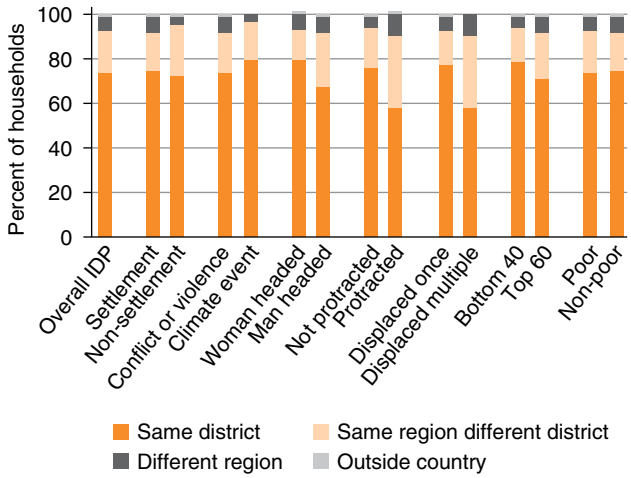
[104] The variable used for the poor and non-poor comparison groups is a dummy variable for whether the household is poor or not, whereas the poverty statistics reported in this chapter are based on a variable which is the probability of being below the poverty line (using 100 imputations of the Rapid Consumption Methodology). Thus, minor variations (less than 1 percent) in the means of these two variables are possible.

FIGURE 4.6 Trends in traveling to current location, for IDPs and refugees



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.7 Original location relative to current location for IDPs

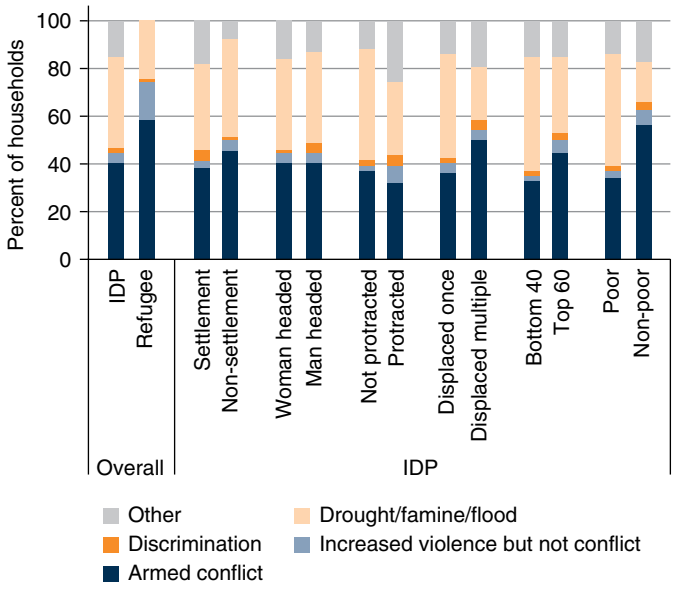


Source: Authors' calculations based on the SHFS 2017–18.

and/or new cycles of violence.[105] Approximately four in five IDPs have traveled with their families to their current locations, about 1 in 10 alone, and about 1 in 10 as part of a larger group. Refugees are much more likely to travel as part of a larger group than IDPs. (Figure 4.6).

[105] Federal Government of Somalia (2018). Also see UNHCR (United Nations High Commissioner for Refugees) (2016).

FIGURE 4.8 Reason for leaving original location



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

Climate-related events (drought, famine, or flood) and conflict are the main causes of displacement cited by IDPs. About two in five IDP households (38 percent) are displaced from their original locations because of climate-related events (drought, famine, or flood). About another two in five (40 percent) are displaced because of armed conflict in their village or another village. Somali refugees in Ethiopia are also highly likely to be displaced by armed conflict. (Figure 4.8)

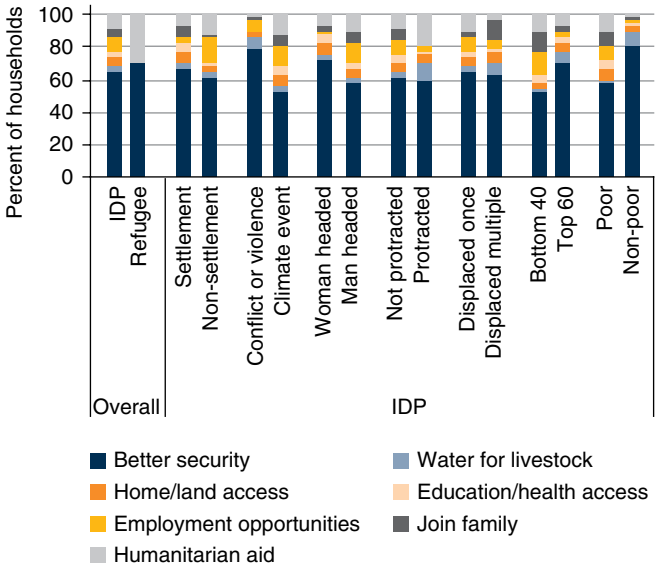
The main reason IDPs live where they do is improved security. This is true whether their households are in or out of settlements, displaced by climate events or conflict, headed by men or women, or rich or poor. Over three in five non-settlement and settlement IDP households, and almost four in five households displaced by conflict, report that they are in their current locations because of better security, rather than for other reasons such as access to humanitarian assistance or better livelihoods. These patterns differ slightly for households displaced by climate, but even among these, approximately half (53 percent, $p<0.05$) are in their current locations for better security, and the rest because they can get better access to livelihoods, employment, land and housing, or humanitarian assistance (Figure 4.9). There are some remaining differences in motivation across types of IDPs,

Box 13 ■ Drivers of displacement in Somali regions

Although the household survey indicates that most people are displaced either by conflict or climate-related events, in practice, these categories are intertwined. The drivers of displacement in Somali regions are overlapping, multiple, and complex. Forced displacement in Somali regions is a consequence of decades of internal conflict, insecurity, political uncertainty, human rights violations, and governance failures, compounded by cyclical environmental challenges, including periods of acute drought and famine. While survey respondents were asked to indicate one primary driver motivating migration, it is more likely that individuals and households were influenced by several interrelated factors, including both climate and security-related events. Indeed, drought conditions in Somali regions have been known to exacerbate conflict, while the impacts of drought are worsened by conditions of violence and insecurity. The Somalia Drought Impact and Needs Assessment reports that in Somali regions, drought conditions in 2017 have exacerbated conflicts over pasturelands and natural resources, with mediating impacts on food prices and livestock, and highlights the upsurge in communal and political violence in 2017 (particularly in the southern and central regions of the country) which compounded the devastating humanitarian and development impacts of drought and contributed further to displacement dynamics.

Source: Federal Republic of Somalia, World Bank, United Nations and European Union. 2018. Somalia Drought Impact and Needs Assessment. Vol II, page 147.

FIGURE 4.9 ■ Reason for arriving at current location



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

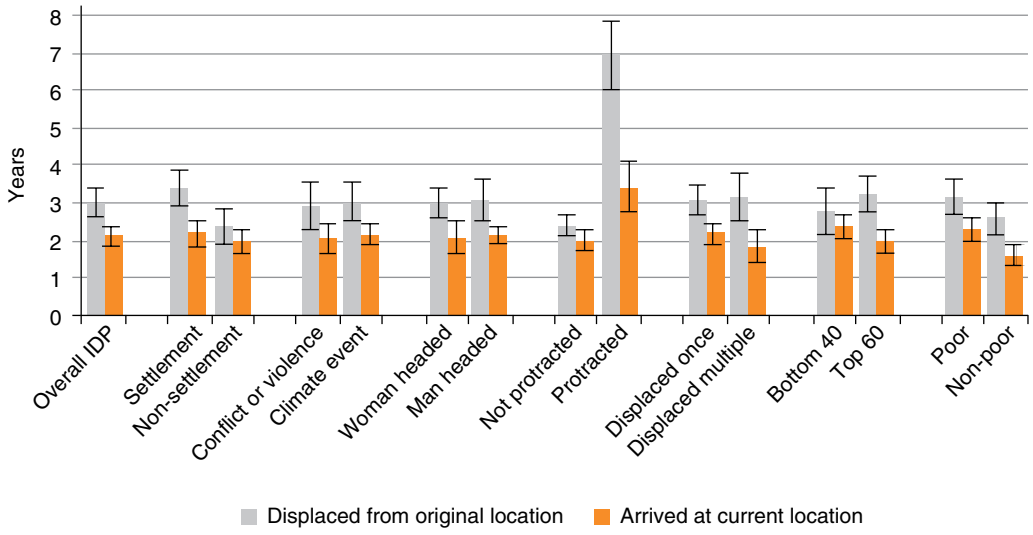
with IDPs in settlements being more likely to cite joining family as a reason for being where they are, and poor IDPs being less likely than non-poor IDPs to cite security as a motivation (poor: 58 percent, non-poor: 82 percent, p<0.01), but overall, security is the main motivation for all groups of IDPs. These patterns differ somewhat for Somali refugees in Ethiopia. Although such refugees also most commonly cite better security as the main reason for being in the current location, the remainder—unlike IDPs within the country—cite humanitarian assistance as the main driver.

Most IDPs have been displaced in the last five years, and those outside settlements more recently. IDPs outside settlements tend to have been displaced more recently than those in settlements: Settlement and non-settlement IDPs alike arrived in their current locations about two years ago but on average, non-settlement IDPs have been displaced for about two and one-fourth years, whereas IDPs in settlements have been displaced for three years (p<0.01). Non-settlement IDPs are also quicker to settle once originally displaced, taking on average four months to do so, compared to about a year for IDPs in settlements (p<0.01; Figure 4.10).

In contrast to Somali refugees, whose numbers spiked after famine in 2011, conflict and climate-driven IDPs within the country have experienced continued and ongoing displacement. The pattern of displacement (Figure 4.11; Figure 4.12) shows clear peaks, which have increased since 2013. These peaks, however, are not as dramatic as that shown by similar data in other countries in the region with large-scale displacement.[106] Although

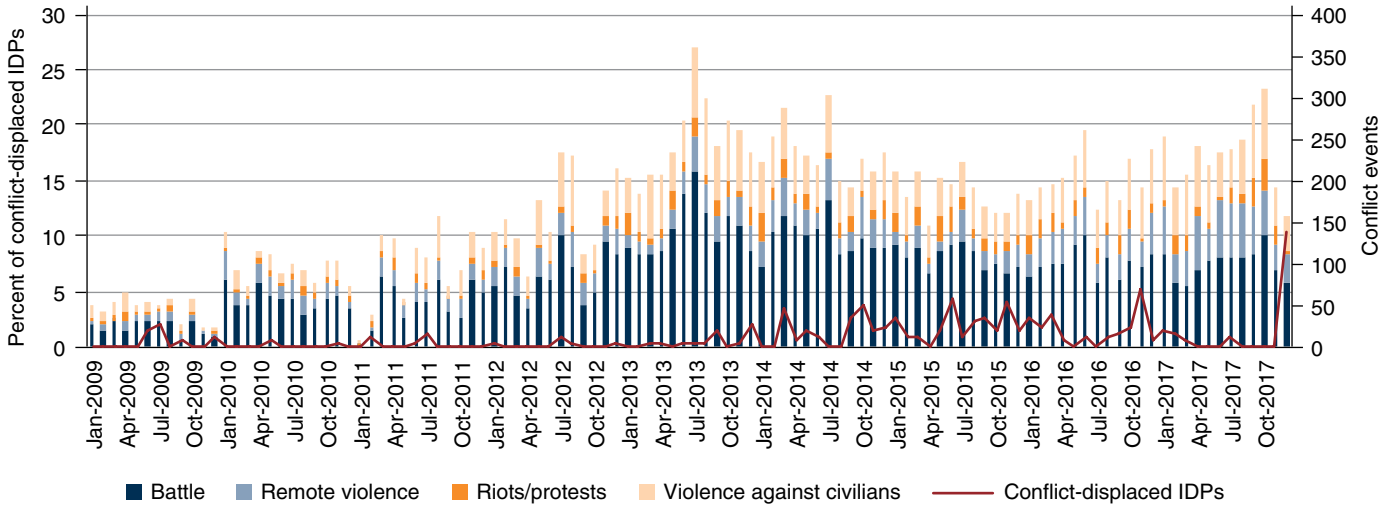
[106] For example, see World Bank (2018e).

FIGURE 4.10 Years since IDP displacement and arrival in current location



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.11 Conflict events and dates of displacement of conflict-driven IDPs

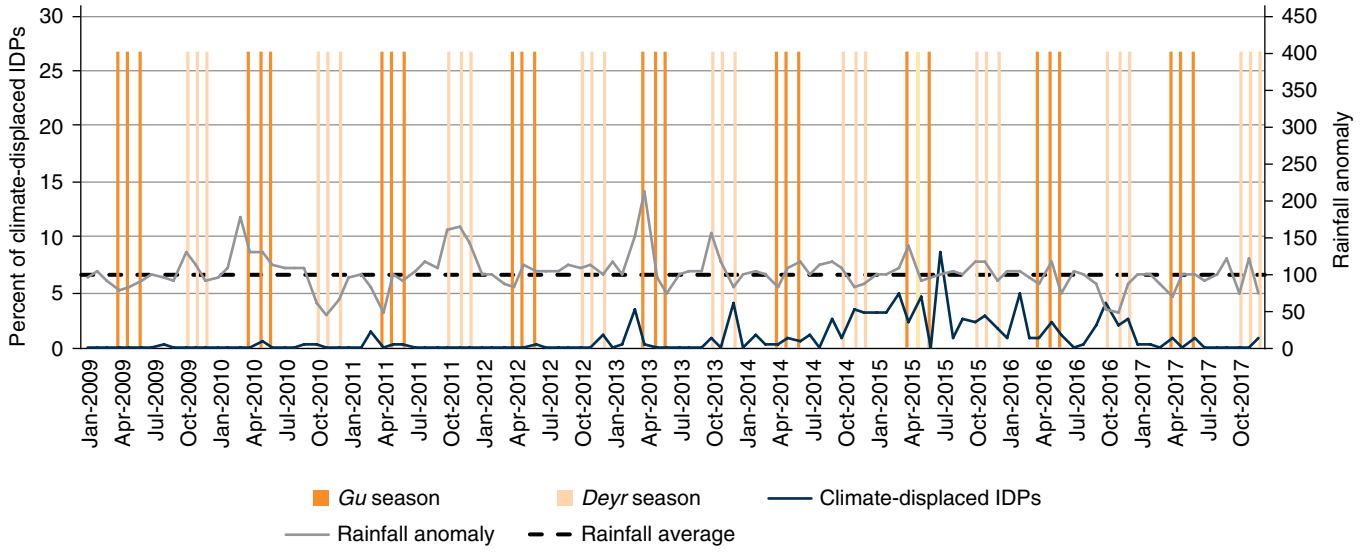


Source: Authors' calculation using SFHS Wave 2, ACLED (conflict events 2006–2017).

the Somali drought displacement pattern shows spikes between or at the edges of the *Gu* and *Deyr* rainy seasons, the displacement spikes also correlate less clearly to climate and conflict events than they do elsewhere. This suggests that displacement in Somali regions reflects underlying and continual uncertainties related to climate and conflict, rather than one-off shocks. These patterns differ for Somali refugees in Ethiopia, whose numbers clearly spiked after the 2011 famine (48 percent arrived in Ethiopia in 2011, Figure 4.13).

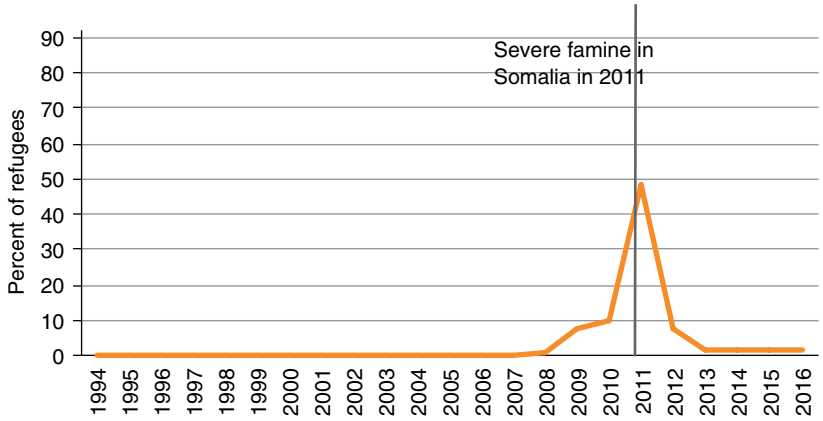
Most IDPs intend to stay in their current locations and only a few have revisited their original residence. About 7 in 10 IDPs (70 percent) wish to stay in their current locations, and only 2 in 10 (23 percent) intend to return to their original place of residence. A minority intends to move elsewhere. This is in stark contrast to refugees, who are more evenly divided between wishing to stay (42 percent) and wishing to move on to a new area (45 percent). Few want to return to their original residence (Figure 4.14). Over 9 in 10 IDPs have not gone back to their

FIGURE 4.12 ■ Rainfall anomalies, *Gu-Deyr* seasons, and displacement dates of climate-driven IDPs



Source: Authors' calculation using SHFS Wave 2, VAM (Rainfall anomalies 2006-2017).
Note: Rainfall anomaly is the monthly deviation of rainfall from the long-term average. The long-term rainfall average is scaled to 100, thus deviations are seen relative to this '100' threshold.

FIGURE 4.13 ■ Dates of displacement for Somali refugees in Ethiopia

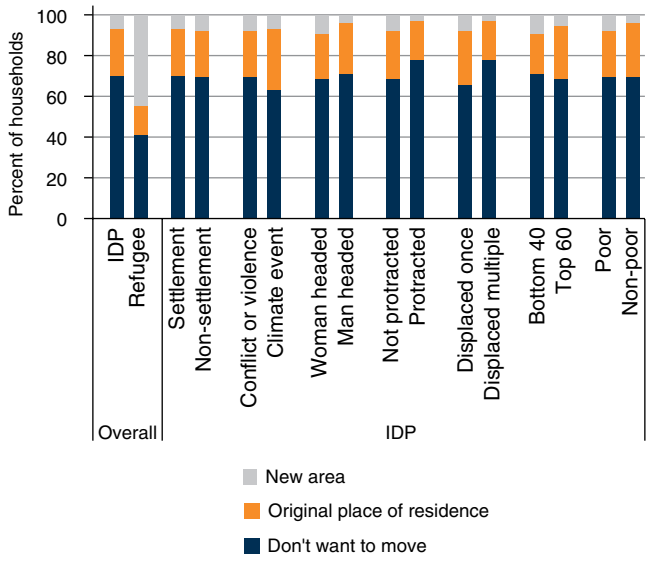


Source: Authors' calculations based on the SPS 2017.

original residences. Those who have returned have done so mainly to visit family (Figure 4.15).

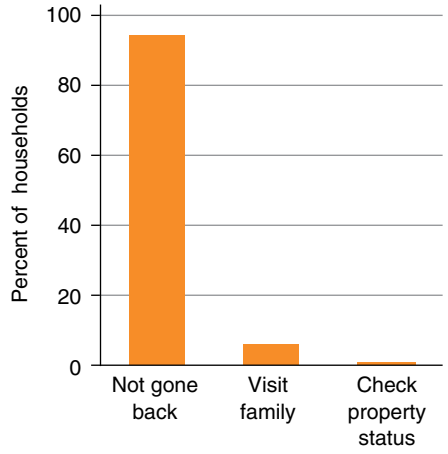
The return intentions of IDPs are strongly motivated by security considerations, whereas Somali refugees outside the country are more likely to want to stay where they are for health, education, and humanitarian aid. Almost 8 in 10 non-settlement IDPs, and 9 in 10 settlement IDPS, cite security as a motivation for wanting to stay where they are. Less than half cite other factors, which include homes, land, livestock, and employment; health, education, and humanitarian aid, or family. Settlement IDPs are more likely than non-settlement IDPs to cite security as a reason for wanting to stay where they are (89 percent of settlement IDPs vs. 75 percent of non-settlement IDPs, $p<0.01$), which is likely because higher levels of security are available in formal settlements compared to outside. Apart from that, IDPs cite similar motivations for wanting to stay where they are, whether their households are in or out of settlements, headed by men or women, displaced by conflict or climate, or are rich or poor (Figure 4.16).

FIGURE 4.14 Return intentions of IDPs and refugees



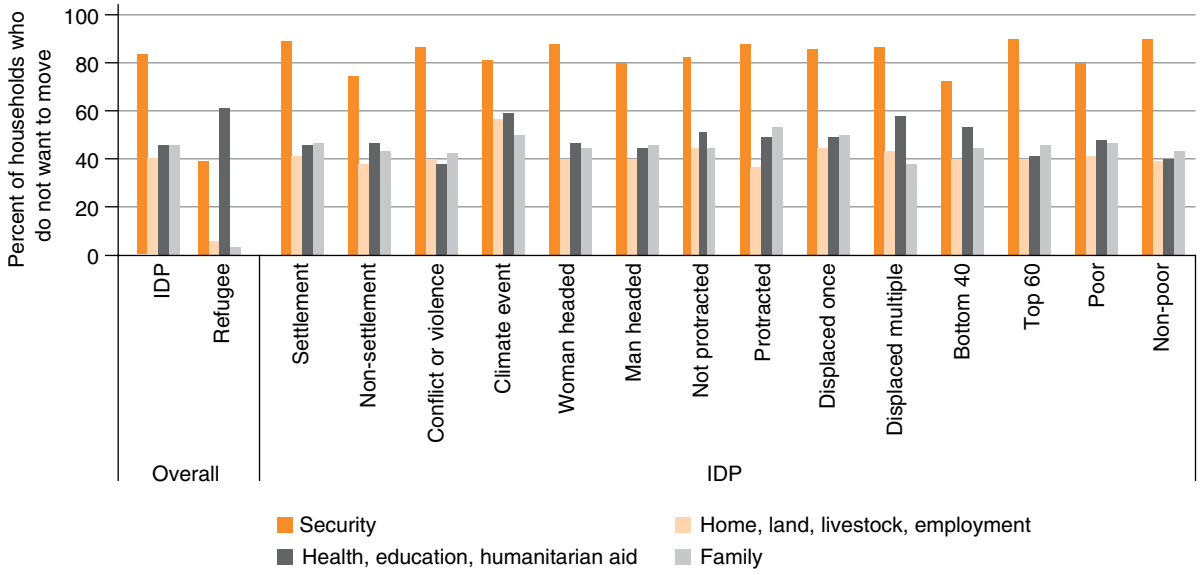
Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.15 Trends in revisiting the original residence location for IDPs



Source: Authors' calculations based on the SHFS 2017–18.

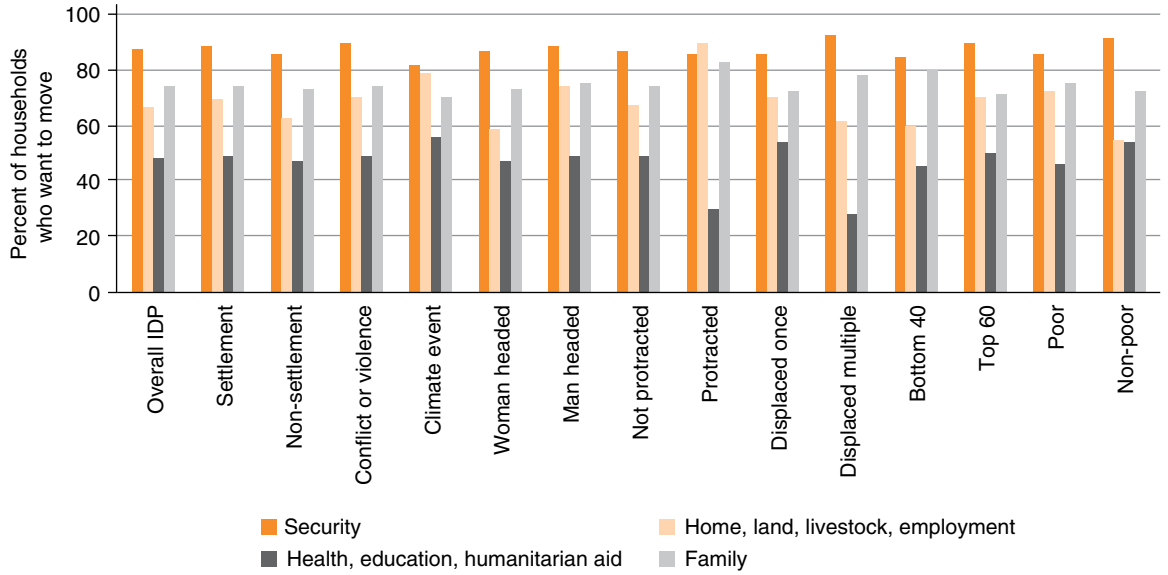
FIGURE 4.16 Push factors for IDPs and refugees who don't want to move



Source: Authors' calculations based on the SHFS 2017–18.

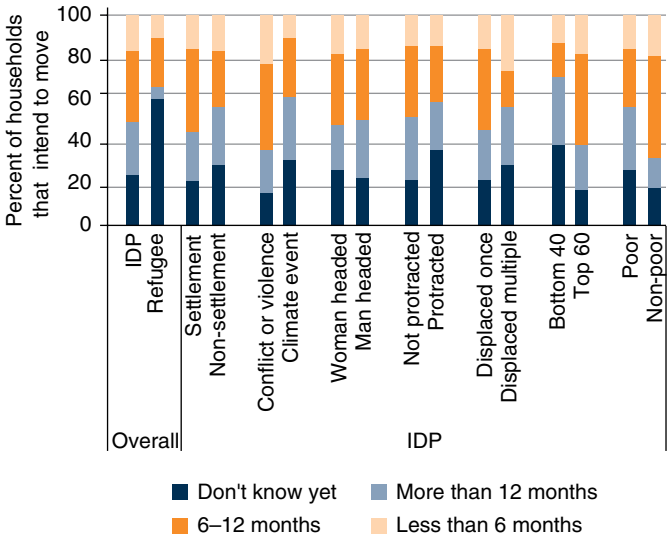
IDPs who do want to move have a broader range of motivations. These include getting better security, as well as family ties and improved housing or access to land, livestock, and employment. Over 7 in 10 IDPs who want to move cite security as a reason for wanting to do so, whether they are in or out of settlements, displaced by conflict or violence, live in households headed by men or women, or are rich or poor. Yet at least 6 in 10 IDPs who want to move cite family as a motivation, and—apart from the poorest IDPs, who may get better services by being displaced—at least 5 in 10 are

FIGURE 4.17 Pull factors for IDPs who want to move



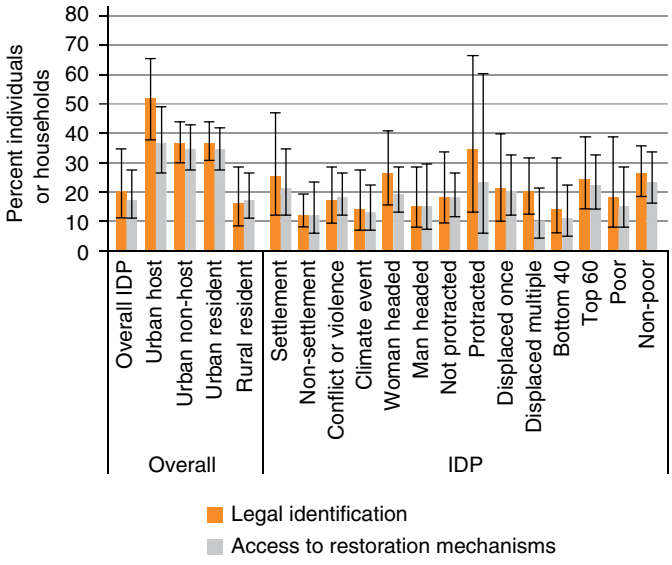
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.18 Return timeline for IDPs and refugees that intend to move



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.19 Legal identification and access to documentation restitution mechanisms[107]



Source: Authors' calculations based on the SHFS 2017–18.

motivated by homes, land, livestock, and employment. Among the IDPs who want to move, richer IDPs plan to do so sooner than others ($p<0.01$), which might reflect the lower capacity of poorer families to bear the costs of moving and to deal with uncertain livelihoods. Somali refugees outside the country are much less likely to know when they can move. (Figure 4.18).

[107] World Bank (2018e). Access to legal identification is calculated at the individual level, whereas access to restoration mechanisms is calculated at the household level.

Only a small proportion of Somalis, and an even lower proportion of IDPs, have legal identification or access to mechanisms to restore documents. About 17 percent of IDPs have legal identification, compared to 36 percent of urban residents ($p<0.01$) and 50 percent of host community members ($p<0.01$); similarly, few have access to mechanisms to restore documents. IDPs in households headed by a woman are more likely to have an ID compared to those in households headed by a man ($p<0.01$). The poorest 40 percent of IDPs are also less likely to have an ID than the richest 60 percent ($p<0.05$) and have less access to document restoration mechanisms ($p<0.01$; Figure 4.19). Other than this, the rate of legal identification ownership does not differ much according to the displacement circumstances of IDPs.

Poverty and hunger

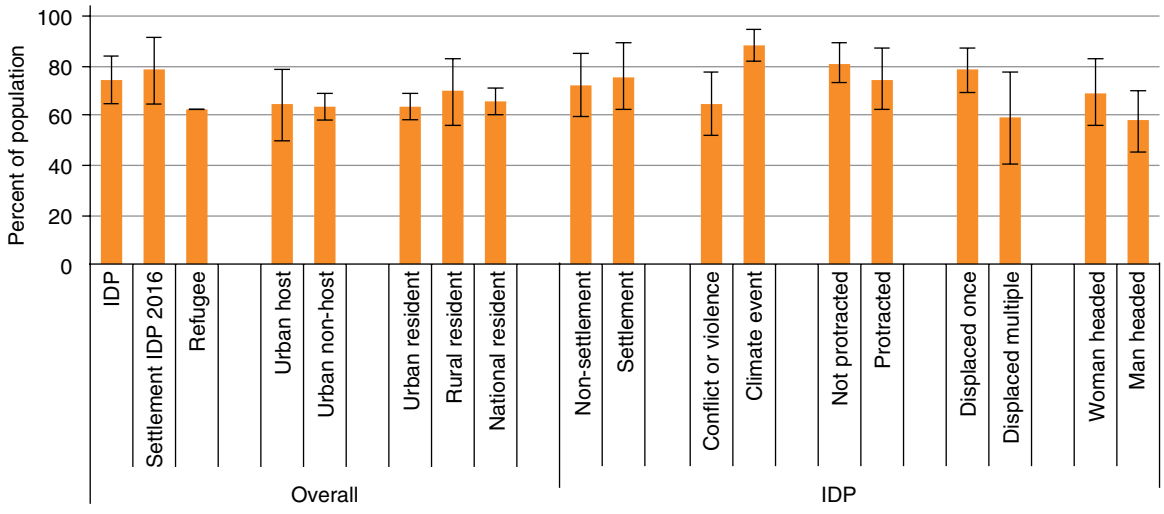
The incidence and depth of poverty is greater among IDPs than urban residents, but about the same as among rural residents. The poverty headcount ratio is the proportion of a population who live under the poverty line: it indicates how widespread poverty is. About three in four IDPs (74 percent) live under the US$1.90 a day (2011 PPP) international poverty line. Poverty is more widespread among IDPs than among urban residents (63 percent, $p<0.05$), but there are no significant differences in the incidence of poverty when comparing IDPs and rural residents, 70 percent of whom are poor (Figure 4.20).[108] Poverty is also deeper among IDPs than urban residents. The poverty gap measures how much less the average poor person consumes relative to the international poverty line: it measures not how widespread poverty is, but how deeply the average poor person feels it. In Somali regions, the poverty gap among IDPs relative to the US$1.90 a day international poverty line is 35 percent, meaning that IDPs below the poverty line typically consume only 65 percent of what is consumed by those who are at the US$1.90 a day threshold. This gap is greater than that of urban residents (24 percent, $p<0.01$) and the national population (27 percent, $p<0.01$), but does not differ significantly compared to rural residents (32 percent) (Figure 4.21).

Poverty is more widespread and deeper among IDPs than non-host communities, but there is no significant difference when comparing IDPs and host communities.[109] The poverty headcount ratio among IDPs (74 percent) is higher than that of non-host communities in urban areas (64 percent, $p<0.05$) (Figure 4.20). The depth of poverty

[108] National populations reported in this chapter are of national residents, which include urban and rural residents, and exclude IDPs and nomads.

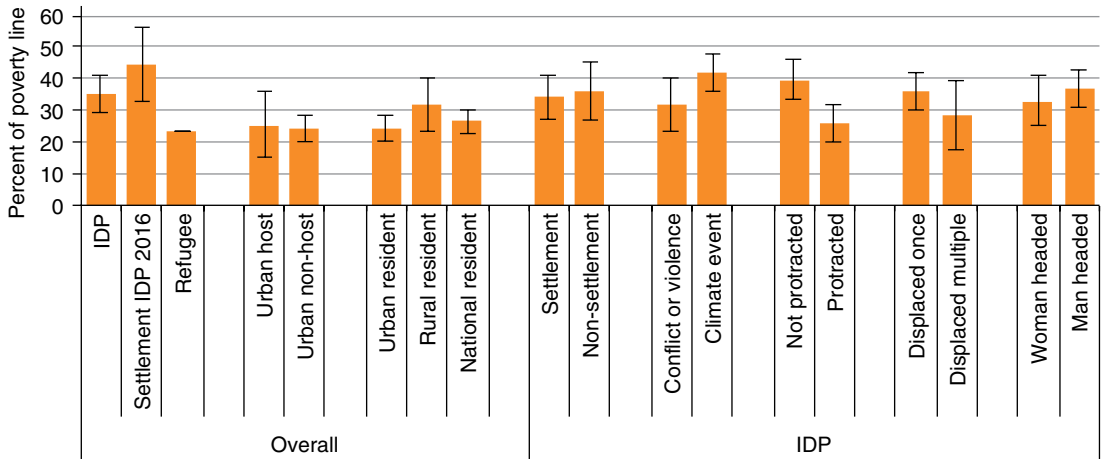
[109] As noted previously, 'host communities' in this survey refer to resident communities surrounding IDP camps, rather than communities that house IDPs within their households or within the resident community.

FIGURE 4.20 Poverty headcount ratio



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.21 Poverty gap



Source: Authors' calculations based on the SHFS 2016–18 and SPS 2017.

among IDPs is also greater. The poverty gap among IDPs (35 percent) is higher than that of non-hosts in urban areas (24 percent, p<0.01), but there is no significant difference in the poverty gap when comparing IDPs and host communities (Figure 4.21).

IDPs in settlements are about as poor as IDPs outside settlements. There is no significant difference in how widespread poverty is when comparing IDPs who live in settlements (76 percent) compared to those living outside settlements (73 percent) (Figure 4.20), or in how deep the poverty gap is (settlement IDPs: 34 percent; non-settlement IDPs: 36 percent) (Figure 4.21).

Poverty is much more widespread and deeper among IDPs displaced by climate rather than conflict. Over four in five IDPs (85 percent) displaced by climate-related events (drought, famine, or flood) live under the $1.90 a day international poverty line, compared to only three in five IDPs (61 percent, p<0.01) displaced by conflict (Figure 4.20). Poverty is also deeper among climate-displaced IDPs under the poverty line, who have a poverty gap of 40 percent, compared to 28 percent for poor IDPs displaced by conflict (p<0.05). This means that IDPs displaced by climate events (drought, famine, or flood) are typically consuming only 60 percent of what is consumed at the US$1.90 a day international poverty line threshold (Figure 4.21).

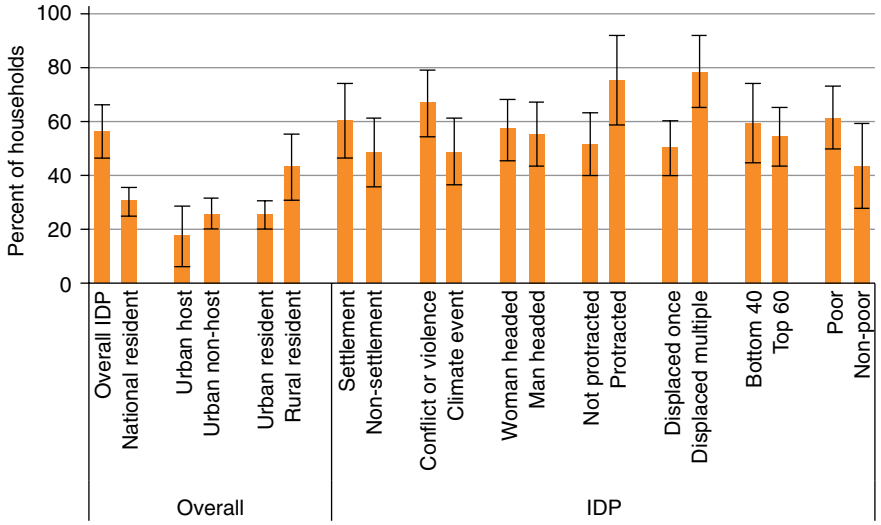
Poverty is more widespread among recent IDPs than those in protracted displacement, and among those who have been displaced only once. The poverty headcount ratio among IDPs who have been displaced for less than five years (76 percent) is significantly higher than that of IDPs who have been displaced for longer than five years (56 percent, p<0.01)—though notably, all those in the SFHS sample who have been displaced for more than five years are in urban areas. The poverty headcount ratio among IDPs who have been displaced only once (73 percent) is significantly higher than that of IDPs who have been displaced multiple times (57 percent, p<0.01) (Figure 4.20).

Poverty is somewhat more common among IDP households headed by men than women. Seventy-five percent of households headed by men live under the US$1.90 a day international poverty line, compared to 64 percent of households headed by women (Figure 4.20, p<0.1).

Somali refugees in Ethiopia are somewhat better off than IDPs who have stayed within Somali regions. Although the poverty headcount ratio among such refugees is still high (62 percent), the poverty gap among such refugees is lower (23 percent), indicating that they are closer to the poverty line (Figure 4.20, Figure 4.21).

Hunger is more common among IDPs than hosts, urban residents, and rural residents. About 55 percent of IDP households went at least once without having food of any kind in the last four weeks, compared to 17 percent of the host community (p<0.01), 25 percent of urban residents

FIGURE 4.22 ■ Hunger incidence in the last four weeks



Source: Authors' calculations based on the SHFS 2017–18.

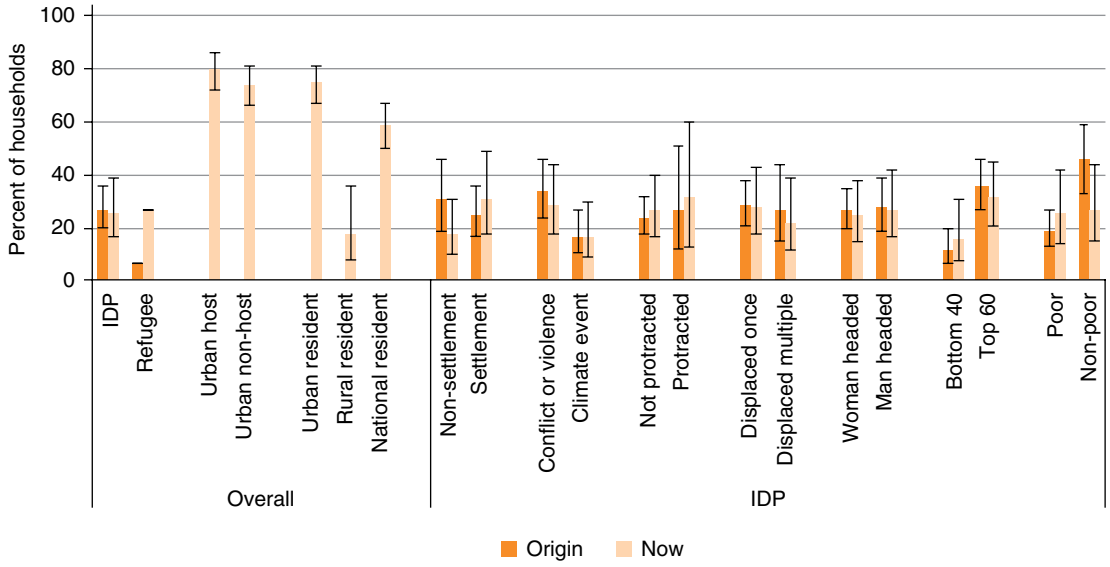
(p<0.01), and 43 percent rural residents (p=0.107). While being inside or outside a settlement had no significant relation with hunger, IDPs displaced by conflict are more likely to face hunger than those displaced by climate events (p<0.05), despite being less poor. This could indicate that conflict-driven IDPs are in areas that are more difficult for humanitarian actors to reach. IDPs that are in protracted displacement, or displaced more than once, are also more likely to face hunger than those who have been displaced for less time (p<0.01) or displaced once (p<0.01). Poor IDPs are more likely to be hungry than non-poor (p<0.1, Figure 4.22).

Access to infrastructure and quality of dwellings

About one in four IDPs has access to improved housing, which is much worse than among the national population and host and non-host communities, but similar to the share among rural residents. Improved housing is defined as living in apartments, shared apartments, separate houses, or shared houses. About one in four IDPs (26 percent) currently has access to improved housing or had it before being displaced (27 percent). This is much lower than the share of the national population (59 percent), host communities (80 percent), and non-host communities (75 percent) (p<0.01) who have improved housing but is not significantly different from the share of rural residents (18 percent) who have such access. The quality of housing is mostly homogenous for different types of IDPs: it is low for most groups and does not differ significantly whether they are in settlements or not, displaced once or more, or are displaced by conflict or climate events. The only exception is the pre-housing quality of poor and non-poor IDPs: although they have similar rates of improved housing at present, non-poor IDPs had better housing than poor IDPs before displacement (p<0.01). Somali refugees in Ethiopia are likely to live in improved housing now but are much less likely to have done so before being displaced (Figure 4.23).

About 8 in 10 IDPs have access to improved drinking water, but this does not account for likely overcrowding of drinking water access points in settlements, so should be interpreted with caution. The share of IDPs with access to improved drinking water (78 percent) is about the same as the share of the national population (77 percent), urban residents (85 percent), and non-hosts in urban areas (85 percent) who have such access, but is lower than among Somali refugees in Ethiopia, 95 percent of whom have such access. The share of IDPs with such access is higher than among rural residents, only about 56 percent of whom have such access (Figure 4.24, p<0.01), and is similar across most types of IDPs, whether they are in or out of settlements, displaced by climate or conflict, were displaced recently or long ago,

FIGURE 4.23 ■ Access to improved housing, now and before displacement



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

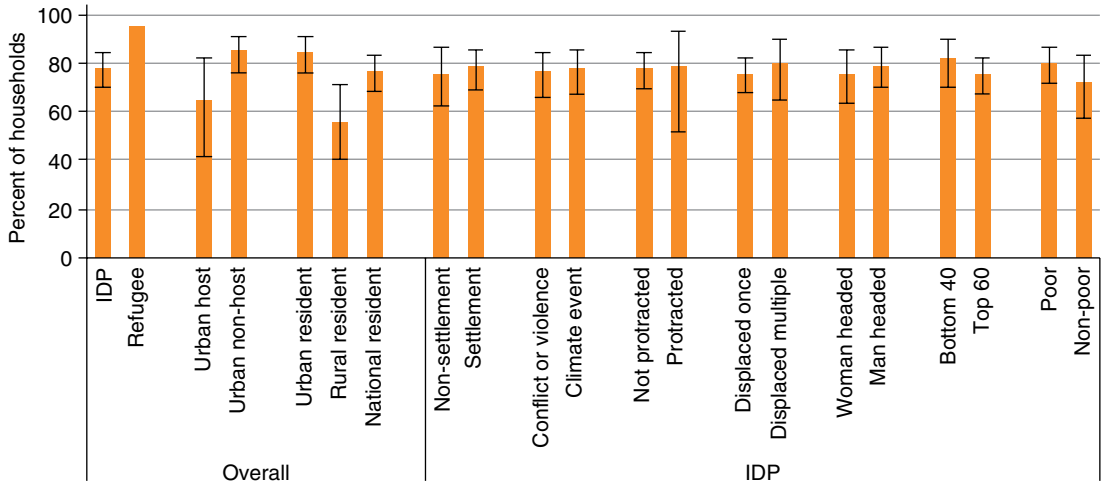
live in households headed by men or women, or are relatively rich or poor (Figure 4.24). However, this finding should be interpreted with caution, as the survey question on which it is based does not account for (nor enable disaggregation for) possible overcrowding in access points for water, which other analyses has indicated is a serious problem: IDPs are reportedly 2.5 times more likely than others to experience problems with water points, including overcrowding.[110]

IDPs appear on the surface to have better access to improved sanitation than rural residents, but this advantage disappears when discounting IDP households who share such facilities. Almost 8 in 10 IDPs have access to improved sanitation when including those whose households share such facilities as well as those who use them exclusively. This is about the same as among the national population and urban residents, and more than among rural residents ($p<0.01$), only 6 in 10 of whom have access to such facilities. Yet such facilities are often overcrowded and are no longer classified as being 'improved' if they are shared. When discounting those who share, the higher rates of access among IDPs disappears. Only half of IDP households have their own exclusive access to improved sanitation facilities, which is about the same as among rural residents, and significantly less than among the national population, urban residents, host communities, and non-hosts in urban areas. After adjusting for sharing, there are no significant differences in improved sanitation access across different types of IDPs. Somali refugees in Ethiopia also see a stark difference in access when adjusted for sharing, indicating that they too face overcrowding of toilets, to a greater degree, than even the IDPs (only 20 percent have improved sanitation after accounting for sharing, compared to 50 percent of IDPs; Figure 4.25).

Toilet crowding is more common among climate-displaced, non-settlement, and poorer IDPs. Having access to toilets is important in stopping disease. IDPs have two households per toilet, meaning that toilet crowding is more common when compared to the national population, urban and rural residents, and hosts and non-hosts in urban areas, all of whom have fewer than one household per toilet. There are also large disparities in toilet access among different types of IDPs. IDP households in settlements, in protracted displacement, headed by women, and in the top 60 percent of households have between one and two households per toilet. Non-poor households experience less crowding than poor households ($p<0.05$). Climate-displaced and non-settlement IDPs are much worse off, with three or more households per toilet (Figure 4.26). This may reflect the rapid recent increase in

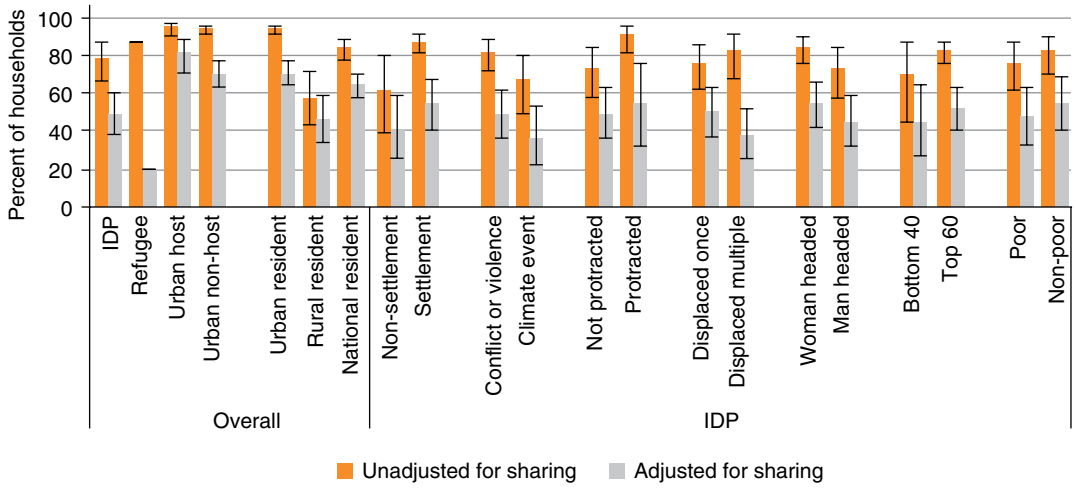
110 Federal Government of Somalia (2018).

FIGURE 4.24 Access to improved drinking water, for IDPs, refugees, and residents



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.25 Access to improved sanitation for IDPs, refugees, and residents



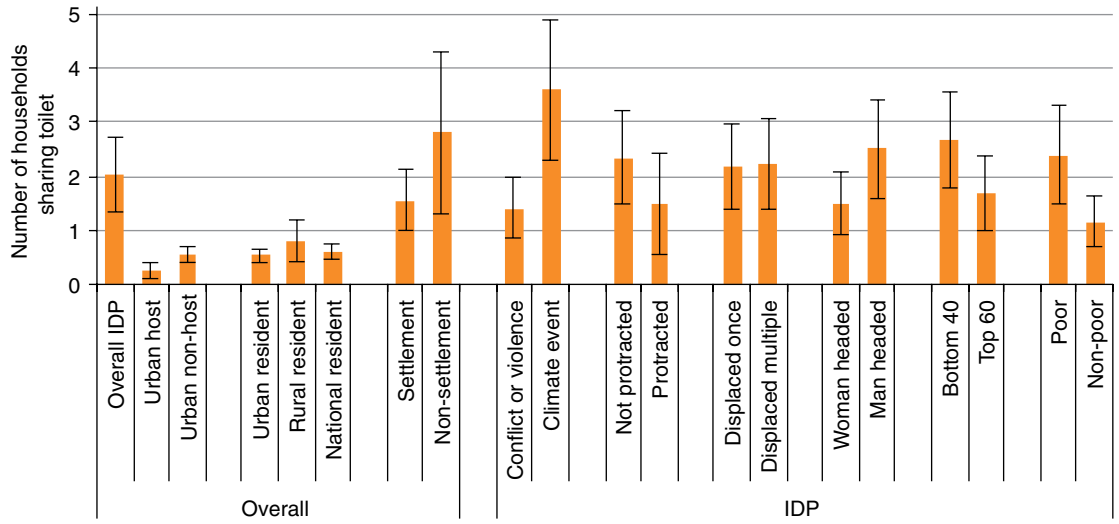
Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

drought-induced displacement: existing toilet facilities are likely insufficient to accommodate such a rapid expansion of migration flows.

Host communities are closer to services than settlement IDPs. Host communities are more likely to be less than 30 minutes away to the closest health facility ($p<0.05$), the nearest primary school ($p<0.1$) and the closest market ($p<0.05$), than settlement IDPs. However, there are no significant differences between host communities and settlement IDP households in how far they are to the closest water point. Non-settlement IDPs are also at similar distances as settlement IDPs for all four services (Figure 4.27).

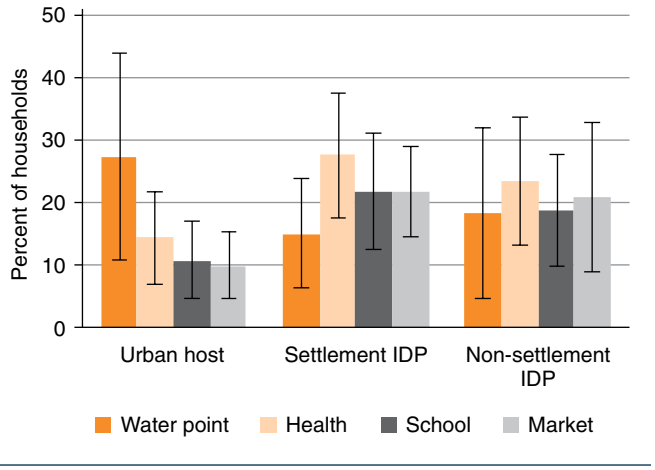
IDPs have lower access to charged mobile phones with network than non-IDPs within the country, but somewhat higher access than refugees. IDPs are less likely to have enough electricity to charge mobile phones than urban hosts and urban residents overall ($p<0.01$ each). Conflict-motivated IDPs have more access than climate-driven IDPs ($p<0.05$). The richest 60 percent and the non-poor are also more likely to have sufficient electricity to charge phones ($p<0.01$ and $p<0.1$ respectively;

FIGURE 4.26 ■ Number of households sharing a toilet



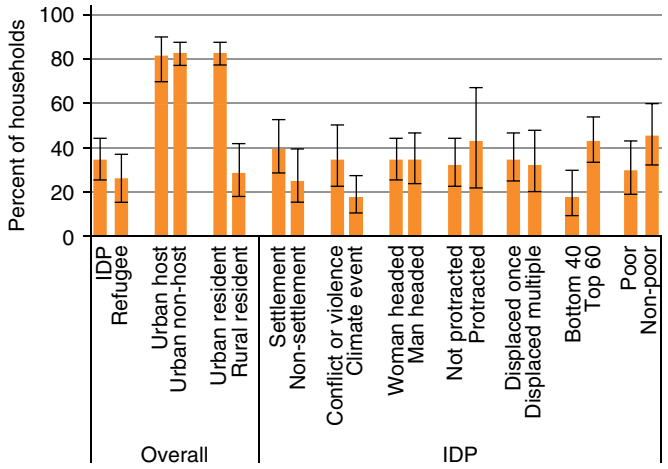
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.27 ■ Households more than 30 minutes from services



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.28 ■ Access to electricity to charge mobile phone



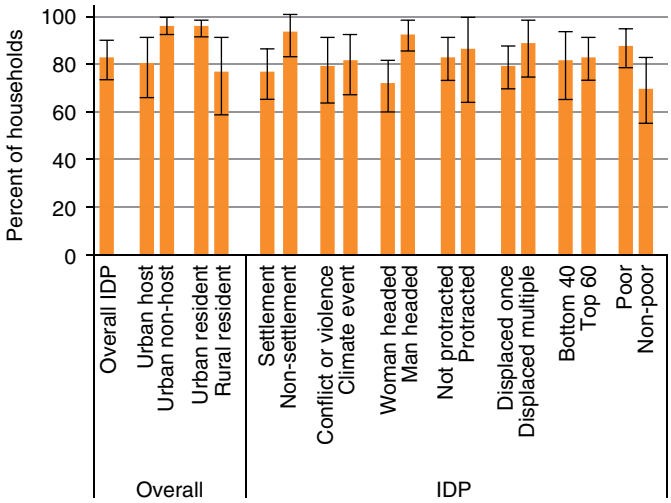
Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

Figure 4.28). IDPs are more likely than urban residents to be more than 15 minutes away from the closest point where they can get mobile phone reception ($p<0.01$), but about as far as host communities. Non-settlement IDPs are closer to phone network reception than settlement IDPs ($p<0.05$) and male-headed households are closer than female-headed ones ($p<0.01$) (Figure 4.29). Somali refugees in Ethiopia are less likely than Somali IDPs to have electricity to charge phones, at about one in four refugee households.

Health and education

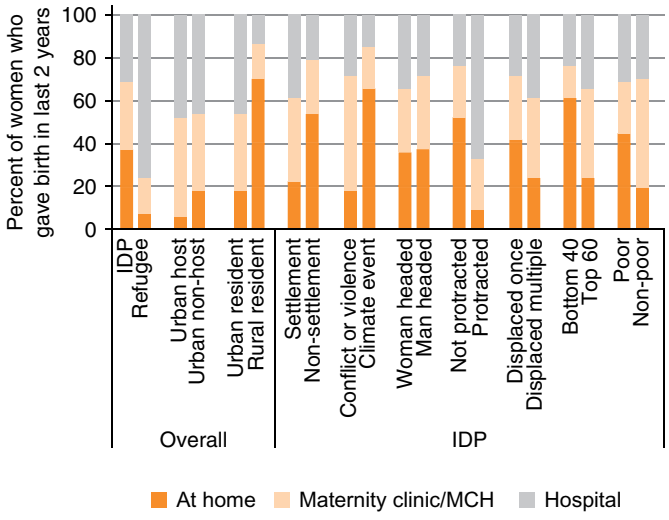
IDPs have less access to health care than urban residents, and more than rural residents, while refugees have better health care in Ethiopia, but the rates of access should be interpreted with caution. IDPs are twice as likely as urban residents, but about half as likely as rural residents, to give birth at home rather than in a maternity clinic, maternal and child health center, or hospital:

FIGURE 4.29 Under 15 minutes to network reception point



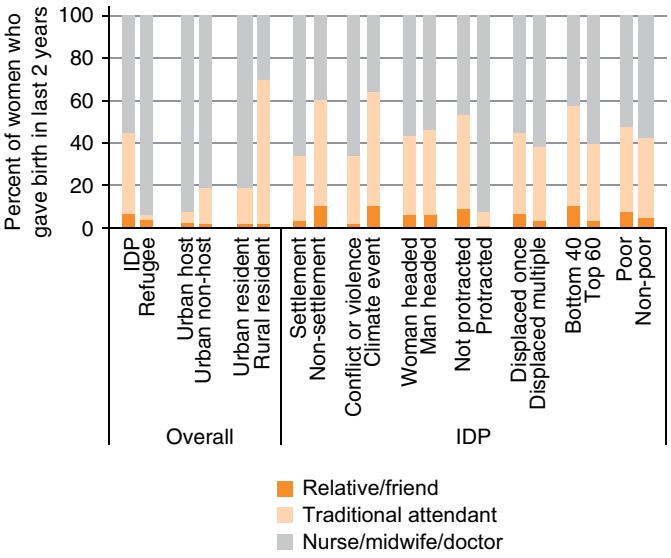
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.30 Births in health facilities, for IDPs, hosts, refugees, and residents



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.31 Births attended by skilled health staff, for IDPs, hosts, refugees, and residents



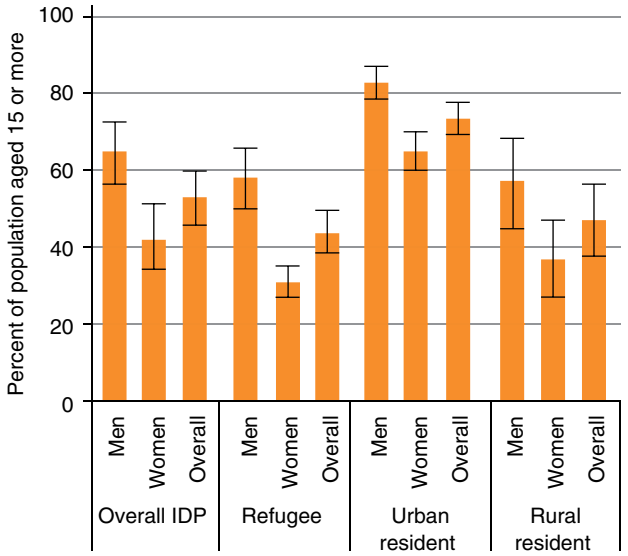
Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

almost 4 in 10 IDP women, less than 2 in 10 urban women, but 7 in 10 rural women ($p<0.01$; Figure 4.30) who have given birth in the last two years have done so at home. These figures, however, are higher than expected. IDPs are also much less likely than urban residents, but more likely than rural residents, to have their births attended by skilled health staff: only half of IDP women who have given birth in the last two years have done so assisted by a nurse, midwife, or doctor, compared to 8 in 10 urban women and 3 in 10 rural women ($p<0.01$; Figure 4.31). Somali refugees in Ethiopia have better access to health care—three in four births occurred at hospitals, and more than 9 in 10 were attended by a nurse, midwife or doctor.

Access to health care varies greatly across different types of IDPs. IDP women in settlements are half as likely ($p<0.01$) to give birth at home compared to those outside settlements. Protracted IDPs, all of whom are in urban areas, also have better health care access than recent IDPs. Overall, the pattern of disparities across groups suggests that location is an important driver of disparities in access.

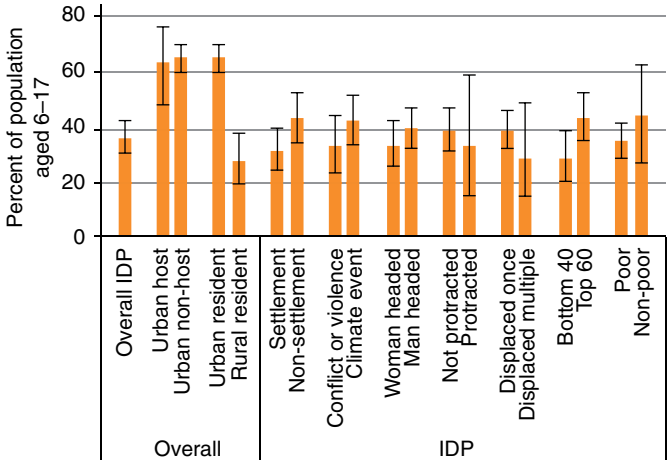
IDPs have lower levels of literacy and schooling than urban residents and, like the rest of the population, there are stark gender gaps between men and women in literacy. The literacy rate of IDP adults (52 percent) is lower than that of urban residents (73 percent, $p<0.01$) (Figure 4.32). School enrollment among those aged 6–17 is also much lower among IDPs (35 percent) than urban residents (64 percent, $p<0.01$) and hosts (62 percent, $p<0.01$) (Figure 4.33). The gender gap in literacy is stark, and consistent across groups: the share of adult men who can read and write, compared to

FIGURE 4.32 ■ Adult literacy rate by gender, IDPs, refugees, and residents



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.33 ■ School enrollment among the school-aged



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

women, is 22 percent higher among IDPs (p<0.01), 18 percent higher among urban residents (18 percent, p<0.01), and 20 percent higher among rural residents (p<0.01) but there are no statistically significant gender gaps in school enrollment for primary (ages 6–13) or secondary school (ages 14–17) children (Figure 4.33).

Adult literacy and schooling levels vary little when comparing IDPs and refugees to rural residents, and when comparing different types of IDPs. There are no statistically significant differences across IDPs, rural residents, and different types of IDPs, except that school enrollment among those aged 6–17 is somewhat lower among settlement IDPs (31 percent) than non-settlement IDPs (42 percent, p<0.1), and among the bottom 40 percent of IDPs across the income distribution (28 percent) compared to the top 60 percent of IDPs (43 percent, p<0.05). The overall similarities across different types of IDPs, however, suggest that the wider disparities in poverty across different types of IDPs are primarily because of their present circumstances, rather than educational endowments. Somali refugees in Ethiopia have an overall adult literacy rate of 43 percent, which is lower than that of IDPs and residents. (Figure 4.32; Figure 4.33).

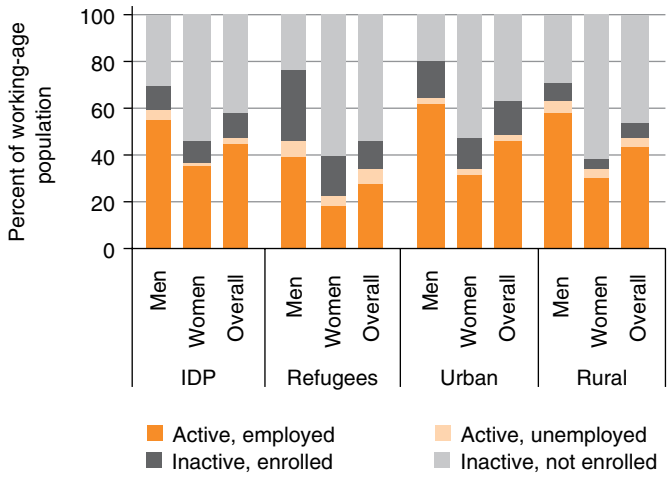
Employment and livelihoods

Employment

IDPs participate in the labor force at similar rates to the urban and rural population, while refugees in Ethiopia have much lower labor force participation. Almost 5 in 10 IDPs (48 percent) aged 15–64 are economically active, meaning that they have worked (45 percent) or have been unemployed but sought work (3 percent) in the last seven days. This is similar to the economically active share of the urban population (49 percent) and rural population (48 percent). Almost two in five inactive IDP working age adults (1 in 10 of all IDPs, whether active or inactive) are enrolled in school. This is somewhat lower than the share of urban inactive adults who are in school (p<0.05), but similar to rural enrollment. The remainder of IDPs in Somali regions, however (4 in 10 IDPs overall) are inactive and unenrolled: they are neither working, looking for work, nor in school. This is comparable to the share of urban and rural residents in this category (Figure 4.34). Somali refugees in Ethiopia, however, have higher levels of inactivity, with 60 percent neither in the labor force nor enrolled in education. Refugees in Ethiopia are not officially allowed to work, which explains the low labor force participation rate.

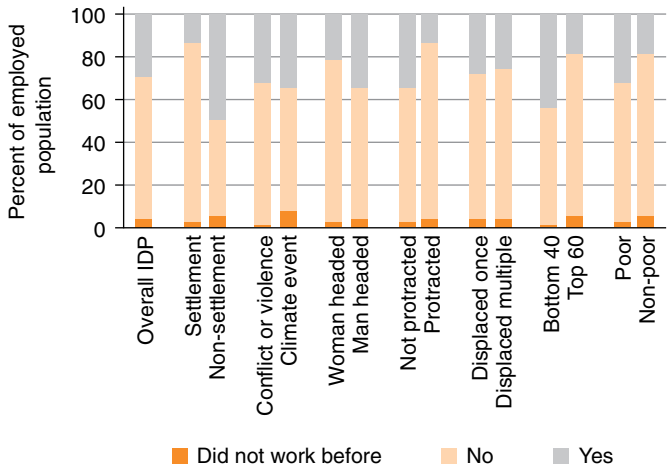
There are significant gender gaps between displaced men and women in labor force participation

FIGURE 4.34 ■ Labor force participation for IDPs, refugees and urban and rural residents



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.35 ■ Changes in employment activity after displacement



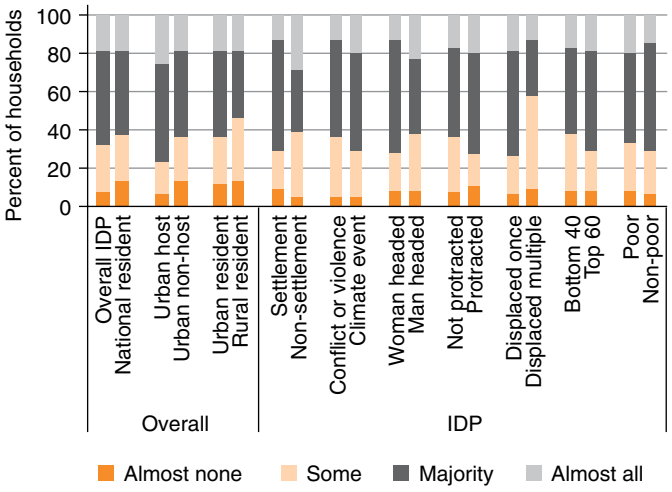
Source: Authors' calculations based on the SHFS 2017–18.

and employment. IDP women are less likely to be employed than men ($p<0.01$), and over half of IDP women are neither active nor enrolled in school, compared to less than a third (31 percent) of IDP men ($p<0.01$). Somali refugees in Ethiopia have the same pattern in the labor force status of the genders: women are less likely to be employed or enrolled in education, and more likely to be neither working nor enrolled. Women's lower likelihood of being enrolled in education can translate to lower employment in the future, leading to a persistent gender gap. The gender gap in being neither active nor enrolled, however, is smaller among IDPs (a 23 percent gap between men and women) than it is among urban and rural residents (a 33 percent gap for each). This may be because IDP women have greater access to schools than rural women (9 percent of IDP women aged 15–64 are enrolled, compared to 5 percent of rural women), or because male IDPs are much more likely to be neither active nor enrolled than urban men. It may also be because such women lack alternate sources of income and are required to find work to support the home. Three in 10 male IDPs (31 percent) are neither working, looking for work, nor enrolled in school, compared to only 2 in 10 urban men (20 percent; $p<0.05$) (Figure 4.34). Male IDPs are almost twice as likely as female IDPs to work as salaried labor (51 percent of male IDPs vs. 31 percent of female IDPs, $p<0.01$). Female IDPs are more likely than men to work on their own account (27 percent for women IDPs vs. 18 percent for male IDPs, $p<0.1$), and to be working as unpaid helpers in family businesses (31 percent for women IDPs vs. 18 percent for male IDPs, $p<0.01$) (Figure 4.38).

Women are much more likely than men to be economically inactive because they are caring for their families or households. Unpaid care work is not counted in labor force participation statistics as being economically 'active'. Most Somalis (about 7 in 10 of IDPs and non-IDPs alike) believe that most or all women in their communities are allowed to work outside the home, despite a significant minority reporting that only some or almost none are (Figure 4.36). Yet even if social norms permit, women are much more likely than men to be unable to work or be enrolled in school because of family and household care responsibilities: among IDPs, 59 percent of women and only 24 percent of men are economically inactive because of family and household care responsibilities ($p<0.01$). Rural and urban women are also more likely than men to be economically inactive because of family and household care (rural women: 64 percent; rural men: 24 percent, $p<0.01$; urban women: 69 percent; urban men: 38 percent, $p<0.01$). IDP men, in contrast, are much more likely than IDP women to be not working because of illness or disability ($p<0.01$), the reason cited by 30 percent of IDP men for economic inactivity.

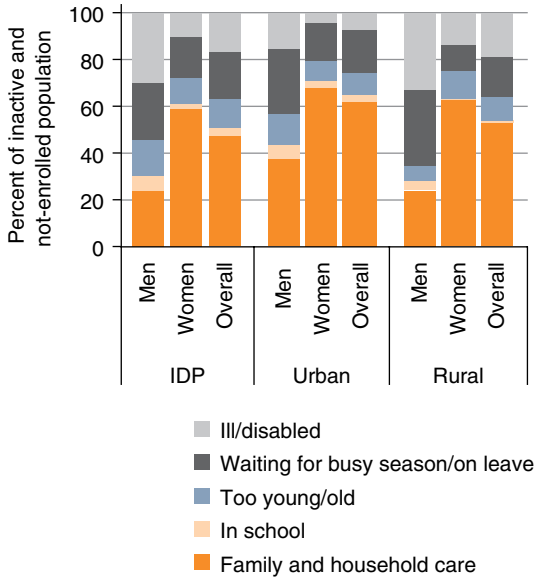
The employment patterns of IDPs, host communities and refugees, and of IDPs in and out of settlements, differ. Most employed IDPs work as salaried

FIGURE 4.36 ■ Proportion of women perceived to be allowed to work outside the home



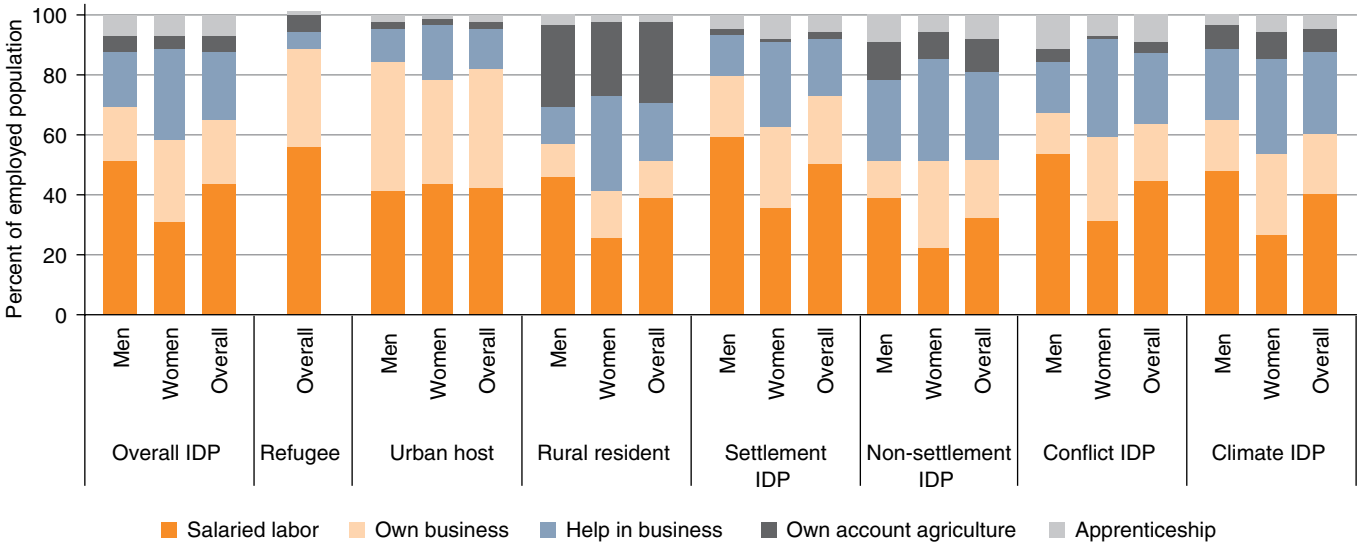
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.37 ■ Reasons for economic inactivity



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.38 ■ Main employment activity for IDPs, hosts, refugees, and rural residents



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

labor or labor paid in kind, including in agriculture (43 percent), or in non-farm businesses that they (22 percent) or their households (23 percent) own. These patterns differ from those of host communities, who are almost twice as likely to work in their own businesses (40 percent for hosts vs. 22 percent for IDPs, $p<0.01$), but are less likely to be helping in their families' businesses (14 percent vs. 23 percent for IDPs, $p<0.1$) (Figure 4.38). Settlement and non-settlement IDPs also have different employment patterns, which may be because settlement IDPs are only in urban areas. Settlement

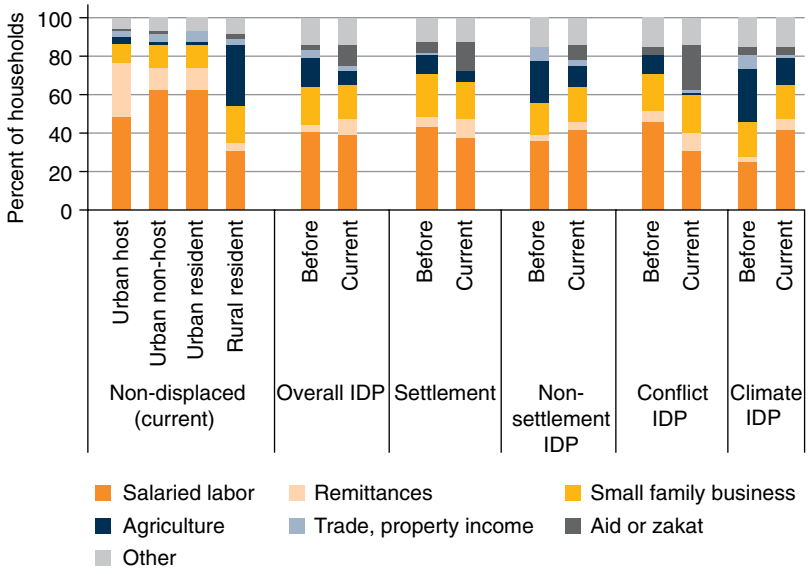
IDPs are more likely than non-settlement IDPs to work as salaried labor ($p<0.05$), and are less likely to farm, hunt, or fish for themselves or help on family farms ($p<0.01$). This difference may partly be because all settlement IDPs (100 percent) are in urban areas, compared to only 35 percent of non-settlement IDPs. Somali refugees in Ethiopia also largely rely either on salaried labor (56 percent) or own businesses (32 percent) for employment (Figure 4.38).

Most IDPs do the same work they did before being displaced, but about half of the poorest and those outside settlements have had to change their main employment. Almost 7 in 10 employed IDPs (67 percent) report the same main employment activities as before being displaced. These figures are even higher for IDPs in protracted displacement (87 percent), who may have had more time than others to re-establish their livelihoods, and settlement IDPs (84 percent). However, non-settlement IDPs and the poorest 40 percent of IDPs (who, because 69 percent of all IDPs are under the poverty line, are a subset of the poor), are more likely to have changed their employment. Every second IDP (49 percent) living outside a settlement has had to change his or her main employment activity since being displaced, as have over 4 in 10 (44 percent) of the poorest 40 percent of IDPs (Figure 4.35).

Household income

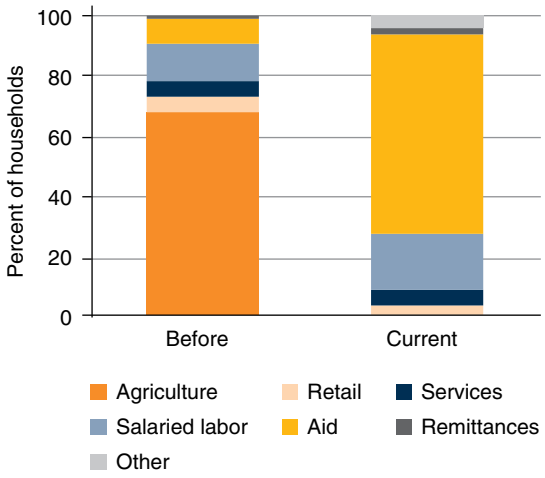
Most IDPs rely on salaried labor, small family businesses, or aid/zakat to provide their main source of income, while refugees rely overwhelmingly on aid. When examining household income (what households live on) rather than employment (what they do), a more nuanced picture of IDP livelihoods emerges, which captures how aid, zakat, remittances, trade, property, and other income sources contribute to household livelihoods. In Somali regions, about two in five IDPs have salaried labor as their main income source, and one in five rely on small family businesses, but almost none rely on trade or property income. IDPs are more likely to rely on small family businesses than urban residents or host communities (IDPs: 19 percent; urban residents: 12 percent, $p<0.05$; host communities: 12 percent, $p<0.05$). IDPs are also less likely than before to make a living from agriculture (15 percent before being displaced, vs. 7 percent after being displaced, $p<0.01$) (Figure 4.39). Somali refugees in Ethiopia have seen a stark shift in livelihoods. Almost 7 in 10 households relied on agriculture as their primary source of household income before displacement. After displacement, agricultural livelihoods have been almost completely squeezed out, and more than 6 in 10 households depend on aid. A combination of low labor force participation, especially as refugees are officially not allowed to

FIGURE 4.39 ■ Main source of income for IDPs, hosts, and residents



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.40 Main source of income for refugees



Source: Authors' calculations based on the SPS 2017.

work in Ethiopia, and the complete lack of agricultural opportunities, can explain why most refugees now rely mainly on aid. Apart from aid, about one in five refugee households get most of their livelihood from salaried labor (Figure 4.40).

Few IDPs rely on remittances, aid, or zakat, and, although they are poorer, climate IDPs are less likely than conflict IDPs to rely on aid or zakat. Less than 1 in 13 IDPs (7 percent) relies on remittances as their main source of income, and only 1 in 10 IDPs overall (12 percent) relies on aid or zakat. IDP aid dependency is much lower than in other countries in the region, such as South Sudan, where over 7 in 10 IDPs, and 9 in 10 refugees, rely on humanitarian assistance.[111] Climate IDPs in Somali regions are also much less likely to rely on aid or zakat than conflict IDPs (Figure 4.39). This is even though they are much poorer (Figure 4.20; Figure 4.21), and even though drought, famine, or flood have disrupted their agricultural livelihoods: as might be expected, far fewer climate IDPs now rely on agriculture, fishing, hunting, and animal husbandry (28 percent before vs. 13 percent now, $p<0.01$) as before being displaced, shifting to salaried labor (25 percent before vs. 41 percent currently, $p<0.01$) to earn an income. Only a tiny minority of climate IDPs (3 percent) rely on aid or zakat, which is much lower than the share of conflict-displaced IDPs who do so (23 percent, $p<0.01$, Figure 4.39). This suggests not that climate IDPs need less assistance, but that they may get less. This may again reflect the recent rapid increase in rates of displacement due to the most recent drought, the growth of which has outpaced the ability of humanitarian actors to expand their assistance to fully meet the scale of demand.

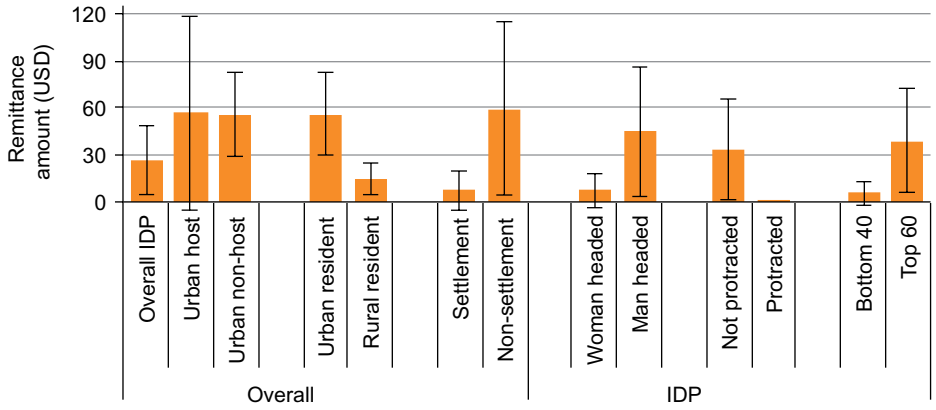
Average remittance amounts vary considerably across different types of IDPs, with settlement, protracted, female-headed, and the bottom 40 percent of IDP households receiving low amounts. The average annual value of remittances for all IDP households, whether they receive remittances or not, is US$27 per capita, which is about half what urban residents get on average (US$56, $p<0.1$). There are considerable disparities in how much different types of IDPs get on average. Settlement IDPs receive about an eighth of what non-settlement IDPs get, receiving only US$7 on average per capita per year in remittances, compared to US$59 for IDPs outside settlements ($p<0.1$). Protracted IDPs get less than a dollar on average per year, compared to US$37 for recent IDPs ($p<0.05$). The bottom 40 percent of IDPs get US$6 on average, compared to US$39 for the top 60, and women-headed households get far less than men-headed households, getting US$7 on average, compared to US$45 for male-headed households ($p<0.1$). These findings are consistent with earlier surveys and likely reflect the extent to which such households are marginalized and disconnected from social networks that would otherwise provide such support. This may be particularly true of minority clans that are disconnected from social networks and may have no mechanisms of support other than formal settlements (Figure 4.41).

Social cohesion, justice, and security

Most IDPs and refugees feel safe where they are, and IDPs report good relations with the communities around them. Almost 8 in 10 IDPs (78 percent) feel safe (moderately or very) where they are, which is similar among the national population, but somewhat less than among host community members (92 percent, $p<0.05$). Somali refugees in Ethiopia report very high levels of perceived safety, with about 8 in 10 households

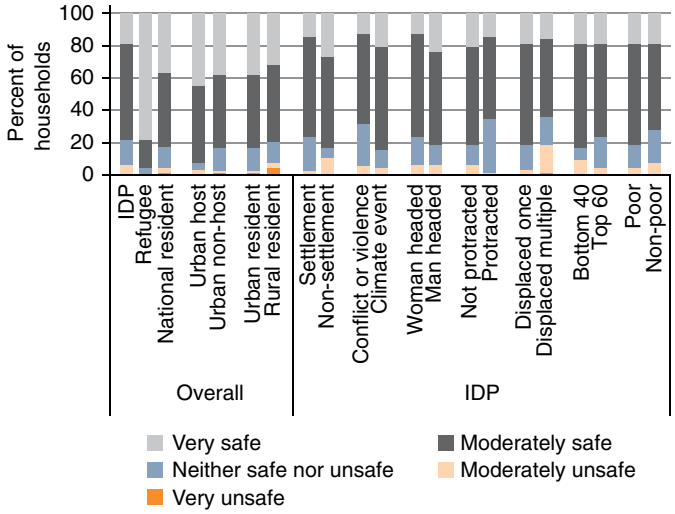
[111] World Bank (2018e). The comparison, however, should be interpreted with some caution, since the South Sudan survey was conducted in Protection of Civilian camps only.

FIGURE 4.41 Average remittances for IDPs, hosts, and residents



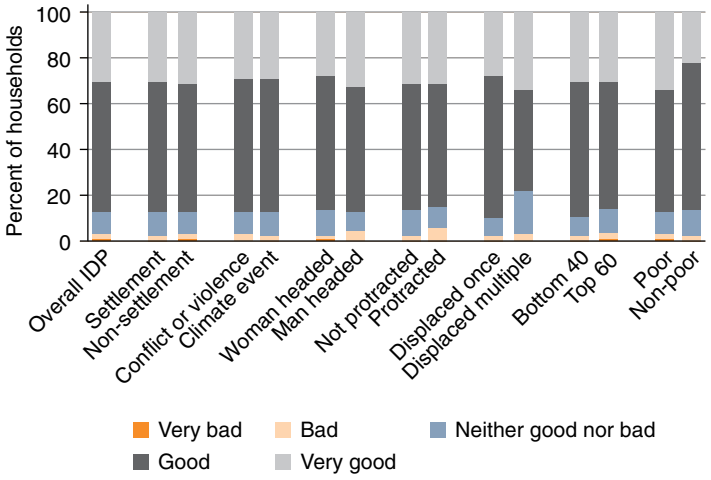
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 4.42 Perceptions of safety



Source: Authors' calculations based on the SHFS 2017–18 and SPS 2017.

FIGURE 4.43 Perceived relations of IDPs with surrounding community

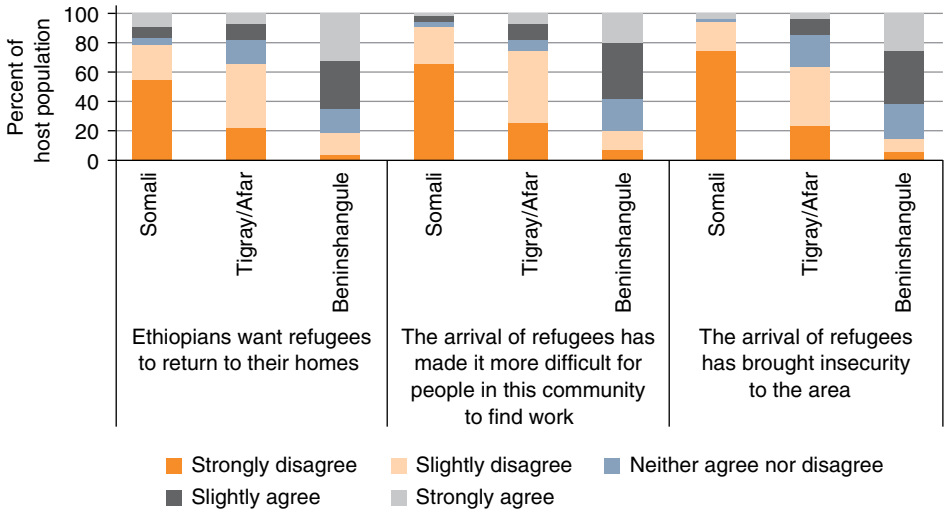


Source: Authors' calculations based on the SHFS 2017–18.

feeling very safe. IDPs displaced by conflict are less likely to feel safe, as are IDPs displaced multiple times: 3 in 10 conflict-displaced IDPs (31 percent) and almost 4 in 10 IDPs displaced multiple times (37 percent) feel very unsafe, moderately unsafe, or neither safe nor unsafe, compared to 15 percent of climate-displaced IDPs ($p<0.1$) and 19 percent of IDPs displaced only once ($p<0.05$) (Figure 4.42). This overall perception of safety among the IDP population at large is in line with perceptions of host community relations. Almost 9 in 10 IDPs (87 percent) think that their relations with the communities around them are good or very good. This likelihood is consistent across different types of IDPs, whether in or out of settlements, in households headed by men or women, in protracted or non-protracted displacement, displaced once or multiple times, or rich or poor (Figure 4.43).

Somali refugees in Ethiopia have markedly positive relations with their host communities, more so than refugees from other countries. The Somali, Tigray-Afar, and Beninshangule regions in Ethiopia host Somali, Eritrean, and Sudanese-South Sudanese refugees, respectively. In the Somali region, large majorities of the host communities disagree with statements such as "Ethiopians want refugees to return to their homes" and "The arrival of

FIGURE 4.44 ■ Perceptions of refugees among host communities in Ethiopia



Source: Authors' calculations based on the SPS 2017.

refugees has brought insecurity to the area." In the Tigray and Afar regions that host Eritreans the picture is slightly more mixed, although relations are overall perceived positively. In contrast, host community sentiments in the Benishangul Gumuz region (which hosts 75 percent Sudanese and 25 percent South Sudanese refugees), relations are not very positive: most host community members agree with the aforementioned statements (Figure 4.44). The more positive perceptions of Somali refugees tie with their longer permanence as refugees, common ethnic identity, and similar clan system. These commonalities entail a higher degree of integration, from economic self-reliance and higher participation in the labor market to better housing conditions and lower poverty incidence.

Policy recommendations

IDPs in Somalia are mostly young, poor, and out of work; often go hungry; have poor housing, water, health, and schooling; and are increasingly concentrated in urban areas. Half of IDPs are under the age of 15, half experience hunger, and three in four live on less than the international poverty line of US$1.90 a day, consuming on average about 35 percent less than that. Three in four are in already strained urban areas. About a third have had to change their livelihoods, many shifting out of agriculture; and 4 in 10 are neither working, looking for work, nor in school. IDPs have poor housing and access to sanitation, and are further away than others from schools, health centers, and markets. They receive low levels of remittances and have few safety nets. They also have less access to health care and schooling, which, combined with hunger, can translate into persistent, lifelong gaps in well-being.

Advancing durable solutions for displacement-affected populations in Somali regions is thus a central challenge for longer-term stability and development. Displacement is widespread; its deprivations many and deep. Development and poverty alleviation strategies for Somali regions will thus not be achieved without addressing displacement-related vulnerability and ensuring that displaced populations are integrated into society, the economy, and development policy and planning.

IDPs should be able to choose freely whether to return, stay, or settle elsewhere. International standards highlight that durable solutions for displaced populations may entail returning sustainably to places of origin, locally integrating into current communities, or settling in another part of the country; particularly important is the right of displaced populations to choose freely between these options.[112] More specifically, in the

[112] For example, Council (1998). Also see the "IASC Framework on Durable Solutions" (2010).

context of Somali regions, advancing durable solutions for displacement-affected populations—including IDPs, returning Somali refugees, and host communities—should further reflect:

- Support for return to communities of origin in areas where conflict and climate-related events have abated and where voluntary, safe, and dignified return is feasible;
- Support for local integration for those unwilling to return to areas affected by continuing conflict or climate-related events, or other factors; and
- Support as feasible for those currently displaced in areas of continuing conflict and/or humanitarian emergency or for those interested in return even in the context of ongoing instability.

Providing durable solutions in Somali regions requires a broad-based approach led by government. This entails a combination of area-based, cross-sectoral, multi-stakeholder needs and rights-based policies and investments, in which humanitarian and development partners engage collaboratively under government leadership. Enabling government ownership and leadership across any policies and investments is a priority. Interventions should align with the development priorities for durable solutions outlined in the National Development Plan, as well as other government-led efforts, including the Recovery and Resilience Framework (RRF) in development to respond to the most recent drought. Efforts should further build on other ongoing initiatives, including the Durable Solutions Initiative and regional initiatives such as the Comprehensive Refugee Response Framework, the Nairobi Declaration on Durable Solutions for Somali Refugees and Reintegration of Returnees in Somalia, and ongoing engagement by IGAD's Regional Secretariat on Mixed Migration and Forced Displacement.

Policy and program recommendations

Policy and program recommendations include the following:

- **Continue to provide humanitarian assistance to address basic needs and support resilience:** With more than half of IDPs reporting hunger, continuing life-saving activities to support basic needs remains critical. Expanding access to basic services, including health and education, is also important in enabling communities to become more resilient.
- **Strengthen the viability of urban and peri-urban areas and enable IDPs to better integrate into them.** Seventy percent of IDPs express a desire to stay in their current locations, which are mostly in urban areas. This is consistent with other studies, which indicate that even when climate-related conditions in communities of origin improve, IDPs may feel too unsafe to return.[113] Given that IDPs are concentrated in urban centers and secondary towns, and that rapid urbanization is having an impact on existing development deficits, vulnerability, and marginalization in Somali cities, strengthening the viability and resilience of Somalia's urban and peri-urban areas to enable IDPs to integrate into the local economy and become more self-reliant is critical. This will entail investing in services and infrastructure (including housing, shelter, water and sanitation, and health and education) to help cities better absorb massive population growth and provide services for displacement-affected populations and host communities alike. There is also a need to empower municipal authorities to plan, monitor, and budget for city growth. At the same time, the cities are already sites of innovation, with extensive private sector delivery mechanisms for services, financial investment, and job creation, which can be further harnessed.
- **Support rural resilience and recovery to enable safe and voluntary return and reintegration:** Although IDPs have mainly moved from rural to urban areas, investing in rural solutions to support return and recovery, and to provide opportunities in rural areas, should also be pursued. The survey findings highlight that socioeconomic and human development indicators of IDPs are often comparable or even better than those of rural residents, highlighting the vulnerabilities and development deficits confronting rural populations in Somali regions. Improving access to basic services and investing in socioeconomic infrastructure will be critical in supporting IDPs who wish to return. This will likely require start-up assistance and support to restore livelihoods.

[113] See UNHCR (United Nations High Commissioner for Refugees) (2016).

Consideration for investments may include cash transfers for basic consumption, skills development, and other forms of livelihood support, including inputs for agricultural production or restocking of livestock for pastoralist activities. Interventions may also include consideration for developing systems to enable recovery of lost assets, land, or repair/restoration of housing.

- **Promote livelihood and employment opportunities:** Employment and labor force participation among IDPs is low. Enabling access to livelihoods, employment, and opportunities to earn an income is critical both for household stability and resilience, as well as for local economic development and growth. In urban settings, this may include expanding salaried labor opportunities, for example through public work schemes or other infrastructure investment activities. Development investments targeting male or youth employment should investigate integrated approaches that combine business skills development, vocational training, or cash transfers with cognitive and non-cognitive skills building, which have had demonstrated effectiveness in other high risk contexts and may be appropriate for addressing psychosocial challenges—e.g., trauma, depression, dislocation—that may impede participation in employment opportunities.[114] Employment and livelihood initiatives should further investigate gender-differentiated approaches to address key barriers to women's economic empowerment, particularly as linked to entrenched social norms and expectations for women's domestic care burden. Policies and interventions to enable women to engage in economic opportunities should consider key protection provisions to minimize potential exposure to harm, harassment, or forms of gender-based violence.

- **Support policy and planning solutions for improved access to land, housing, and shelter:** Insecurity of land tenure constitutes a significant challenge in Somalia, which has had a major influence on the success of housing and resettlement provisions in Somalia to date. Other studies and humanitarian reports indicate that forced evictions due to land tenure insecurity are a common feature of urban life and perpetuate cycles of displacement. As this survey further highlights, lack of access to improved housing for three-quarters of IDPs also constitutes a major barrier to development and resilience across multiple dimensions. These findings underscore the need for laws, frameworks, and policies to assure both secure property rights and to identify housing planning and policy solutions for IDPs and host communities alike. Addressing land tenure and housing disputes may further require establishment and mediation through local-level dispute resolution mechanisms.

- **Promote protection and social cohesion:** While survey findings indicate general positive feelings of safety and cohesion by displaced populations, humanitarian and development programming should necessarily consider interventions to strengthen social cohesion and protection considerations to minimize potential grievance and monitor or address tensions between displaced and host communities in both urban and rural environments.

[114] For information related to psychosocial impacts of conflict on Somali men and boys and associated implications for engaging in employment, see "The Impact of War on Somali Men" (2015). For evidence of integrated economic empowerment programming targeting high risk youth in Liberia see "The Sustainable Transformation of Youth in Liberia (Styl) Program" (2015).

CHAPTER 5

Social Protection

KEY MESSAGES

Somalia is prone to both natural and man-made shocks and has inadequate risk management capacity at both national and household levels. It has led to extreme poverty and vulnerability where Somalis have limited economic opportunities and face severe constraints on livelihoods through losses to productive and physical assets, access to farmlands, fishing, and pastoralists' traditional routes for tending livestock. This cycle of shocks has increased their vulnerability to future shocks as there is very limited access to public and private insurance systems.

Almost two in every three Somali households reported experiencing at least one type of shock in the past 12 months. Of those who experienced a shock, one in every two households reported experiencing the drought. Households that are more likely to experience shocks are mostly male-headed, elderly, nomadic, and poor. Wealth plays an essential role in reducing vulnerability to shocks where a one percentage increase in wealth is associated with a 24 to 56 percent decrease in probability to experience drought and loss of crops or livestock, *ceteris paribus.*

Ninety-five percent of Somali households experienced loss of income or assets because of shocks. The drought in 2017 alone led to pastoralists losing around 70 percent of their average annual cash incomes while agropastoralists lost around 30 percent.

The majority of Somalis relied on self-help or self-insurance mechanisms to cope with the shocks. They include selling, pledging, or mortgaging their physical and productive assets; borrowing from friends, relatives, or moneylenders; or using other social networks to smooth consumption. Households also relied on using assets to generate more income; supplying more work; or allocating more hours to work by those who are already employed. Due to inadequate risk mitigation capacity at household and community levels, there was a direct impact on household consumption and wealth, which also led to high levels of food insecurity.

A social protection system can help address the vulnerability experienced by households through preventing and mitigating their impact. An efficient social protection system responds to the needs of the population both under emergency and normal circumstances and relies on information on the causes and type of risks that the population is exposed to and needs protection against. Hence, it consists of strategies that *ex ante* prevents poverty and *ex post* alleviates poverty. Before the risk, it relies on measures to prevent its occurrence or at least prepares the households in a way that can help them mitigate its impact. After the shock, it relies on different strategies to help the household to cope with it.

Cash transfers are an important social protection intervention that enable households to increase investment in productive assets, savings, and other income generating activities. Children in recipient households exhibit higher school attendance rates. Such households also avail health services more and pay off their debts. Cash transfers also encourage households to save and build household resilience that can help them to smooth their consumption in an event of a shock.

Somalis are vulnerable to various covariate (i.e., community level shocks such as natural disasters and epidemics) and idiosyncratic (i.e., household level shocks such as injury, death or unemployment) shocks, which have become a threat to their well-being. Somalia has faced almost three decades of humanitarian crises caused by recurrent climatic and conflict related shocks. These shocks have contributed to the extreme poverty, vulnerability, and displacement in the country. A coping mechanism, for most Somalis, in the absence of government-led support, is to rely on informal safety nets and humanitarian assistance. However, the capacity and reach of such mechanisms remain limited. There were 1.1 million internally displaced persons (IDPs) and around 1 million

Box 14 ■ What is vulnerability?

Vulnerability refers to the potential risks and shocks that can negatively impact an individual's welfare. Usually poor households are also more vulnerable, as they lack access to resources required to protect themselves against shocks, but poverty is not the only predictor of vulnerability. Being vulnerable refers to being prone to uninsured shocks and risks that can threaten one's livelihood or survival or both. In contrast to poverty, which is an *ex post* measure of household's welfare, vulnerability refers to an *ex ante* risk that can push a non-poor household into poverty or an already poor household deeper in poverty. In this framework, vulnerability depends on exposure to risks and shocks and lack of access to adequate resources and social protection mechanisms to manage these risks. Some groups are vulnerable only when exposed to a shock while others are in a chronic state of vulnerability with their livelihoods always at risk. Poor households are generally more exposed to risks while also less protected from them as they are less likely to be insured against risks and do not have access to formal and informal safeguards.

Source: Holzmann (2001); Chaudhuri (2000); Tesliuc and Lindert (2004); and Hoogeveen, et al. (2004).

Somali refugees across the borders before the 2017 drought started.[115] And 3.2 million Somalis were declared severely food insecure at the onset of the drought. Just the drought alone in 2017, caused an estimated US$3 billion in damages and losses in Somalia. An effective and responsive social protection system is based on a thorough understanding of poverty and vulnerability so that relevant risk mitigating and coping strategies can be adopted.

Sources of vulnerability at macro level

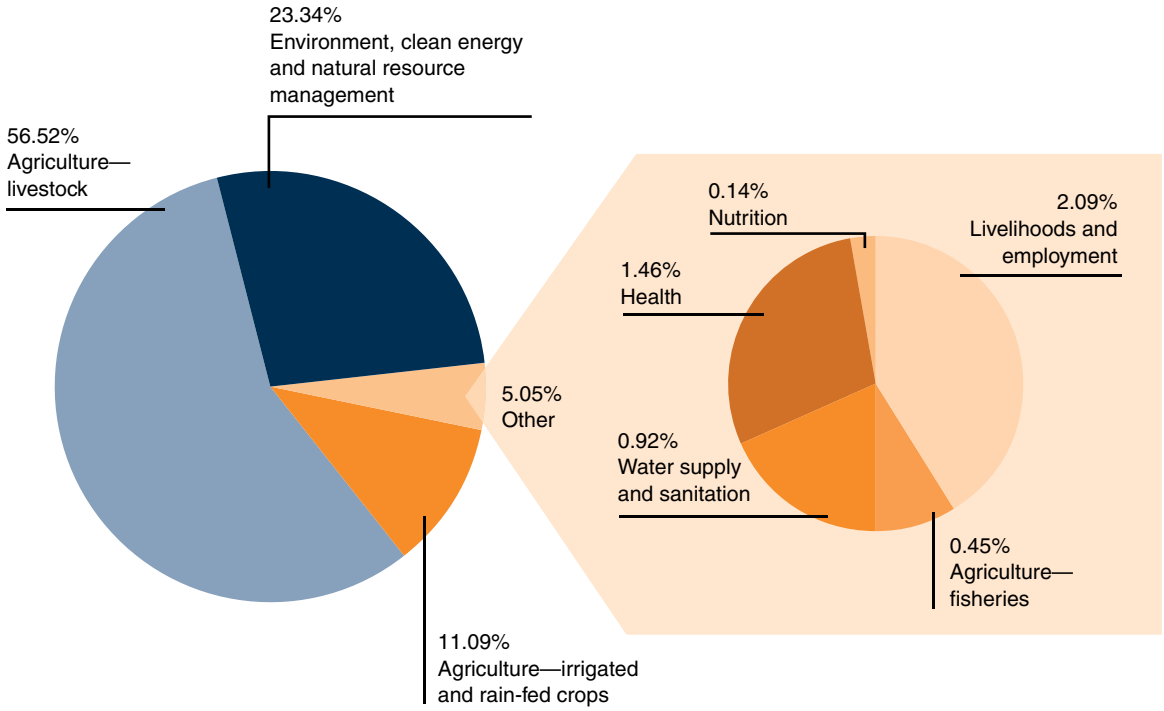
Somalia's history is rife with conflict and violence, which often led to physical and economic displacement, combined with loss of life and productive assets. Most of the armed conflicts in Somalia are along clan lines with clan identities being used to gain control of power and resources such as land and water points. These resources are fundamental for survival in Somalia where agro-pastoralism is the main source of livelihood and access to land and water translates into improved livelihoods and a stable food supply. Force and violence are often used to grab land, which ensues a cycle of conflict.[116] Al-Shabab's increased dominance in southern Somalia has also worsened the security situation. This continuous threat of violence often leads to reduced economic opportunities and severe constraints on livelihoods through losses of productive assets, access to farm lands, fishing and pastoralists' traditional routes for tending livestock.

Somalia has been experiencing recurrent climatic shocks such as droughts and floods because of its geographic location. The presence of conflict and violence has exacerbated the impact of climate shocks by affecting access and mobility. Somalia had its first famine in 1991. In 2011, Somalia experienced its most destructive drought that put 750,000 people at the risk of starvation and caused almost 260,000 deaths.[117] A few years later in 2015, Somalia was hit by El Niño with below average rains in the following two consecutive years triggering a potential famine. As a result, water reserves have been depleted, directly affecting agricultural and livestock sectors. The 2017 drought had the largest negative impact on agriculture and livestock accounting for 56 percent of total losses (Figure 5.1).

Loss in agriculture and livestock sectors directly or indirectly impact welfare of Somalis, as these sectors form the backbone of the economy and are the largest source of employment, income, and exports. Agriculture and livestock contribute around 65 percent to Somalia's Gross Domestic Product (GDP) and represent 93 percent of total exports. Around 23 percent of the total population is agropastoralist and is dependent on a mix of crop production and livestock rearing.[118] Both sec-

[115] https://reliefweb.int/disaster/dr-2015-000134-som
[116] World Bank (2005).
[117] FSNAU (2011).
[118] World Bank (2018c).

FIGURE 5.1 ■ Distribution of losses incurred due to 2017 drought by sector



Source: World Bank (2018c).

tors are heavily dependent on favorable climatic conditions. The recurrent droughts caused loss of crop production due to reduced cultivated land area as well as the reduced yields. The livestock sector has also suffered due to a severe dearth of water and unavailability of pasture for the livestock. It also disrupted the normal migration patterns of pastoralist households that are driven by searching for grazing land and water for the livestock. The drought in 2017 alone led to pastoralists losing around 70 percent of their average annual cash incomes, while agropastoralists lost around 30 percent.[119, 120]

Dwindling food supply causes a hike in food prices, which aggravated food insecurity. The increase in cereal prices is closely associated with irregular rainfall.[121] In 2017, there was a sharp drop in crop production in Somalia due to the drought, with maize and sorghum harvests being 75 percent lower in 2017 than in previous years.[122] About 6.2 million people—more than half Somalia's population—were estimated to be food insecure (IPC Phases 2, 3, and 4).[123] Somalis, especially those living in rural areas, totally lost access to food markets and even those who still had access to markets experienced much higher prices because of limited supply. It restricted household's capacity to access and procure food.[124]

Ever since the civil war of 1991, the governance structures and institutions have deteriorated causing political fragility. Only in 2012, the Federal Government of Somalia was established but still lacks technical and institutional capacity to deliver goods and services adequately. In the absence of formal institutions and regulatory structures, the household is left on its own to cope with shocks.

It is hard to distinguish between the impact of conflict and climatic shocks because the political economy of the two is closely intertwined. The impact of natural disasters is compounded by the ongoing conflict and insurgency and political

[119] World Bank (2018c).
[120] Zanini, et al. (2018).
[121] World Food Programme (2011).
[122] http://www.fao.org/news/story/en/item/470220/icode/

[123] World Bank (2018c).
[124] Zanini, et al. (2018).

instability. In 1991, food aid became part of the war economy, when different clans fought over getting access to it.[125] Similarly, due to restrictions on trade and freedom of movement caused by the current insecurity and conflict, Somalis living in southern Somalia had very limited access to humanitarian funding and other external resources during the 2011 drought. It led to spreading of famine across all regions of south Somalia.

Inadequate risk management capacity

An efficient risk management system includes mechanisms for risk prevention, risk mitigation, and coping strategies designed to alleviate the negative impact of shocks.[126] Its objective is to address the immediate impact of shocks by preparing people to cope and to facilitate investments that can reduce household vulnerability to future shocks. It includes, but is not limited to, pooling of resources using both formal and informal networks such as market-based arrangements, public or government led arrangements, and informal or community-based arrangements. The specifics of this system will vary by type and scale of risk but will be based on three components: acquiring knowledge (gathering information on potential risks and their impact), obtaining protection (to reduce the likelihood of experiencing risk), and procuring insurance (to transfer resources between good and bad periods to smooth consumption).[127]

Somalia's vulnerable population has high exposure to risk and lacks access to public and private sector safety nets and insurance systems. Somalia's authorities have inadequate capacity to mitigate risks and to protect households against shocks, due to a lack of institutional setup required to administer such programs. Humanitarian organizations are filling the void.[128] However, the government is inclined toward transitioning from short-term emergency response to a long-term and stable safety nets program. But it lacks technical and institutional capacity to administer an expansive program. Low revenue generation is another constraint, with domestic revenue representing only 2.1 percent of total GDP. Households also lack access to formal insurance and credit markets.[129]

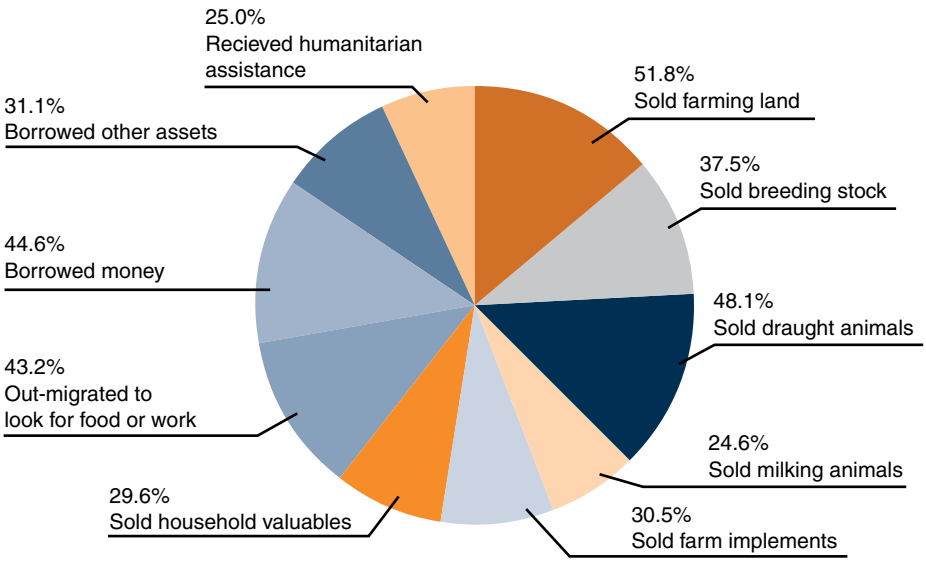
At the community level, clans have played a crucial role in such circumstances through a network of informal safety nets by establishing charity mechanisms (e.g., *sadaqah*) and sharing livestock as well as their products (e.g., *irmaansi*).[130, 131] Such networks are exclusionary in nature, as the access is mostly limited to clan members. Also, since they are informal by definition, they do not have an institutional setup or regulatory framework to ensure maximum coverage and timeliness when responding to shocks such as a drought. The resources are limited and cannot cover all vulnerable households even within the same clan.

Most households when exposed to a shock, take up loans from formal and informal networks to smooth consumption during periods of shocks. This increases their risk exposure which is already high due to climatic and conflict conditions. On the other hand, informal mechanisms such as remittances, have served as a lifeline. Somalia receives around US$1.4 billion in remittances every year, which is around 23 percent of its GDP.[132] It is facilitated by high mobile phone penetration (around 70 percent), which has made it possible to reach networks that are physically separated whereby allowing households to tap into those resources. Beneficiaries of cash transfers tend to use funds first to play off existing debt. This in turn makes households more resilient to future shocks.[133]

Humanitarian programing is another source of assistance for vulnerable households but due to lack of resources, access, administrative capacity, and coordination, households often remain excluded. In recent years, cash-based transfers have become more prevalent and were instrumental in the response to the drought in 2017. Approximately 3.2 million individuals received cash transfers in October 2017 only, with the help

[125] World Bank (2005).
[126] De Ferranti, et al. (2000).
[127] World Bank (2013).
[128] World Bank (2017b).
[129] World Bank (2018c).
[130] Majoka (2017).
[131] World Bank (2005).
[132] https://qz.com/848447/gift-remitting-somalis-in-the-diaspora-send-1-4-billion-in-cash-remittances-every-year/
[133] https://icai.independent.gov.uk/html-report/effects-dfids-cash-transfer-programmes-poverty-vulnerability/

FIGURE 5.2 ■ Coping strategies in response to the 2017 drought



Source: World Bank (2018c).

of various NGOs.[134] Mostly only those individuals are targeted that are in acute need, which is IPC 3 and IPC 4 level of food insecurity.[135] Some of these transfers are one-time only whereas others continue for up to 2 years. However, due to the security situation, it has remained a challenge to reach rural parts of central and southern Somalia.[136]

Households, with no access to formal or informal safety nets, resort to coping strategies that are detrimental to their well-being and create a vortex of increasing risk and vulnerability which is difficult to exit. Other than the direct negative impact of a shock on a household's welfare, it can lead to adoption of negative coping mechanisms such as selling or consuming productive assets, incurring debt, taking children out of school, foregoing medical care or reducing the share of meals consumed.[137] In response to the 2017 drought, households coped by selling their assets such as farming land (52 percent), breeding stock (37 percent), draught animals (48 percent), milking animals (25 percent), and household valuables (30 percent; Figure 5.2). Poor households mostly use informal savings arrangements such as buying jewelry or saving under the mattress that can be used in time of emergency. Loss of productive asset is a direct shock to income whereas loss of physical asset indicates reduced savings.

Another common coping strategy is migrating for food or work. Because of the drought, people start moving to places to have better access to safe shelter, food, and water for their own survival as well as for pasture for their livestock.[138] Migration, usually adopted as a coping strategy, can also compound issues related to displacement. The recurrent shocks related to natural hazards and conflict determine the patterns of migration and displacement. IDPs generally belong to marginalized groups, live in informal settlements with poor conditions, and are more prone to violence and discrimination.[139]

Conflict and natural disasters are two of the major contributors to hunger and poverty, making them essential targets for creating resilience.[140] Building resilience means to enable households to protect their assets and level of well-being during a shock and to bounce back to the level of welfare prior to the shock. With more than half of the population living below the extreme poverty line and suffering from food insecurity, it is important

[134] https://ocha-dap.github.io/hdx-somalia-cash-v2/
[135] World Bank (2017b).
[136] FSNAU (2017).
[137] Hoogeveen, et al. (2004).
[138] http://www.internal-displacement.org/countries/somalia
[139] Ibid.
[140] Myers (2017).

Box 15 ■ Data caveats for vulnerability analysis

The data used for this analysis is the second wave of the Somali High Frequency Survey. The survey instrument relies on self-reported information on shocks and risks while certain groups are more likely to report experiencing a shock than others. For example, richer household overreport whereas poor households underreport illness episodes. Quantitative surveys are also limited in their ability to capture certain types of shocks. For example, experience of discrimination or corruption can be explored better in qualitative studies. Shocks are only one of many factors that affect household welfare. At the time of data collection, Somalia was experiencing a drought, potentially subduing other types of shocks being reported.[141]

Source: Dercon and Krishnan (2000); Hoogeveen, et al. (2004).

to understand drivers of poverty and vulnerability, identify circumstances where poverty and vulnerability persists, and map livelihood strategies that are employed to survive and cope. In general, the poor are more exposed to risk with little access to preventative measures. In this context, a poverty and vulnerability analysis can inform the government policies around risk management and resilience building.

A social protection system can help in addressing household vulnerabilities through prevention of shocks and mitigation of their impact. Poverty can be transient or chronic in nature, both caused by different factors and, thus, also with different remedies, which are important to understand to inform social protection policy.[142, 143] An efficient social protection system responds to the needs of the population both under emergency and normal circumstances and relies on information on the causes and type of risks that the population is exposed to and needs protection against. Hence, it consists of strategies that *ex ante* prevents poverty and *ex post* alleviates poverty. Before the risk, it relies on measures to prevent its occurrence or at least prepares the households in a way that can help them mitigate its impact. After the shock, it relies on different strategies to help the household cope with it.[144] Building a social protection system is a high priority on the agenda of the Federal Government of Somalia, as emphasized in the National Development Plan 2017–19.

Experience and impact of shock

Both exposure and experience of shock affects the behavior and welfare of vulnerable households. Exposure to risk can make a household poor but at the same time, a poor household is more likely to take decisions that increases its exposure to risks. A vulnerable household will allocate a large share of its welfare to smooth its consumption in response to a shock. This can push the household into poverty or further increase its severity. Similarly, a poor household is less likely to save or invest in insuring its productive assets. This further increases its vulnerability to shocks.

Almost two in three Somali households (66 percent) reported experiencing at least one type of

[141] There is no information on certain characteristics of shocks, such as exact timing and duration of shock and whether the household could recover from it. The recall period is 12 months where all the shocks that a household experienced are lumped together. The respondents are not asked to quantify the impact of shock in monetary terms so it is also hard to assess their impact. There is information on whether the shock had a negative impact on income, assets, or wealth but without quantifying the impact, it is not possible to identify households that were affected the most. However, this data allows to explore the link between household characteristics and these shocks. As Somalia is prone to recurrent climatic shocks, this analysis has important insights into how Somalis responded to the drought as well as the measures they took to cope with the shock.

[142] Jalan and Ravallion (2000).

[143] According to the World Bank's Social Protection & Labor strategy, social protection programs and policies "help individuals and societies manage risk and volatility and protect them from poverty and destitution—through instruments that improve resilience, equity, and opportunity."

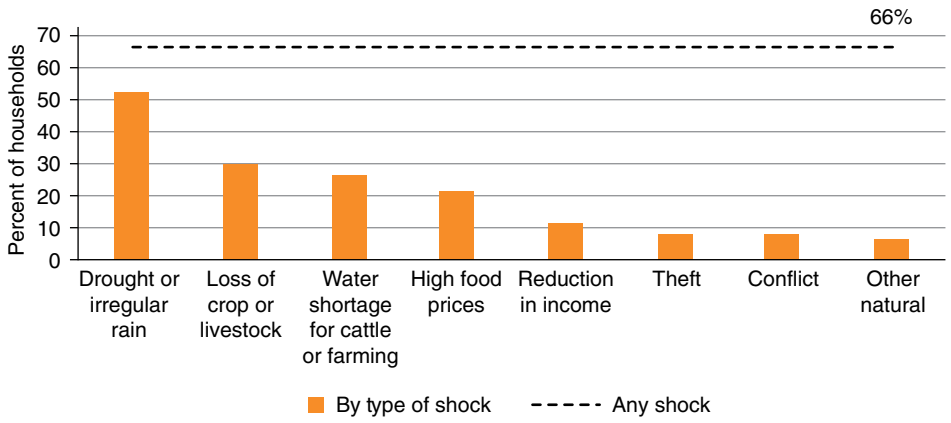
[144] Hoogeveen, et al. (2004).

Box 16 ■ Social protection systems in Kenya and Ethiopia

Ethiopia's Productive Safety Nets Program (PSNP) targets the poorest 6.5 million beneficiaries, however with a flexible caseload that can include an additional 3.1 million people in the event of a climate shock using a federal contingency budget. This kind of dynamic targeting helps to respond to impacts of recurrent droughts and chronic food insecurity. It has incorporated public works activities that help build climate resilience by providing households with alternative livelihood strategies. In times of crises, it increases the duration of the program by three months. Kenya's Hunger Safety Nets Program functions in a very similar way in terms of scaling up during climate shocks. It is an unconditional cash transfer targeted at the poorest households but increases its caseload depending on triggers, such as changes in the Vegetation Condition Index. As a result, beneficiary households in Kenya and Ethiopia are more resilient to climate shocks. For example, Hunger Safety Net Program (HSNP) households in Kenya are more likely to save, whereas households engaged in PSNP's public works program are less likely to engage in distress selling of assets to meet food or cash needs.

Source: World Bank (2018f); World Bank (2017c); Hoddinott, et al. (2015).

FIGURE 5.3 ■ Incidence of reported shocks among Somali households



Source: Authors' calculations based on the SHFS 2017–18.
Note: Households were asked to select all the shocks that they experienced in the past 12 months. Percentages indicate share of Somali households that reported experiencing a shock.

shock in the past 12 months.[145] Due to the 2017 drought, most of the reported shocks are related to fluctuation in climate and its impact on livelihoods and economy. In an agropastoralist economy such as Somalia, household welfare is closely linked with changes in rain patterns. Of those who experienced a shock, one in every two households reported experiencing the drought and one in four households reported loss of crops or livestock and shortage of water for farming or cattle. One in every five households experienced high food prices. (Figure 5.3).

Two of five Somali households experienced multiple types of shocks within a year. The negative impact of each shock is greater if a household experiences multiple types of shocks simultaneously as it leads to accumulation of vulnerabilities. Poorer households are more likely to experience more than one type of shock, but it is hard to conclude anything about the direction of causality, i.e., poor households are more likely to experience

[145] There were 18 categories of shock in the dataset which were collapsed into 8 categories presented in the graphs. Loss of crop and livestock refers to crop failure; crop disease or pest; and livestock death or disease. Reduction in income includes loss of remittances or other assistance; job loss or business failure; and loss of a household member or main earner due to illness or accident. Conflict covers both experiencing violence and land eviction whereas other natural shocks include floods or landslides and fire.

TABLE 5.1 ■ Incidence of types of shocks among poor and non-poor households

Types of shocks experienced in the past 12 months	Poor households (%)	Non-poor households (%)
Did not experience a shock	35	38.5
Experienced at least 1 shock	20.9	24
Experienced at least 2 shocks	36.9	34
Experienced at least 3 shocks	47.2	39.9
Experienced at least 4 shocks	52.3	42.1

Source: Authors' calculations based on the SHFS 2017–18.

multiple types of shocks or experiencing multiple shocks make households poor (Table 5.1).[146]

Who is more vulnerable to shocks?

Experience of a shock is influenced by various demographic characteristics such as location, age, and gender. Such information can be used to formulate relevant targeting strategies for safety nets that are inclusive of the vulnerable population and its needs. For example, natural shocks are more common in certain locations, which can be used to make the response more efficient and effective. However, other household characteristics, such as gender or age of the household head or employment status, also contribute to vulnerability to shocks, and, thus, increase the risk at the household level.

Nomads are most vulnerable to shocks, with 98 percent of them reporting at least one type of shock. Given their dependence on agropastoralist lifestyle, they are more likely to experience drought and loss of livestock (Figure 5.4). Three out of every four households in IDP settlements and rural areas reported experiencing a shock in the past 12 months (73 and 72 percent respectively). In comparison, only one in three urban households report a shock. IDPs living in settlements report experiencing conflict and violence more than the other population subgroups. In Mogadishu, certain militia groups continue to operate in the city even after withdrawal of Al-Shabab and have tried to maintain control over IDP camps.[147] Members of these militia groups act as "gatekeepers" at IDP settlement camps in Somalia and charge IDPs in settlements a certain fee in exchange for providing security.

Overall, male headed households are more likely to experience a shock than female headed households (70 and 60 percent respectively), but trends vary across types of shocks. One in every two male-headed households reported experiencing the drought in comparison to one in every three female headed household (Figure 5.5). Similarly, male headed households are more likely to experience water shortages for farming and cattle rearing. These shocks are closely related to the agropastoralist livelihood strategy, which is common among Somali households. Unsurprisingly, incidence of conflict and violence is higher among female headed households as women generally experience higher levels of violence at domestic, social, and institutional levels.

Households with heads older than 55 years are more likely to experience shock as compared to households with younger heads. Other factors such as loss of income, lack of livelihood opportunities, immobility, loss of networks, and loss of health and physical strength contribute to their vulnerability. These factors limit their access to coping mechanisms. Usually child headed households are common in conflict and fragile contexts and are more vulnerable due to social isolation. Child headed household are also common in Somalia due to continuous violence and displacement, but there is no systematic data on them.[148]

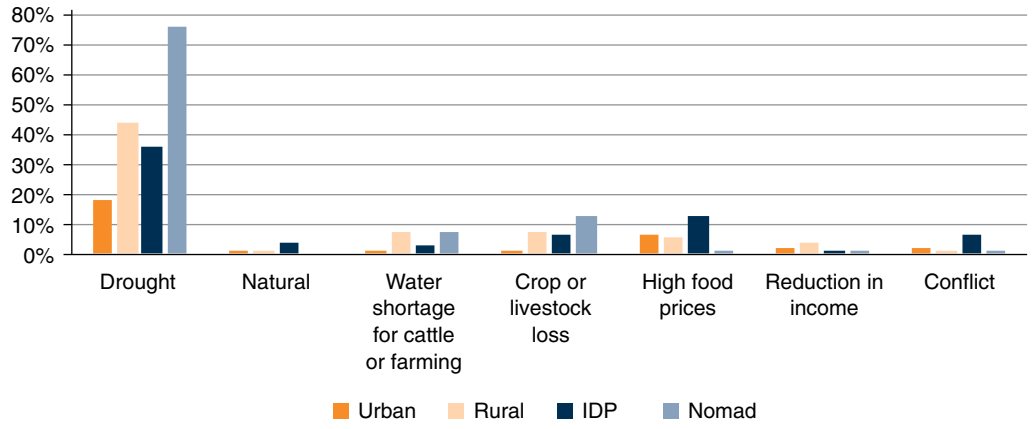
Poor households are more likely to experience a shock than non-poor households (67 and 64 percent respectively). Usually, poor households are

[146] The cross-sectional nature of data does not allow to identify households that experienced shock because of being poor in contrast to those that became poor as a result of experiencing shocks.

[147] http://www.irinnews.org/Report/96686/SOMALIA-Mogadishu-IDPs-suffer-extortion-eviction

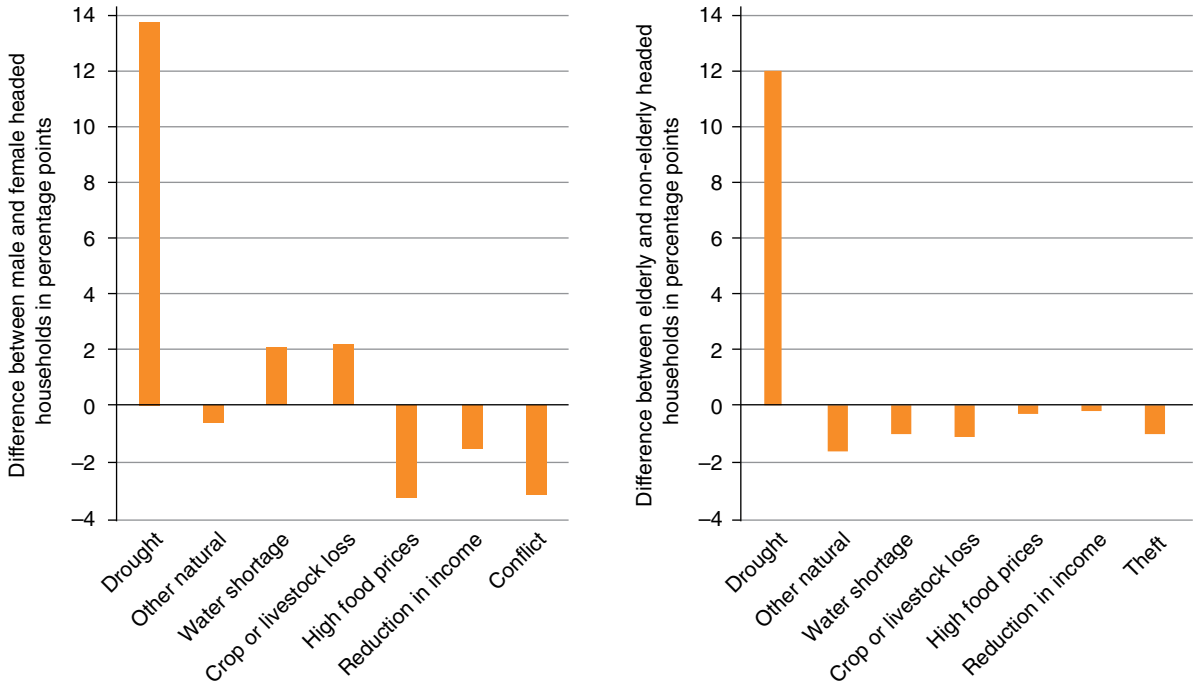
[148] Ward and Eyber (2009).

FIGURE 5.4 Incidence of shock by population type



Source: Authors' calculations based on the SHFS 2017–18.

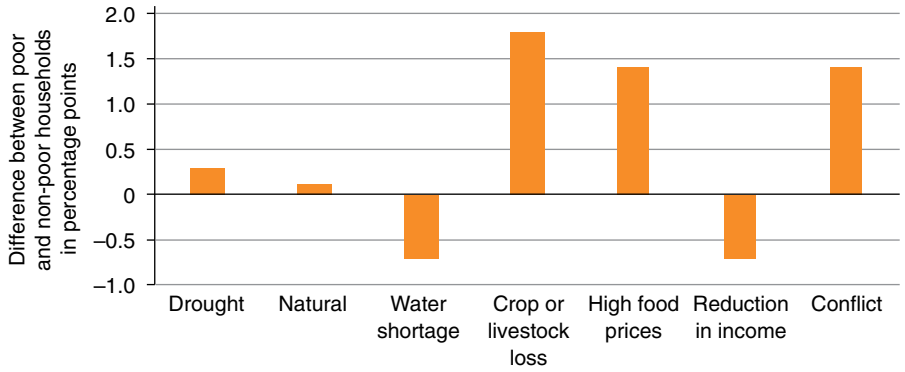
FIGURE 5.5 Difference in incidence of shock by age and gender of household head



Source: Authors' calculations based on the SHFS 2017–18.
Note: Respondents were asked to select the shock that affected them the most. Left: If the bar is above the x-axis, it means male headed households had a higher incidence than female headed households. Right: If the bar is above x-axis, households with heads 55+ experience have a higher incidence of shock than households with younger heads.

more likely to experience shocks because they lack access to risk management instruments such as insurance or credit. But the relationship between incidence of shock and consumption-based poverty remains spurious because unlike other household characteristics such as age and gender, consumption changes in response to a shock. However, the breakdown of shocks in Figure 5.6 shows interesting results where non-poor households report experiencing shortage of water for cattle and farming and reduction in income more often.

FIGURE 5.6 ■ Difference in incidence of shock between poor and non-poor households



Source: Authors' calculations based on the SHFS 2017–18.
Note: If the bar is above the x-axis, it means a higher incidence among poor households.

Factors determining household vulnerability to shocks

Households with a male head or elderly head, nomads, and poor are more likely to experience drought. Female headed households and IDPs in settlements report experiencing high food prices and conflict and violence more than other population groups. However, for insights into what makes households more vulnerable to shocks, regression analysis is conducted with whether a household experienced a shock or not as a dependent variable.[149]

Overall, one percentage increase in wealth decreases the probability to experience any shock by 20 percent, *ceteris paribus*. Other factors that make households more vulnerable to experiencing shocks are lack of education, dependence on agricultural income, unemployment, and household size. In low-income countries, households often rely on informal networks, such as family and friends, to share risk.[150] Remittances have served as a lifeline for Somalis through emergency times where inflow increases during droughts and other natural shocks. This can possibly explain households that reported receiving remittances in the past 12 months are more likely to report experiencing a shock as compared to those that did not receive any remittances (See Table 5.2).

The impact of household characteristics varies across different types of shocks. If the household head is illiterate, the probability of experiencing drought and loss of crops and livestock is 12 to 24 percent higher than households whose heads have some education. Unsurprisingly, households which depend on agriculture as their main source of income, are more likely to report water shortage for livestock and farming and loss of crops and livestock but less likely to report high food prices.

Different types of population are more prone to certain shocks. For example, settlement IDPs are more likely to experience conflict and violence as compared to the urban households. This is consistent with the evidence in literature on prevalence of violence in IDP settlements. On the other hand, both nomads and rural households are more likely than urban households to experience drought but less likely to experience high food prices. Possibly, reliance on agropastoralism makes households more prone to experiencing drought as a shock.

[149] Probit regression model is used where the dependent variable is whether a household reported experiencing a specific shock or not. It is clustered at regional level and assesses the impact of demographic and geographical characteristics on whether a household experienced a shock. Household wealth is used instead of consumption to control for household's long-term socioeconomic status. But there is a dummy variable that compares the top 60 percent of consumption distribution with the bottom 40 percent. Other characteristics of household head such as literacy, age, and gender are also added. Other controls are location of the household (urban, rural, IDP, or nomad as well as region), whether the household has an employed member, if the household depends on agriculture as its main source of income, and if the household has received any assistance and remittances in the past 12 months.

[150] Jack and Suri (2014).

TABLE 5.2 ■ What household characteristics affect the probability of reporting shocks?

	Any shock	Drought	Other natural	Water shortage	Crop or livestock loss	High food prices	Conflict
Wealth index	–0.112*** [0.018]	–0.080*** [0.021]	–0.006 [0.005]	0.005 [0.005]	–0.028*** [0.005]	–0.005 [0.014]	–0.002 [0.006]
Head (no education)	0.039*** [0.014]	0.041*** [0.013]	–0.007 [0.007]	–0.008 [0.006]	0.014** [0.006]	0.001 [0.011]	–0.003 [0.005]
HH with employed member	0.066*** [0.026]	0.031* [0.019]	0.000 [0.010]	–0.007 [0.008]	–0.006 [0.011]	0.034** [0.015]	0.005 [0.007]
HH has agricultural income	0.158*** [0.039]	0.024 [0.016]	0.021** [0.008]	0.046*** [0.009]	0.033** [0.013]	–0.051*** [0.011]	–0.027** [0.013]
Male headed HH	–0.006 [0.038]	0.021 [0.023]	0.015*** [0.004]	–0.013*** [0.004]	–0.013 [0.016]	–0.014 [0.020]	–0.007 [0.004]
HH head age	0.000 [0.001]	0.001 [0.001]	–0.000 [0.000]	0.000 [0.000]	–0.001*** [0.000]	0.001* [0.000]	0.000 [0.000]
Household size	0.01*** [0.004]	–0.008 [0.005]	0.001 [0.002]	–0.002 [0.004]	0.006*** [0.002]	0.003** [0.002]	0.001 [0.001]
HH receives assistance	0.111*** [0.05]	–0.017 [0.028]	0.027** [0.012]	0.030*** [0.009]	0.018* [0.010]	0.017 [0.012]	0.001 [0.010]
HH receives remittances	0.083** [0.04]	0.011 [0.035]	0.005 [0.008]	0.010 [0.008]	0.015 [0.013]	0.021 [0.019]	0.010*** [0.003]
Household welfare							
Bottom 40%	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*
Top 60%	0.10*** [0.031]	0.021 [0.019]	0.025*** [0.005]	0.0009 [0.006]	0.014 [0.015]	0.020 [0.016]	0.003 [0.006]
Population type							
Urban	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*
Rural	0.095* [0.051]	0.143*** [0.023]	–0.016* [0.009]	0.015 [0.015]	0.004 [0.010]	–0.036** [0.018]	–0.006 [0.009]
IDP (settlement)	0.021 [0.054]	0.014 [0.078]	–0.002 [0.020]	0.050** [0.022]	0.032 [0.019]	0.034 [0.030]	0.063*** [0.024]
Nomad	0.298*** [0.054]	0.256*** [0.078]	—	0.026 [0.016]	0.010 [0.013]	–0.057*** [0.011]	0.002 [0.022]
Control for region	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Predicted probability	0.56	0.33	0.03	0.04	0.05	0.06	0.02
No. of observations	3,163	3,170	2,516	2,974	3,032	3,134	2,570
Pseudo R^2	0.26	0.26	0.12	0.18	0.17	0.11	0.14

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*)
Dependent variables are dummies for experiencing each type of shock. Results are presented as margins with robust standard errors in parenthesis below. Wealth Index refers to the score based on assets and dwelling conditions, calculated using Principal Factor Analysis and is based on Filmer and Pritchett (2001).[151] A higher score reflects households that are better off. Variable for agricultural income means that the main source of household income is agriculture. For results on each type of shock, see Appendix D, Regression results for each type of shock.

[151] Wealth Index was created using Filmer and Pritchett (2001), but the choice of asset variables was slightly different. There is a huge asset depletion among households in Somalia, and most assets had less than 10 percent average incidence. The choice of variables on dwelling conditions was based on available information, as the data was collected using rapid survey consumption methodology.

Households receiving assistance are more likely to report a shock in the last 12 months, suggesting that humanitarian assistance is well targeted. Due to the timing of data collection, humanitarian assistance had already reached the affected households, or households are reducing their future risk exposure by reporting vulnerability knowing that this increases their chances of receiving assistance.

Households in the top 60 percent of the consumption distribution are more likely to experience a shock, particularly a reduction in income and increase in theft. It may seem counterintuitive but households in the top half of the distribution are more likely to have jobs and valuables as compared to the poorer households.

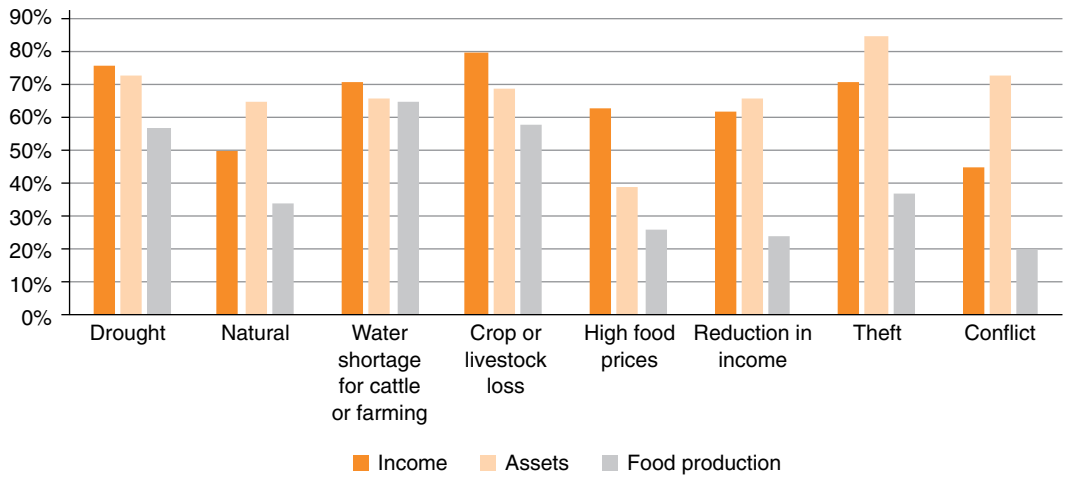
How do shocks affect households?

Ninety-five percent of Somali households that experienced a shock reported a negative impact on their income, assets, or food resources. Households experiencing theft or conflict report a loss of assets such as loss of valuables, land, or livestock (Figure 5.7). Conflict and violence also lead to destruction of property and other valuables. High food prices, loss of crops or livestock, and water shortage have a negative impact on household income. Most Somalis rely on livestock and farming for their livelihood so any shock to these leads to a direct reduction in household income sources. Similarly, high food prices reflect a decrease in purchasing power parity and real income of households.

How do households cope with shocks?

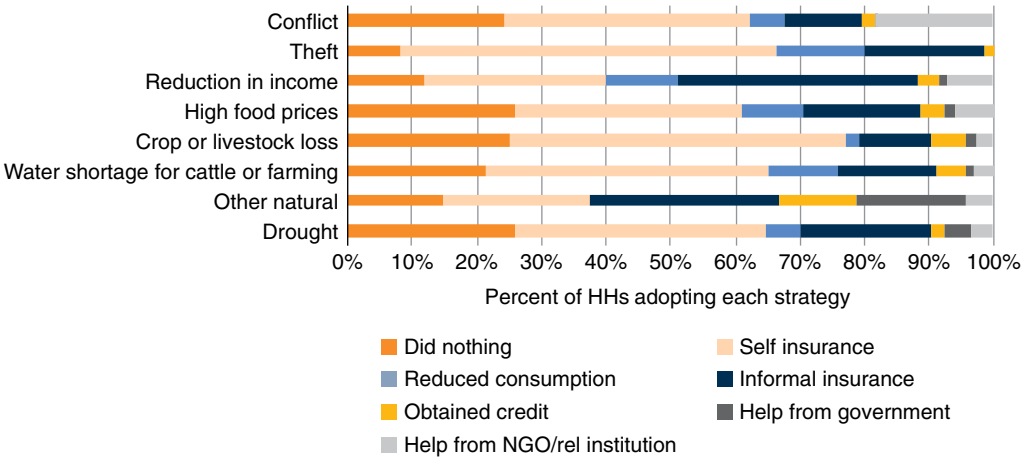
Households rely on formal and informal networks to mitigate the impact of shock and to smooth their consumption. These coping strategies fall into these categories: (i) self-insurance, which refers to selling, pledging, or mortgaging their assets; borrowing from friends, relatives, moneylenders, or using other social networks to smooth consumption; (ii) self-help entails using assets to generate more income, supplying more work, or allocating more hours to work by those who are already employed; (iii) informal insurance is pooling of risks by tapping into informal networks such as friends, family or clan. In Somalia's case, remittances have served as a strong informal insurance mechanism facilitated by mobile money operators; (iv) credit is either from informal mechanisms such as family and friends or market-based mechanisms such as banks or other financial institutions. Since market-based mechanisms are not well developed in Somalia, the use of informal credit is likely to dominate; (v) government help consists of government's assistance, both cash and in-kind, given directly to households; and (vi) help from NGOs includes all disaster relief and aid or ad hoc social assistance

FIGURE 5.7 ■ Negative effects of shocks on household welfare



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 5.8 ■ Risk mitigation strategies in response to each shock



Source: Authors' calculations based on the SHFS 2017–18.

services. Households that don't have access to any of these, respond by doing nothing.[152]

The most common coping strategy is self-insurance and incurring debt, which indicates lack of adequate risk management and mitigation systems, as well as an absence of formal and informal safety nets (Figure 5.8). If households are relying on self-insurance or choose to do nothing in case of conflict or theft, it implies a lack of access to formal conflict resolution mechanisms and regulatory frameworks. This adds to the vulnerability of households, especially those who belong to marginalized communities. Only an almost negligible percentage of households have access to formal or market mechanisms.

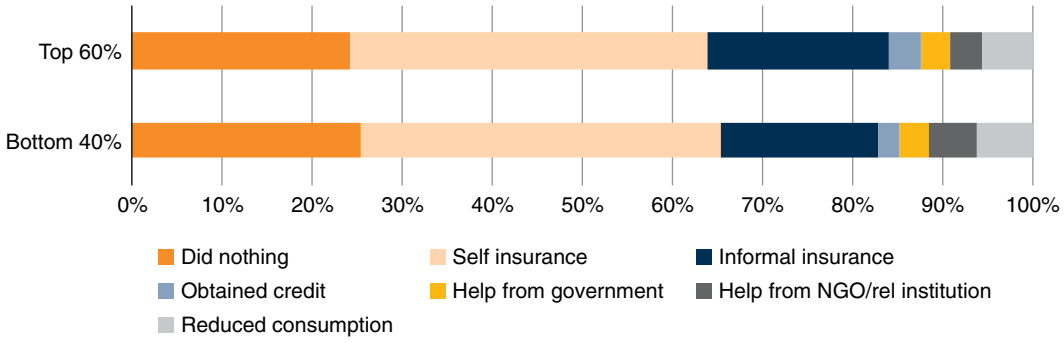
Poverty and wealth do not influence access to different types of mitigation strategies. Generally, the poor are more exposed to shocks and risks but have fewest instruments to cope with them.[153] In Somalia, however, the 60 percent wealthiest have similar access to formal and informal safety nets as the bottom 40 percent of the population (Figure 5.9). The main coping strategy remains resorting to informal mechanisms and self-insurance or not doing anything in both subpopulations. More than half of Somali households find borrowing money from both formal and informal institutions (including friends and relatives) difficult or very difficult. As only 8 percent of households were able to save money in the past 12 months, this leaves them very vulnerable to future shocks. In such cases, households resort to selling their assets, which leads to even higher vulnerability. As the resources keep dwindling, there are fewer and fewer ways to cope with future shocks.

Reliance on informal risk mitigation mechanisms is also consistent across different locations and male and female headed households. However, female headed households are more likely to respond by not doing anything as compared to male headed households. Similarly, urban households are more likely to do nothing after experiencing a shock. It is indicative of absence of formal risk mitigation mechanisms (Figure 5.10).

Households who have experienced a shock in the past 12 months are more food insecure than those who did not experience a shock. Drought is ranked as the single most common cause of food shortage, especially in low-income countries and can also trigger malnutrition and famine, depending on the local context. It affects all four dimensions of food security: availability, stability, access, and utilization.[154] Coping Strategy Index (CSI) is based on a household's behavioral response to sudden decrease in resources and uses latent variables such as reducing portion size or taking children out of school to estimate level of food

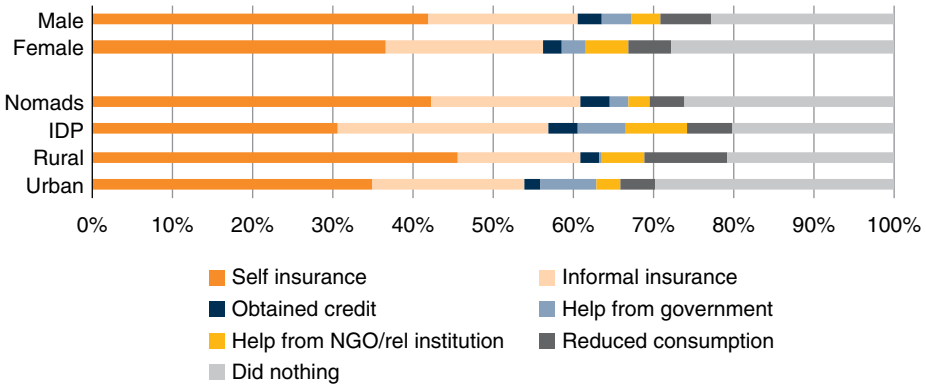
[152] Tesliuc and Lindert (2004).
[153] World Bank (2003).
[154] http://www.fao.org/crisis/28402-0f9dad42f33c6ad6ebda108ddc1009adf.pdf

FIGURE 5.9 ■ Adoption of risk mitigation mechanisms by welfare levels



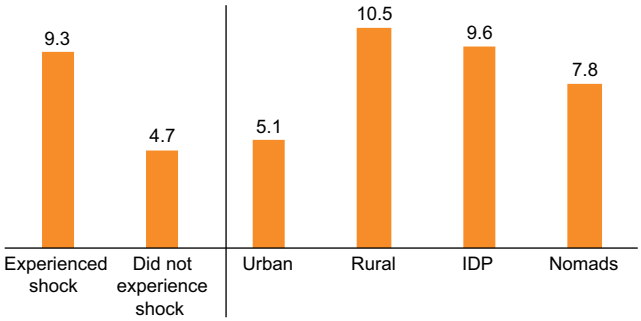
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 5.10 ■ Adoption of risk mitigation mechanisms by location and head's gender



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 5.11 ■ Reduced Coping Strategy Index



Source: Authors' calculations based on the SHFS 2017–18.

insecurity.[155] Households in rural areas are much worse off, potentially because of disruption of markets and loss of crops and livestock due to the drought that makes food even more inaccessible and unavailable.

Resilience building with social safety nets

Somali households that have experienced a shock report a higher level of food insecurity, low level

[155] Coping Strategy Index (CSI) is one of the tools used to measure the level of food insecurity at the household level, which can then serve as an early warning system by identifying groups where the need for aid is the highest. The CSI tries to quantify behavior of people when they are unable to access sufficient food. We calculate a reduced version of CSI, which is highly correlated with other measures of food insecurity.

of wealth, and are less likely to save or have access to formal or informal coping mechanisms, and are also more likely to resort to negative coping strategies. In this context, there is a need of social safety nets and a social protection system that can build both risk management and risk coping capacity of vulnerable households.

There is a distinction between risk-management and risk-coping strategies where the former refers to ex ante management of income generation (income smoothing), and latter refers to dealing with the income or welfare risk ex post (consumption smoothing).[156]A social safety nets system relies on a mix of both in its effort to build resilience, which enables households to anticipate and/or recover from the effects of a shock in a timely and efficient way.[157] Under severe conditions, households are forced to sell their assets to smooth their consumption. For example, in India, farmers sold their cattle when exposed to shocks and crises.[158] Similarly, in West-African countries, the transactions in livestock sales were responsive to income fluctuations related to the semi-arid environment.[159] In Somalia, which has suffered recurrent shocks, households are experiencing extreme asset depletion where the most common durable owned by households is a cell phone.

One of the most effective approaches toward risk-coping at household level is to create conditions where households can participate in voluntary savings such as building grain reserves.[160] This enables households to create capacity for self-insurance. Households with access to formal insurance and those that have higher income levels and savings, are better able to smooth their consumption. Moreover, in rural contexts where there are credit constraints, households are less likely to save. Similarly, the saving pattern among poor households indicates that most of their savings are usually meant to smooth income shocks, but they seldom make long-term investments, which have higher returns.[161] In Somalia's context, safety nets can encourage households to save and build household resilience that can help them to smooth their consumption in an event of shock.

Households receiving cash transfers use them for productive investments, savings, and other income generating activities.[162] Similarly, cash transfers lead to an improvement in household consumption with an increase in livestock ownership, agricultural assets and inputs, and savings.[163] In Ghana and Zambia, there was an increase in savings by 11 and 24 percentage points, respectively. In terms of human capital, households receiving a cash benefit are less likely to take children out of school.[164] Cash transfers also lead to an increase in school attendance but not necessarily in learning outcomes. In the context of health, cash transfers encourage households to use health services and to improve dietary diversity.[165] Cash transfers also lead to reduction of loans and debt repayments. Cash transfers help households manage risks in a more effective manner by diversifying income generating activities and avoiding negative coping strategies, such as begging or changing eating patterns.[166] Households are better able to cope with shocks if they have more human capital and assets, have access to jobs, and have diversified livelihoods.[167]

The primary target for cash transfer programs must be poor households as they are typically more exposed to multiple risks with limited access to formal and informal insurance networks. Poor households are most vulnerable to shocks as they experience the highest marginal impact on welfare because of low welfare levels to begin with, but also due to lack of access to risk management instruments. High level of vulnerability tends to make them risk averse so that they are less likely to engage in high risk, high return activities. Hence, having access to insurance mechanisms and other risk mitigating instruments can give them an opportunity to make investments without fearing losses.[168]

A cash transfer to poor households can help reduce poverty. Globally, countries tend to spend between 2.5 and 5 percent of GDP on such programs.[169] In contrast, Sub-Saharan countries on

[156] Alderman and Paxson (1994).
[157] Mitchell and Harris (2012).
[158] Rosenzweig and Wolpin (1993).
[159] Fafchamps, et al. (1998).
[160] Lim and Townsend (1998).
[161] Zeldes (1989); Kimball (1990); Deaton (1992).
[162] World Bank 2018a.
[163] Bastagli, et al. (2016).
[164] Davis, et al. (2016).
[165] Hagen-Zanker, et al. (2016).
[166] Daidone, et al. (2015).
[167] World Bank (2018f).
[168] World Bank (2003).
[169] World Bank (2018b).

average spend only 1.6 percent of GDP on social safety nets. Somalia spend even less at 0.8 percent of GDP in 2016, even though it received 16 percent of GDP (US$ 1.2 billion) in humanitarian aid.[170] Using some resources to implement a well-targeted safety net could substantially reduce poverty.

The impact of social safety nets on poverty and inequality is influenced by coverage, benefit level, benefit incidence, and other design features. On average, household consumption can increase by US$0.74 for each dollar transferred, though the impact varies in magnitude across countries.[171] In general, countries that have a very high rate of coverage coupled with a high benefit level, have a greater impact on poverty and inequality. Georgia and South Africa are two examples that display the highest level of poverty reduction, particularly in the bottom quintile of the distribution. In Georgia, the coverage rate is 93 percent of the poorest quintile where each household receives a benefit that constitutes 68 percent of its total welfare. This has led to reduction in headcount poverty by 43 percent. Similarly, low coverage and low benefit levels will have lower impact on poverty reduction.[172]

Globally, countries that are more prone to natural shocks have low safety net coverage rates.[173] Low coverage rates might be explained by budget constraints, lack of implementation and institutional capacity, or other political economy issues. However, low coverage rates of social safety nets can lead to lack of access to those who need them the most. But in most fragile countries, such as Afghanistan, the Democratic Republic of Congo and Haiti, even though there is a low safety net coverage, humanitarian programming is much larger.[174] In Somalia, currently there is no national government-led safety net system, but around 20 percent of the population was covered by humanitarian assistance in 2017.

Policy recommendations

The effectiveness and efficiency of safety net program depends on its ability to reach vulnerable communities, which remains a challenge given local clan dynamics and the security situation in Somalia. Most development partners rely on clan leaders or local partner organizations to gain access to communities, which in most cases also serve as gatekeepers for information. An inclusive program will have to break these barriers, for example by using an objective and transparent targeting scheme.

The first step could be to identify geographic regions that experience higher incidence of shocks, followed by a selection of households that qualify as a vulnerable household. Given barriers to access communities, a phased approach similar to Pakistan's Benazir Income Support Program could be successful. In the first phase, members of Parliament were responsible for selecting geographic areas as well as for compiling a list of beneficiary households. It was a subjective approach to targeting that resulted in very high inclusion and exclusion errors, measured against poverty criteria. However, once the government established access with target communities, a targeting strategy based on Proxy Means Test was developed and implemented. This has led to reduction of leakages and has also helped the government to build trust among citizens.[175]

In a resource constrained environment such as Somalia, a social safety net program in the short and medium term cannot replace humanitarian assistance but only complement it. The objective of humanitarian assistance is to help households smooth their consumption after experiencing the shock, and hence serves as a risk coping strategy. Somalia has been receiving humanitarian assistance for the past two decades, which by definition is ad hoc and demand based. As Somalia is prone to natural and manmade shocks, a transition to social safety nets can help in building resilience at the household level. In contrast to humanitarian assistance, social safety nets serve as both a risk management and risk coping mechanism. These systems can exist concurrently and complement each other. In fact, the presence of humanitarian

[170] https://reliefweb.int/sites/reliefweb.int/files/resources/final_ocha_somalia_humanitarian_bulletin_october_2017v3_002.pdf
[171] Ralston, et al. (2017).
[172] World Bank (2018f).
[173] Ibid.
[174] Ibid.
[175] Haseeb and Vyborny (2017).

programming can ease the fiscal burden of implementing such programs. Thus, a coordinated national level program that offers long-term and reliable cash transfers in Somalia can assist the most vulnerable households that are not being targeted by humanitarian assistance or remittances.

Due to political fragility in Somalia, NGOs and INGOs will have to work collaboratively with Somali government to build technical, institutional, and fiscal capacity. A Multi-Donor Trust Fund (MDTF) can be set up as was done in Ethiopia, where different donors committed funds for a social protection program that was implemented by the Ethiopian government. Donors and implementation partners also provided continuous technical assistance to formulate policy and to set up relevant institutions and systems. Such an arrangement helps the government to establish its legitimacy.

Even though the poverty impact of a safety net appears small, it can have a profound impact in the long term on reducing vulnerability and building human capital by helping households to invest in health, education, and assets while increasing savings and reducing exposure to risk by reducing debt repayments. Cash transfer programs should be designed for multiple years to serve as a reliable source of income for households, which helps them to smooth their consumption over time. Given asset depletion and household level loans in Somalia, households first respond by repaying loans and then only after that will invest in human and physical capital.

Household-level investments in human capital will directly benefit children, representing nearly half of the Somali population. A large young population is a huge asset for Somalia that can contribute to its growth. But the challenge is to create conducive conditions. In conflict and fragile situations, young men are more likely to engage in violence, substance abuse, and gang activities. Unemployment is one of the major factors that motivates young men to join rebel movements.[176] In this context, cash transfers will initially enable households to make investments in health and education of children, whereby opening opportunities for them to participate in the growth of Somali economy. However, in the medium to long term, social protection must include youth focused programming that targets their specific needs and goes beyond providing only employment.

In the medium term, cash transfers can be combined with productive inclusion strategies that can help diversify livelihood strategies. In Somalia, where agriculture, fisheries, and livestock are the main contributors to the GDP but at the same time most vulnerable to climate shocks, households with diversified livelihood strategies can cope with climate risks better. This will prevent them from depending entirely on agriculture, fisheries, and livestock for their livelihoods and so when hit by a shock, they will explore other livelihood avenues to smooth their income and consumption. Even when not combined with labor market activities, cash transfers enable households to switch from casual agricultural labor to on-farm labor.[177]

[176] World Bank (2011).
[177] Davis, et al. (2016).

CHAPTER 6

Remittances

KEY MESSAGES

Remittances are the major source of external development finance for Somalia. Remittances contribute to international reserves, help finance imports, and improve the current account position of the country. Somali migrants send on average $1.3 billion per year. These estimates of remittance inflows based on data reported by the International Monetary Fund are likely below the actual volume of remittance flows to Somalia. There is need to improve data collection and reporting of remittances, as well as to capture flows that take place outside of formal financial channels.

In Somalia, remittances were more stable than both FDI and official aid. Sometimes remittances may also behave countercyclically with respect to the economic cycle of the recipient country. Thus, the greater stability of remittance flows and their anti-cyclicality may contribute to the stability of resources received by Somalia. Remittance inflows are more than three times the size of foreign direct investment and are the same size as grants and official aid Somalia received. Remittances contribute to the country's international reserves, help finance imports, and improve the current account position.

Somali households are both remittance receivers and senders, however the incidence of receipt exceeds the incidence of sending. Remittance-recipient urban households receive the largest amount on international remittances, while IDPs living outside settlements receive the largest amount on internal remittances. The average amount of international remittances households received range from US$505 to US$876 and domestic remittances range from US$138 to US$525. Most remittance-recipient households receive remittances monthly. Households receiving international remittances draw a larger proportion of their incomes from salaried labor (35 percent) and remittances (34 percent).

Remittances are associated with reductions in poverty and increased access to health and education services. The proportion of households receiving remittances tend to be less poor. International remittance recipient households are typically urban, headed by women, and have their kids enrolled in school. Urban households receiving international remittances tend to have both higher consumption levels and higher enrollment rates for their children.

Even though remittances provide a lifeline to the poor, sending money to Somalia remains costly. Somalia has been affected by "de-risking." Due to the anti-money laundering and combatting the financing of terrorism regulations, the costs of remitting money to Somalia have increased. According to the Remittance Prices Worldwide database, the average cost of sending US$200 from Australia and the United Kingdom to Somalia has increased. Reducing transaction costs increases the disposable income of poor migrants and increases their incentives to remit. Policies to foster the use of innovative mobile money transfer technologies and payment systems, as well as the use of digital financial IDs, will facilitate remittance flows and the compliance with Know Your Client (KYC) regulations.

Remittances have impact at both the household level and at the level of the economy, affecting macroeconomic management, labor force participation, and patterns of household expenditure. Remittances are associated with increased household investments in education and health. Remittances may play a significant role in alleviating poverty. Remittances are private money that belong to the households. However, remittances can be leveraged at the macroeconomic level (accessing improving credit ratings) and the microeconomic level (accessing new financial products for micro-insurance, education, food, and micro and small and medium enterprises).

Remittances are the major source of external development finance for Somalia. During 2015–2017, Somali migrants and refugees remitted on average US$1.3 billion per year.[178] The true size of remittance flows is believed to be

[178] International Monetary Fund (2018a).

significantly larger considering unrecorded flows. In Somalia, remittances are close to 20 percent of GDP.[179] Remittances have consequences at both the household level and at the level of the economy, affecting macroeconomic management, labor force participation, education and health outcomes, income distribution, and patterns of household expenditure. This chapter discusses the economic implications of migrant remittances for Somalia and recipient households.

International mobility patterns

Somalia has one of the most complex migration patterns of any part of the Horn of Africa, in part due to the conflict in the region. It is a country that sends migrants and refugees while also receiving migrant and refugee returnees. Recently, the conflict in Yemen has pushed new Yemeni refugees to Somalia.

The stock of Somali migrants and refugees living outside of Somalia reached more than 2 million in 2017, having doubled since 1990.[180] Somalis primarily migrate to Kenya, Ethiopia, the Republic of Yemen, Libya, the United Kingdom, Djibouti, the United States and Sweden in descending order of popularity. Before the 1990s, Somali migration had been focused on the Arabian Peninsula and the Persian Gulf, in part because Somalia has historic trade ties with the Gulf States linked to the Somali livestock trade and labor migration. Somali mobility patterns shifted in the 1990s with the eruption of the civil war. After the war, Somalis went to various destinations outside Africa. Migrants and refugees continue using the migration/refugee routes from the southern, northeastern and northwestern Somali regions to the Gulf of Aden looking for better opportunities and security. Some venture northwest through Sudan and Libya as transit countries. Several of the youth migrants go to Libya and try to cross to Europe. Libya is a main transit country in which several Somalis are being abused by smugglers and traffickers. Others head south through Kenya and the eastern Africa corridor toward South Africa.

Somalia is the fourth top refugee origin country with almost 1 million refugees in the world.[181] The number of Somali refugee arrivals to the United States increased from 6,969 in 2007 to 9,020 in 2016. In Africa, around 835,900 Somali refugees are still displaced. Since the beginning of the Voluntary Repatriation program in December 2014, 81,030 refugees were repatriated.[182] Out of 81,030 who were repatriated, 1,089 were assisted in March, namely, 759 from Kenya, 272 from Yemen, 56 from Libya, and two from Gambia.[183]

Despite being the home country to millions in the diaspora, Somalia is also host to millions of internally displaced persons and thousands of refugees, asylum seekers, and migrants. Somalia is estimated to host over 1.1 million internally displaced persons, 116,040 returnees, 15,259 refugees, 14,885 asylum seekers, and 44,868 migrants.[184] A total of 4,293 Somali refugees returned to Somalia in the first three months of 2018. Large numbers of migrants and refugees transit through Somalia, particularly Somaliland and Puntland, but no data capture this movement. Somalia is also a destination country for undocumented migratory flows due to its extensive borders. Transit migration is driven by the same drivers of voluntary or forced migration, including better economic opportunities and security. Estimates suggest that there are at least 20,000 undocumented migrants, mainly Ethiopian, in Somaliland.[185]

Remittances at the macroeconomic level

Remittances have been a lifeline for Somalia. The importance of remittances as a means of development finance and household income in Somalia has sparked substantial interest. Somali migrants sent at least $1.3 billion in remittances in 2017. The true size of remittance flows, including unrecorded flows, is believed to be significantly larger. Remittances are the most tangible link between migration and development.

[179] IMF (2018a).
[180] World Bank (2018a).
[181] UNHCR (2017).
[182] UNHCR (2018a).
[183] UNHCR (2018b).
[184] World Bank (2018a); UNDESA (2017); UNHCR (2018a).
[185] RMMS (2016).

TABLE 6.1 ■ Selected economic indicators, 2015–2018 (percent of GDP)

	2016 (estimated)	2017 (projected)	2018 (projected)
Real GDP growth	2.4	1.8	2.5
Current account balance	–6.3	–6.7	–7.2
Trade balance	–46.2	–50.5	–45.8
Remittances	19.6	20.6	19.5
Grants	20.8	23.7	19.5
External debt	74.5	71.5	…
Nominal GDP in US$	6,887	7,382	7,781

Source: Somali Authorities and Fund staff estimations and projections. Taken from the 2017 Article IV Consultation.

Remittances tend to be relatively stable and may behave countercyclically. The reason is that relatives and friends often send more when the recipient country is in an economic downturn or experiences a disaster (Mohapatra, Joseph, and Ratha, 2009). In Sub-Saharan Africa, remittances have been more stable than foreign direct investment, private debt, and equity flows. Nevertheless, even small fluctuations in remittance inflows can pose macroeconomic challenges to recipient countries, especially those with large inflows.

Remittance inflows in the period 2015–2017 stood at about US$ 1.3 billion per year. Remittances represented 20 percent of the GDP in 2017 (Table 6.1).[186] These inflows are more than three times the size of foreign direct investment and are the same size as grants and official aid Somalia received. Remittances contribute to the country's international reserves, help finance imports, and improve the current account position.

Remittances offer some important advantages from the point of macroeconomic management in poorer countries. Remittances tend to be a more stable source of foreign exchange than other sources so that the resulting real exchange rate level may be sustainable.[187] Remittances are often countercyclical, helping to sustain consumption and investment during economic downturns. Thus, they perform the role of a "shock absorber" or insurance for origin countries against macroeconomic shocks or other shocks.[188, 189] Economic activity in Somalia is recovering from the effects of the drought in 2016–17. The drought impacted Somalia's economic activity in 2017, but sustained international community support, and remittances helped Somalia avoid a severe humanitarian crisis as well as to finance the trade deficit.[190]

Large and sustained remittance inflows can make manufacturing less profitable. Like other sources of exogenous foreign exchange, such as development assistance, remittance inflows can cause an appreciation of the real exchange rate, making tradable goods production less competitive overall, and perhaps making low-cost manufacturing unprofitable. Empirical evidence on the adverse effect of large inflows of foreign exchange is scarce. It is even more scarce with reference to remittances. According to Chami (2018), the Dutch disease effect is less pronounced in fragile states due to the fact there is a small tradeable sector.[191]

Appropriately accounting for remittances can improve the evaluations of external debt sustainability and creditworthiness. The ratio of external debt to exports would be significantly lower if remittances were included in the denominator. The International Monetary Fund (IMF) is helping Somalia reach debt relief under the Heavily Indebted Poor Countries (HIPC) initiative as soon as feasible within established HIPC procedures, including the preparation of a Poverty Reduction Strategic Paper (PRSP).[192] Remittances could be included in the preparation of the debt sustainability analysis as per the latest guidance on debt sustainability analysis.

Remittances can affect economic growth directly by raising consumption and investment expenditures, and by improving the stability of consumption and output at both the household and macroeconomic level.[193] Remittances tend to be relatively stable, and may behave

[186] International Monetary Fund (2018b).
[187] IMF (2005).
[188] Frankel (2011); Chami, et al. (2009); Singh, et al. (2009).
[189] Ratha (2007).
[190] IMF (2018b).
[191] Chami, et al. (2018).
[192] IMF (2018a).
[193] Chami, et al. (2009); Mohapatra, et al. (2009).

countercyclically—because relatives and friends often send more when the recipient country is in an economic downturn or experiences a disaster (Mohapatra, Joseph, and Ratha, 2009). In Somali, remittances have been more stable than foreign direct investment, private debt, and equity flows. Nevertheless, even small fluctuations in remittance inflows can pose macroeconomic challenges to recipient countries, especially those with large inflows.

Reliable data on remittances are hard to come by as in the case with migration data. Data on remittances are believed to be underestimated in Somalia. While the IMF is trying to assess the volume of remittances, these data are neither comprehensively reported nor do they capture flows of monies that take place outside of formal financial channels. Data inaccuracy stems from problems associated with knowing the universe of remitters and the intermediaries facilitating the process, enforcing data collection, and applying the appropriate methodologies to capture the data. Reliable data on remittances are hard to come by. Some recommendations to improve remittances data include: (i) improve data compilation and methodologies for Somalia; (ii) improve coverage of all remittance service providers including mobile phone service providers; and (iii) increase resources and build capacity to improve the accuracy of data compiled by the Central Bank of Somalia.

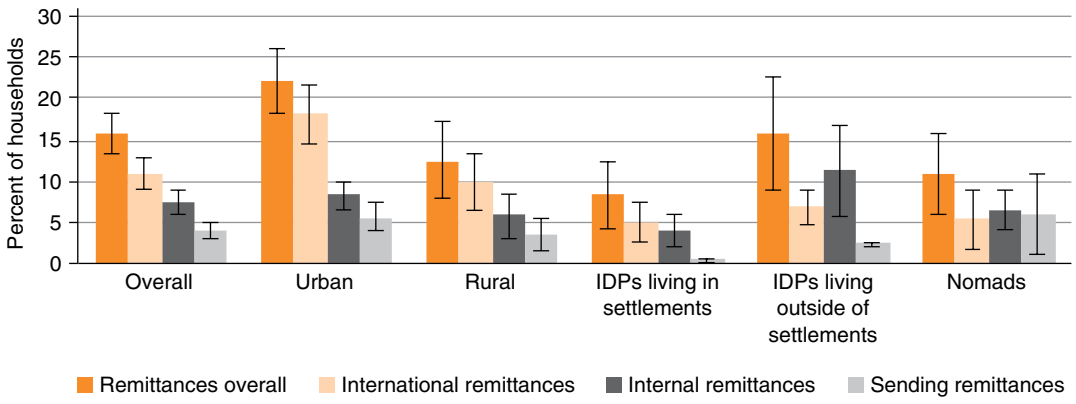
The development impact of remittances at the microeconomic level

It is well established that the primary economic benefit of migration to recipient households is the receipt of remittances, although it can be difficult to separate the effects of remittances from the overall effect of migration in empirical studies.[194] While there is general agreement that billions of dollars in money and goods are remitted to developing countries, there is less consensus on the growth implications for developing countries.

Somali households are both remittance receivers and senders, but their incidence of receipt exceeds the incidence of sending fourfold and is biased toward urban areas. Fifteen percent of Somali households receive remittances while only 4 percent send remittances. Urban households are more likely to receive international remittances, while IDPs living outside settlements are more likely to receive internal remittances (Figure 6.1). In contrast to urban populations, the proportions of IDP households living in settlements that received remittances were found to be generally low. These ranged from 4 percent for domestic remittances to 5 percent for international remittances (Figure 6.1).

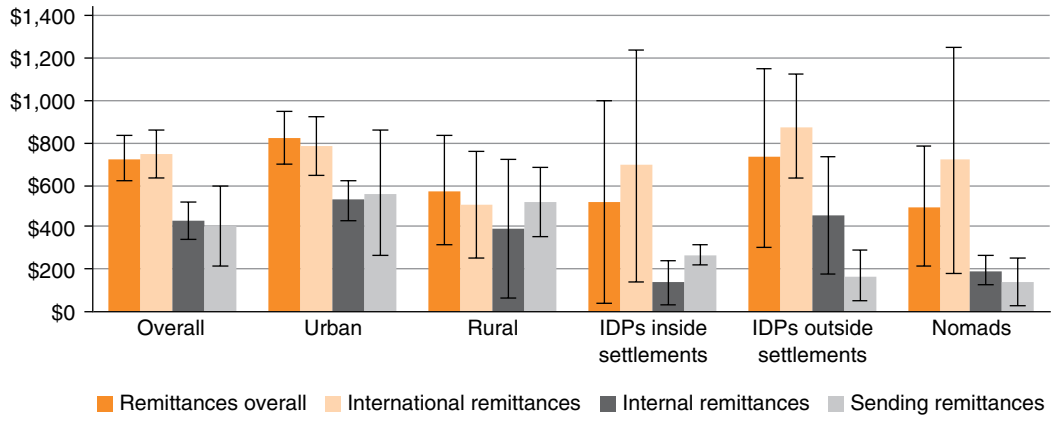
[194] World Bank (2006); McKenzie and Sasin (2007). See Plaza and Ratha (2011) for other benefits, such as the transmission of knowledge, trade, and investment linkages.

FIGURE 6.1 ■ Incidence of remittance receipt and sending



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 6.2 ■ Average annual value of remittance received and sent



Source: Authors' calculations based on the SHFS 2017–18.

Both urban and IDP households living outside settlements also send remittances. This has been a feature of the Somali community that send cash between various locations.[195]

Not all migrants send remittances home and not all migrant households receive remittances. About 23 percent of the households reported receiving remittances from a former household member or a friend who is living abroad as its main source of income.

Remittance-recipient urban households receive the largest amount on international remittances followed by IDPs living outside settlements. The average amount of international remittances received per household per year is US$743—above the average per capita income of Somalia of US$535 for 2017 (Figure 6.2). There are variations in the average amount of remittances households received. International remittances range from US$505 to US$876, and domestic remittances range from US$138 to US$525. Domestic and international remittances are important for recipient-receiving households, particularly among the urban, non-settlement IDPs, rural households, and nomads. While it appears that IDPs inside settlements receive large sums of remittances, the share of households receiving remittances is very low

Interestingly, the average amount received by IDPs outside settlements was relatively high at an average of US$430 for domestic remittances and US$876 for international remittances. This could be also in response to the impact on the drought. IDPs living outside of settlements reported exposure to drought (70 percent) compared to the IDPs living in settlements (46 percent). Equally, rural areas had been more impacted by the drought. However, due to the remoteness and not easy access by Money Transfer Operators (MTOs) to these localities, remittances are not easily sent.

Most Somali households receive remittances monthly. The incidence of receiving international remittances once per month is higher (61.9 percent) than the incidence of receiving domestic remittances (42 percent). Somalis reported that they receive internal remittances every other month (12.6 percent) and for special occasions (11.2 percent). However, only about 6.6 percent of recipients receive international remittances during special occasions. These facts underscore the role international remittances play in household consumption (Table 6.2).

Remittances from the Somali diaspora have emerged as an important source of income. For many households in Somalia, remittances represent both a sizeable proportion of household income as well as a substantial source of fund inflows into the local communities. Households receiving international remittances draw a larger proportion of their incomes from salaried labor (35 percent) and remittances (34 percent). Households receiving internal remittances draw 35 percent of their income from salaried labor, remittances (23 percent), and agriculture (19 percent). While for households that do not received any remittances, salaried labor

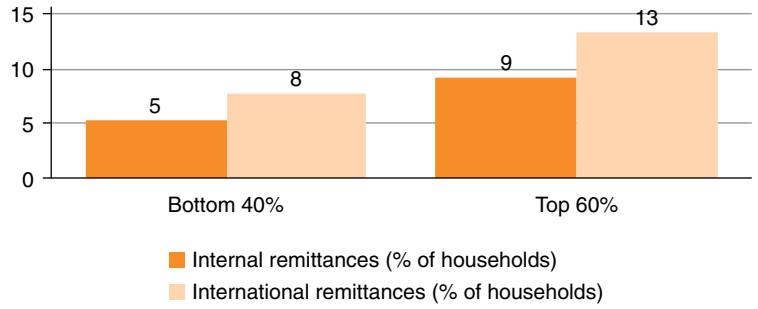
[195] European Commission (2017).

TABLE 6.2 ■ Frequency remittances are received by households

	Internal remittances (frequency)	Internal remittances (%)	International remittances (frequency)	International remittances (%)
Once per week or more	28	5.3	20	2.5
Twice per month	27	5.1	28	3.4
Once per month	221	42.1	504	61.9
Every other month	66	12.6	84	10.3
Once every three months	55	10.5	54	6.6
Once every four months	27	5.1	30	3.7
Twice a year	21	4.0	12	1.5
Once a year	21	4.0	28	3.4
Special occasions only	59	11.2	54	6.6
Total	525	100	814	100

Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 6.3 ■ Remittance-receiving households are in the top 60 percent consumption



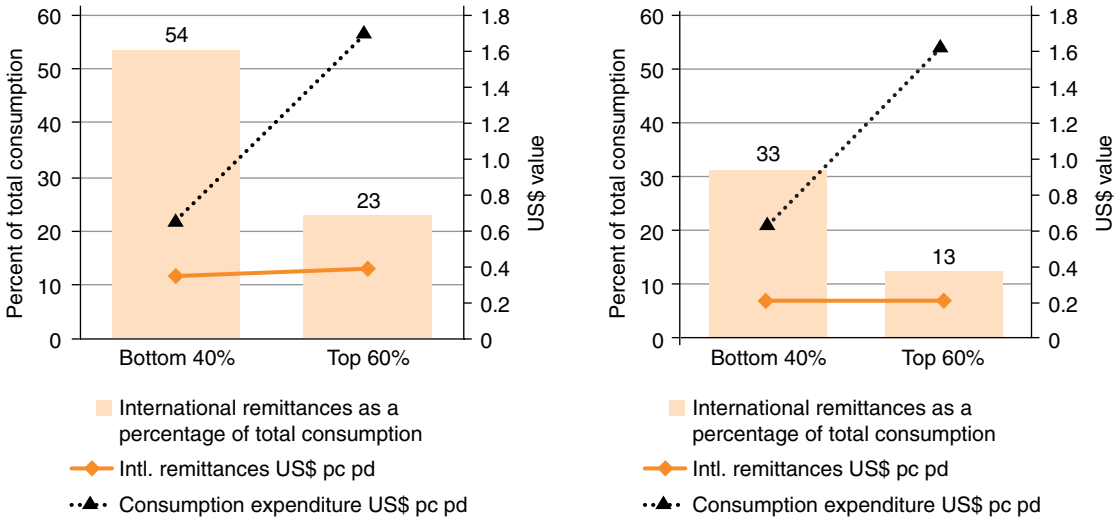
Source: Authors' calculations based on the SHFS 2017–18.

(38 percent) and agriculture activities (26 percent) are the dominant sources of income.

Remittances can reduce the level of poverty by directly augmenting the incomes of recipient households and by increasing aggregate demand. About 13 percent of Somali households receiving international remittances are in the top 60 percent of the consumption distribution (Figure 6.3). Households receiving international remittances from outside Africa may have high incomes since these remittances tend to be larger—much larger than remittances from domestic sources.

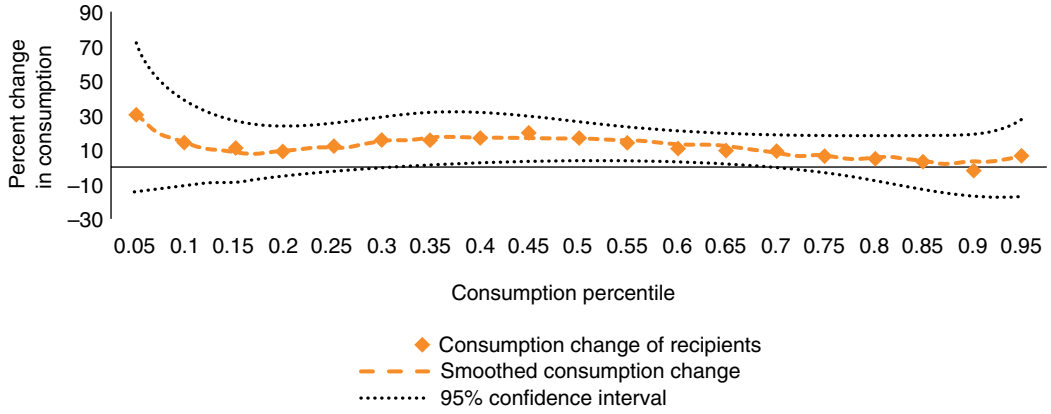
Both internal and international remittances are relatively more important for the bottom 40 percent. International remittances received per capita per day are almost the same amount for the bottom 40 percent (US$0.35) and the upper 60 percent (US$0.39). However, income from international remittances represents 54 percent of the total consumption for the bottom 40 percent of households while they only represent 23 percent of the total consumption for the upper 60 percent (Figure 6.4). Internal remittances represent 33 percent of the total consumption for the bottom 40 percent of households, while they only represent 13 percent of the total consumption for the upper 60 percent. Facilitating remittance flows to the bottom 40 percent could have a positive impact on welfare. A social protection program targeted to the bottom 40 percent could also alleviate poverty.

FIGURE 6.4 ■ Remittances more important for the bottom 40 percent



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE 6.5 ■ How do international remittances impact consumption?



Source: Authors' calculations based on the SHFS 2017–18.

International remittance-receiving households are positively impacted in their level of consumption. To assess the importance of receiving remittances for the poorest households, a quantile regression is used to measure the effect in consumption for recipients over non-recipients along the consumption distribution as a function of remittances controlling for population type. An increase in remittances is associated with an increase in consumption for the lowest quantiles (Figure 6.5). This implies that remittances contribute to increases in consumption that belong to the worse-off group.

There is a strong correlation between households that receive remittances and poverty. The proportion of households receiving remittances tend to be less poor. About 58 percent of the households receiving international remittances are poor compared to 71 percent of the households that do not receive remittances. Table 6.3 shows that recipient households are typically urban, headed by women, and have their kids enrolled in school. There is strong correlation between households receiving international remittances and preparedness to absorb shocks. Not surprisingly, urban households which have higher incidence of international

TABLE 6.3 ■ Characteristics of remittance-recipient households

	Internal remittances	International remittances	Do not receive remittances
Poverty	64%	58%	71%
Consumption expenditure (2017 PPP US$ per capita per day)	$1.35	$1.41	$1.25
Consumption expenditure (2017 PPP US$ per household per day)	$7.40	$7.63	$6.66
Enrollment (6–17 years)	48%	60%	33%
Labor force participation (7 days)	54%	46%	47%
Female household head	36%	45%	42%

Source: Authors' calculations based on the SHFS 2017–18.

remittances tend to have both higher consumption level and higher enrollment rates for their children.

Since remittances may be endogenous, it will be important to address it when estimating the impact of remittances on poverty. Several authors have used different methods to take into consideration the value of that migrant had he stayed and worked at home.[196] We explained below why this is not possible in the case of Somalia. The second method is the one used by Lopez, et al. (2007). He constructed a counterfactual and used a two-stage Heckman model to correct for selection bias.[197] For the case of Somalia, it is difficult to find an exogenous variable that propels migration or the receipt of remittances in the first stage equation that it is not related to the dependent variable in the second stage equation. Some authors have used the nearest distance to the border to instrument for conflict (as in the case of Pakistan-Afghanistan border) because of the endogeneity of conflict and remittances.[198] This could not be the best instrument for Somalia. Another method is to use an instrumental variable that it is correlated with remittances but exogenous to poverty. In the literature, several instruments have been applied such as rainfall shocks, distance, migrant ethnic networks, ownership of non-agricultural land, and number of return migrants in the ethnic group with which the head of household identifies, among others. Those instruments could be particularly problematic for the case of Somalia. One possibility is to use a quintile regression using as an instrument variable the ownership of mobile phones. This variable will be more appropriate for Somalia where mobile phones and mobile money are highly used.

To explore the impact of remittances on poverty, we created a counterfactual of expenditures without remittances. Using the Kinnon and Soler (2018) methodology, we compared actual, observed poverty levels that would have existed if remittance income had not been available to households. This scenario provides an upper bound estimate of the difference in poverty rates associated with migration. The calculations show that: (i) using the head count ratio without remittances, poverty would have been more severe; (ii) the poverty gap index would have been widened; and (iii) the inequality measured by the Gini coefficient would have been larger (see Table 6.4).

For Somalia, it is not advisable to impute the per capita household income of remittances-receiving households. In a country where migration takes place due to conflict, it is difficult to

TABLE 6.4 ■ Counterfactual without remittances

	With internal and international remittances	Without internal and international remittances
Poverty headcount	69%	71%
Poverty gap index	0.29	0.32
Gini	0.34	0.35

Source: Authors' calculations based on the SHFS 2017–18.

[196] Barham and Boucher (1998).
[197] Lopez, et al. (2007).
[198] Ghorpade (2017).

make assumptions on how to convert migrants back to household members in the household of origin. It is not possible to assume that only one adult male had migrated and would need to be "re-integrated" into the household to estimate household income in the absence of migration. Given the army conflict, several members of the household have migrated. It is not possible also to assume that each remittance-receiving household would have retained the same number and gender of migrants as appeared in the survey data. In addition, it will not be possible to add both the labor force participation and the unemployment rate of the population into the equation since the country is still recovering.[199] And the assumption on the demographic characteristics will not be accurate.

Uses of remittances

Remittances have been found to have positive impacts on human development. Evidence from Latin America, Africa, South Asia, and other regions suggests that remittances reduce the depth and severity of poverty, as well as indirectly stimulate economic activity. Remittances have also implications for human welfare, including poverty reduction and promoting shared prosperity. Migration and remittances lead to increased investments in health and education. In some countries, remittances contribute to better school attendance, higher school enrollment rates, and additional years in school. Remittances may increase expenditure on education by helping finance schooling and reducing the need for child labor (e.g., Ghana). Girls' school attendance and educational attainment rise from the receipt of remittances (e.g., Pakistan, Peru). Remittances can contribute to better health outcomes by enabling household members to purchase more food and health care services and perhaps by increasing information on health practices. Some studies found that higher remittances per capita were associated with greater access to private treatment for fever and diarrhea. Remittances reduce overall child mortality, and remittances and access to knowledge facilitate new treatments for HIV/AIDS and malaria.

International remittances may increase expenditure on education and health in Somalia. This section examines the relation between the international remittance inflows and educational and health expenditures by estimating a linear model. When the probability of receiving international remittances is considered, a statistically significant relationship emerges between remittances and educational and health expenditures. International remittance-receiving households have a 67 percent higher chance to increase expenditures on education compared to non-recipient households. In the case of internal remittances, there is not a significant effect on education. Moreover, international remittances and health expenditures of households receiving remittances were positively correlated (Table 6.5).

Households in the bottom 40 percent that receive international remittances have substantially higher school enrollment than non-recipients. Households receiving international remittances have a positive correlation with higher enrollment

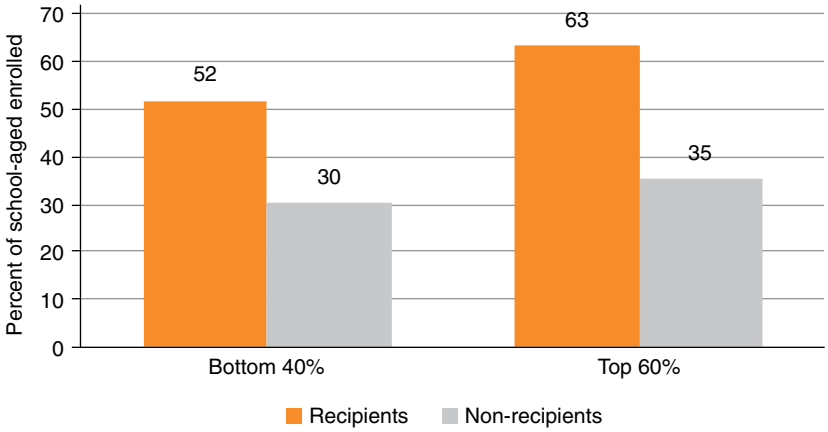
[199] Scott and Soler (unpublished).

TABLE 6.5 ■ Impact of international remittances on educational and health expenditure

	(i)	(ii)	(iii)
	Dependent variable		
	Log (educational expenditure)	Log (health expenditure)	Land access
International remittances receipt	0.637***	0.249***	0.004
Standard error	(0.183)	(0.068)	(0.025)
Observations	5,132	5,132	6,057
R-squared	0.132	0.129	

Source: Authors' calculations based on the SHFS 2017–18.
Note: *** p<0.01, ** p<0.05, * p<0.1. (i) and (ii) from OLS regression, (iii) from Probit regression. Controlling for household size, income, and population type.

FIGURE 6.6 ■ Do international remittances impact enrollment?



Source: Authors' calculations based on the SHFS 2017–18.

TABLE 6.6 ■ Housing conditions and remittance receipts among Somali households

Floor material	Households not receiving remittances	Households receiving domestic remittances	Households receiving international remittances
Cement	33%	43%	58%
Mud	25%	27%	11%
Wood	9%	5%	3%
Grid access	38%	54%	72%

Source: Authors' calculations based on the SHFS 2017–18.

rates (Figure 6.6). Moreover, although these findings do not control for the possible endogeneity of remittance-receiving status, they suggest that remittances may help raise the level of resources devoted to education.

International remittances help households cope with droughts. Transfers from friends and relatives abroad played a key role in reducing the distress caused by the drought. The remittances received by IDPs living outside of settlements could be in part due to transfers received to survive the drought.

There is a positive relationship between remittances and the quality of dwelling and access to electricity. Remittances can also enable recipient households to build stronger and more resilient housing. For example, remittance-receiving households in Burkina Faso and Ghana were more likely to have a concrete house, after controlling for the possible endogeneity of the remittance-receiving status by using propensity score-matching methods.[200] Although, it was not possible to apply score-matching, the data suggest that Somali households that receive international remittances have houses with cement floors and have better grid access, although possible endogeneity is not controlled for (Table 6.6). Stark differences between international remittance-receiving households and non-receiving households in floor material exist, with about 58 percent of international remittance-receiving households having floors made from cement, with 33 percent of non-recipient households having cement floors. The most visible distinction between international remittance-receiving households and non-receiving households was the access to electricity. The share of households with access to the grid was 34 percentage points higher among the households receiving international remittances compared to non-receiving households.

[200] Mohapatra, et al. (2009).

Remittances can help reduce poverty, increase access to health and education services, and promote household savings. Remittance-receiving households are less likely to be poor compared to the households that do not receive remittances.[201] Somalis continue to transfer funds to family left behind and invest back home to support the recovery of the country.

Remittance markets

Following the civil war, remittances have been mainly sent through the *hawala* system.[202] *Hawala* refers to money transfers that occur in the absence of, or are parallel to, formal banking sector channels.[203] Somalis call this informal system *"xawilaad"* which is the Somali rendering of the Arabic word *"hawala."* The *xawilaad* operates in almost every part of the world and is operated and used by Somalis to send money back home to families and to conduct business transactions.[204] Transfers by *xawilaad* are fast and made with great efficiency.[205] Currently, there are more than 20 Money Transfer Operators (MTOs) in the country that work cross-border and across regions within Somalia. However, the market is dominated by three main players: Dahabshiil, Amal Express, and Taaj. Interviews conducted in Virginia, United States of America—an area with one of the largest Somali migrant populations—indicate that the Somali community mainly uses two large companies to transfer remittances: Dahabshiil and Amal Express.[206] Some of these MTOs have become banks, are registered companies on the sending side (the United States, the United Kingdom, Australia, and others), and are also regulated as money transfer business (MTB) by the Central Bank of Somalia (CBS). However, there are also funds transferred through non-registered *"hawalas."*

Remittance markets in Somalia remain relatively underdeveloped in terms of their financial infrastructure and the regulatory environment, but the rapid adoption of innovative money-transfer technologies is transforming the landscape for remittances and broader financial services. Two remittance channels are involved: (a) domestic remittances are conducted overwhelmingly through mobile money (46 percent), money transfer operators (47 percent), and informal channels such as hand-carried during visits home, and *Hawala,* and (b) international remittances are largely channeled through money transfer operators (87 percent) and mobile phones (12 percent). The top three mobile money players are Hormuud, Someteland, and Golis.

The use of mobile phone has been limited to domestic money transfers. This is mainly because of concerns about money laundering and terrorist financing related to cross-border remittances. However, these technologies have the potential to vastly improve access to both remittances and broader financial services, including low-cost savings and credit products, for Somali migrants and remittance recipients in the country.

Somalia is facing de-risking and Know-Your-Client (KYC) regulation. Migrants send money using MTOs and with family members.[207] The choice of the intermediary is affected by, among other things, costs, trust in the intermediary, and convenience factors—such as location, hours of operation and language—and identification requirements. However, the closure of correspondent relationships with commercial banks due to concerns related to regulatory compliance (referred to as "de-risking") threatens the sustainability of business transactions by many MTOs in Somalia.

Remittance costs

Costs of remitting money to Somalia have increased due to the Anti-Money Laundering regulations. Somalia has been affected by "de-risking,"

[201] Cuecuecha and Adams Jr (2016); Adams Jr and Page (2005); Acosta, et al. (2006); Yang and Martinez (2006); Lokshin, et al. (2010).
[202] *Hawala* or *Hewala,* also known as hundi, is an informal value transfer system based on the performance and honor of a huge network of money brokers, primarily located in the Middle East, North Africa, the Horn of Africa, and the Indian subcontinent, operating outside of, or parallel to, traditional banking, financial channels, and remittance systems.
[203] El Qorchi, et al. (2003).
[204] Horst and Van Hear (2002).
[205] Montclos and Kagwanja (2000).
[206] After September 11, one of the largest *xawilaad* company, Al Barakat, was closed down. Page and Plaza (2006).

[207] The Financial Action Task Force (FATF) defines de-risking as "the phenomenon of financial institutions terminating or restricting business relationships with clients or categories of clients to avoid, rather than manage, risk." Somalia has been affected by "de-risking"—the closing of bank accounts of money transfer operators by banks due to perceived legal, regulatory, sanctions, and AML/CFT risks.

which refers to the financial institutions terminating or restricting relationships with clients perceived as high risk for money laundering or financing terrorism. High remittance costs represent an unnecessary burden on Somali migrants and likely reduce amounts sent and their development impact. Since the events of September 11, 2001, many countries have adopted stringent Anti-Money Laundering and Combatting the Financing of Terrorism (AML/CFT) regulations for funds transfers. Several banks in the United States (Wells Fargo, US Bank, the TCF bank, and Sunrise Community Bank) and in the United Kingdom have closed the accounts of money services business to avoid incurring penalties for not complying with the new regulations.[208] The account closures have changed how the remittance market works in both the United Kingdom and the United States, including carrying cash directly. Banks still perceive the remittance sector as having a high risk for money laundering or terrorism financing in Somalia. The recent closing of a bank account of a correspondent bank in Canada indicates that Somalia continues to be impacted by de-risking. Know Your Client (KYC) regulation remains a concern, and related issues about the absence of reliable identification systems need to be addressed.

The World Bank began working with the UK in 2015 to develop mechanisms, in case of severe disruption of remittance flows between the UK and Somalia. This work has since evolved to address fundamental issues affecting remittance flows to the country. The current activities are focused on improving the formalization, transparency, and compliance of the money transfer business sector in Somalia. The World Bank and the Federal Government of Somalia are working together to help support the flow of remittances and to address key deficiencies in the Somali financial sector affecting remittance flows to the country. The remittance crisis highlighted the need for the Central Bank of Somalia to start formal supervision of Somali MTOs. In response to the crisis, a larger reform program of policy change, institutional reforms, and technical assistance was also developed and is now being implemented. The work is coordinated through the Somali Remittances Stakeholder Advisory Council, co-chaired by the Central Bank Governor and the World Bank and with representatives from Somalia, IMF, AfDB, US Treasury, the UK, and IGAD. In this context, the World Bank has selected and appointed "Abyrint AS" to act as the "Trusted Agent" to the CBS and assist the authorities in comprehensively regulating and supervising money transfer businesses.

The Central Bank of Somalia has licensed and registered four money transfer businesses and has registered nine money transfer businesses under the Money Transfer Business Registration Regulations and Money Transfer Business Licensing Regulations passed by the Central Bank in 2014, developed with the support of the World Bank. The CBS recently concluded on-site examinations of four of the largest MTBs operating. The CBS is working on improving MTBs compliance with AML/CFT regulations, including reporting requirements. The World Bank is considering support to the Somalia Financial Reporting Center under a proposed new program that is currently under discussion. Somalia does not yet have a system in place for know your client (KYC) or customer due diligence (CDD) requirements. Some money transmitters are considering the use of biometric identification for meeting KYC requirements.

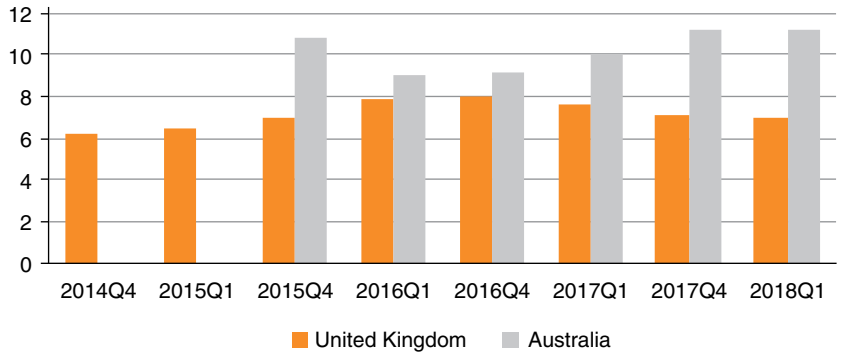
In general, banks consider remittance service providers as entities that do not have adequate controls, do not implement the adequate customer due diligence, and lack the capacity to comply with AML/CFT regulations. The risk factors of remittance service providers (RSPs) operating in Somali jurisdictions include that the majority of operations are cash transactions; government oversight is weak or lacking; and operations are conducted through agents, which makes it difficult to implement the "know your client" norms. A recent report from the United States Accountability Office found that money transmitters operating in Somalia reported using non-banking channels such as cash couriers to move funds for cross-border transfer of remittances.[209]

Personal identification in the financial services will be important for addressing the issues of de-risking, AML/CFT, and KYC requirements. Identification will also facilitate the transfer of aid to IDPs and refugees. The objective is to create systems that are interoperable. The World Bank is developing a project for expanding financial and digital access in Somalia, which includes components

[208] Note: HSBC, a banking institution, was fined US$1.9 billion for not complying with money laundering controls in 2012.

[209] GAO (2018).

FIGURE 6.7 Remittance cost as a proportion of sending US$200 to Somalia



Source: Remittances Prices Worldwide database (2018Q1).

on: (i) expanding access to finance and capability for micro, small, and medium enterprises; (ii) deepening the regulatory capacity for Central Bank of Somalia, the Somalia Financial Reporting Center, and the telecommunications regulator; (iii) enhancing connectivity and development of government digital services; and (iv) extending digital identification coverage and accessibility.

Three effects on the remittance markets to Somalia are observed due to the AML/CFT regulations. First, Banks stopped offering low cost remittance services. Second, banks closed accounts of MTOs. And third, small MTOs also closed since they could not any longer operate without bank accounts. These developments in the remittance markets increase remittance prices, reduce competition, and encourage the use of informal channels.

The United Nations has recently adopted the Sustainable Development Goals (SDGs) targets and indicators for migration. The SDGs include explicit targets to ensure safe, orderly, and regular migration, including through well-managed migration policies (10.7) and reductions in the costs of remittance transfers (10.c). By 2030, reduce to less than 3 percent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 percent. The cost of sending money continues to be high and regressive, well above the SDG target of 3 percent. According to the Remittance Prices Worldwide database, the global average cost of sending remittances of US$200 (inclusive of all fees and charges) remained at 7.1 percent in 2018 Q1.[210]

According to the Remittance Prices Worldwide database, the average cost of sending US$200 from Australia and the United Kingdom to Somalia have increased. In the United Kingdom, the remittance cost increased from 6.3 percent in the fourth quarter of 2014 to 7.1 percent in the fourth quarter of 2017 (Figure 6.7). In Australia, three major banks, the Commonwealth Bank, the National Australia Bank, and the Westpac closed the accounts of MTOs serving Somalia in Australia. Due to the closure of the bank accounts, remittance costs increased from 9.06 percent in the first quarter of 2016 to 11.2 percent in the first quarter of 2018. The costs for sending remittances from the United Kingdom to Somalia are more than twice the SDG target of 3 percent. From Australia to Somalia the costs are almost three times the SDGs target.

Remittances and access to finance

Somali households that receive internal and international remittances typically have better access to financial services such as bank accounts (Table 6.7). Households receiving remittances within the country tend to be better off in terms of financial access, in part because households that send out internal migrants are using mobile money and could save using mobile phones that effectively substitute for formal banking services.

[210] Page and Plaza (2006).

TABLE 6.7 ■ Remittances facilitate financial inclusion

	(I)	(II)	(III)
	Bank access	Mobile money	Savings
Internal remittances	0.082***	0.014	0.073***
S.E.	(0.021)	(0.064)	(0.020)
International remittances	0.053**	0.047	0.031*
S.E.	(0.023)	(0.056)	(0.017)
Observations	6,058	6,060	6,048

Source: Authors' calculations based on the SHFS 2017–18.
Note: *** p<0.01, ** p<0.05, * p<0.1. Results from Probit regression controlling for income, household size, population type.

Policy recommendations

Remittances are private money that belong to the households. However, remittances can be leveraged at the macroeconomic level (accessing capital markets and improving credit ratings) and the microeconomic level (accessing new financial products for micro-insurance, education, food, and micro and small and medium enterprises). This section outlines policies to leverage remittances for development for Somali people.

Improving remittance data

The Central Bank of Somalia is working to improve statistics on remittances. The CBS can also improve data collection by expanding the reporting of remittances to all nonbank providers of remittance services (such as money-transfer companies, mobile operators) and using surveys of migrants and recipient households to estimate remittance flows through formal and informal channels. Having an estimation of the volume of remittances will help in the preparation of the debt sustainability analysis for Somalia once a decision on the HIPC initiative has been taken. Improving data collection on remittances is also receiving attention from the international community: The Sustainable Development Goals and the Global Compact on Migration promote improving remittance data collection as one of its areas of action.

Reducing remittances costs

Technological advances including digital payments have increased efficiency and contributed to reducing remittance costs. On the other hand, compliance with AML/CFT requirements seems to have increased the overall costs of remittances. Promoting policies that reduce entry, such as mobile licensing and increasing competition, will decrease costs. Thus, reductions in remittance costs can be supported by financial and regulatory frameworks that facilitate the introduction of new products, interoperability among MTOs, and the establishment of open infrastructure to collect digital payments. Reducing transaction costs increases the disposable income of poor migrants and increases their incentives to remit because the net receipts of recipients will increase. An important barrier to lowering remittance fees arises from the costs associated with implementing AML/CFT requirements. Further development at the national level of a risk-based approach to AML/CFT regulation could help reduce these costs. Somalia is working on complying with AML/CFT requirements and establishing a digital identification which could facilitate and reduce 'de-risking' by international banks. Remittance services to Somalia have been impacted, including banking and trade operations.

Policies to foster the use of innovative mobile money–transfer technologies and payment systems will help to reduce costs. Mobile money transfer systems offer new opportunities for more effective ways of sending money. Although Somalis use mobile money widely, less than a third subscribe to mobile services. Measures that would encourage the expansion of mobile phones to be able to undertake international remittances include (i) harmonizing banking and telecommunications regulations to enable mainstream Somali banks to participate in mobile money transfers and for telecommunication firms to offer microdeposit and savings accounts, (ii) simplifying AML/CFT regulations for small-value transfers, and (iii) ensuring that mobile distribution networks are open to multiple international remittance service providers, instead of becoming exclusive partnerships between international MTO and country-based mobile money services. The Central Bank of Somalia is preparing mobile money regulations.

Facilitating financial inclusion

Having access to financial products facilitated by remittances contributes to reduce poverty. Access of poor migrants and their families to formal financial services for sending and receiving remittances could be improved through public policies that encourage expansion of banking networks, provide identification cards to migrants, and facilitate the participation of microfinance institutions and credit unions in providing low-cost remittance services. The issue of identification cards is important for both sending and receiving countries. In Somalia, the issuance of a digital ID for financial services will help to comply with KYC regulations. For Somalis residing in Kenya, IDs will facilitate access to financial institutions.

Developing new products

New financial products such as micro-insurance or direct payments of tuition could be offered for the remitters. Remittance-linked insurance products could help to protect the downside of at-risk populations. Equally, direct payments provide migrants with better control over the use of remittances. In addition, basic savings accounts where remittances can be paid, small savings deposited, and payments processed should be offered in connection with remittances.

Reaching HIPC decision point for Somalia

Somalia is eligible for debt relief under HIPC, which will facilitate the use of funds on programs that benefit the poor. Facilitating access to concessional financing through reduction in the debt burden will facilitate Somalia's reconstruction. A poverty reduction strategy will be prepared that focuses on expenditures on health, education, and social services. Monitoring of the progress in implementing the poverty reduction strategy and the macroeconomic program will be important to ensure the focus on the humanitarian and development needs of Somali people. Conversations with the government are taking place to start the process.

References

Acosta, P., C. Calderon, P. Fajnzylber, and H. López. "Remittances and Development in Latin America." *The World Economy* 29, no. 7 (2006): 957–87.

Adams Jr, R.H., and J. Page. "Do International Migration and Remittances Reduce Poverty in Developing Countries?". *World development* 33, no. 10 (2005): 1645–69.

Alderman, H., and C.H. Paxson. "Do the Poor Insure? A Synthesis of the Literature on Risk and Consumption in Developing Countries." In *Economics in a Changing World,* 48–78: Springer, 1994.

Baker, J.L. *Evaluating the Impact of Development Projects on Poverty: A Handbook for Practitioners.* World Bank Publications, 2000.

Banerjee, A.V., and E. Duflo. "The Economic Lives of the Poor." *Journal of Economic Perspectives* 21, no. 1 (2007): 141–68.

Barham, B., and S. Boucher. "Migration, Remittances, and Inequality: Estimating the Net Effects of Migration on Income Distribution." *Journal of Development Economics* 55, no. 2 (1998): 307–31.

Bastagli, F., J. Hagen-Zanker, L. Harman, V. Barca, G. Sturge, T. Schmidt, and L. Pellerano. "Cash Transfers: What Does the Evidence Say." *A rigorous review of programme impact and the role of design and implementation features.* London: ODI, 2016.

Centre for Research on the Epidemiology of Disasters (CRED). "Emergency Events Database, EmDat." Brussels, Belgium: Université catholique de Louvain, 2017.

Chami, R., E. Ernst, C. Fullenkamp, and A. Oeking. "Are Remittances Good for Labor Markets in Lics, Mics and Fragile States?" International Monetary Fund, 2018.

Chami, R., D. Hakura, and P. Montiel. *Remittances: An Automatic Output Stabilizer?* International Monetary Fund, 2009.

Chaudhuri, S. "Empirical Methods for Assessing Household Vulnerability to Poverty." School of International and Public Affairs, Columbia University, New York, 2000.

Council, U.E.a.S. "Guiding Principles on Internal Displacement." 1998.

Cuecuecha, A., and R.H. Adams Jr. "Remittances, Household Investment and Poverty in Indonesia." *Journal of Finance and Economics* 4, no. 3 (2016): 12–31.

Daidone, S., L. Pellerano, S. Handa, and B. Davis. "Is Graduation from Social Safety Nets Possible? Evidence from Sub-Saharan Africa." *IDS Bulletin* 46, no. 2 (2015): 93–102.

Dar, O.A., and M.S. Khan. "Millennium Development Goals and the Water Target: Details, Definitions and Debate." *Tropical medicine & international health* 16, no. 5 (2011): 540–44.

Davis, B., S. Handa, N. Hypher, N.W. Rossi, P. Winters, and J. Yablonski. *From Evidence to Action: The Story of Cash Transfers and Impact Evaluation in Sub Saharan Africa.* Oxford University Press, 2016.

De Ferranti, D., G. Perry, I. Gill, and L. Servén. *Securing Our Future in a Global Economy.* World Bank Washington, DC, 2000.

Deaton, A. "Household Saving in Ldcs: Credit Markets, Insurance and Welfare." *The Scandinavian Journal of Economics* (1992): 253–73.

_____. "Measuring Poverty." *Understanding poverty* (2006): 3–15.

Dercon, S., and P. Krishnan. "Vulnerability, Seasonality and Poverty in Ethiopia." *The Journal of Development Studies* 36, no. 6 (2000): 25–53.

El Qorchi, M., S.M. Maimbo, S.M. Autmainbo, and J.F. Wilson. *Informal Funds Transfer Systems: An Analysis of the Informal Hawala System.* Vol. 222. International Monetary Fund, 2003.

European Commission. "Somalia: In Pursuit of a Safety Net Programme in the Short Term Paving the Way to a Social Protection Approach in the Long Term: Issues and Options. Final Report." Advisory Service in Social Transfers, European Commission, 2017.

Fafchamps, M., C. Udry, and K. Czukas. "Drought and Saving in West Africa: Are Livestock a Buffer Stock?". *Journal of Development Economics* 55, no. 2 (1998): 273–305.

FAO (Food and Agriculture Organization of the United Nations). "Integrated Food Security Phase Classification. Technical Manual Version 2.0." 2012.

Federal Government of Somalia (FGS), W.B., United Nations, European Union. "Somalia Drought Impact & Needs Assessment." 2018.

FEWSNET. "East Africa Special Report. Illustrating the Extent and Severity of the 2016/17 Horn of Africa Drought." Famine Early Warning Network, 2017.

———. "Somalia Food Security Outlook. June 2016 to January 2017": Famine Early Warning Systems Network, 2016.

Filmer, D., and L.H. Pritchett. "Estimating Wealth Effects without Expenditure Data—or Tears: An Application to Educational Enrollments in States of India." *Demography* 38, no. 1 (2001): 115–32.

Fisseha, G., Y. Berhane, A. Worku, and W. Terefe. "Distance from Health Facility and Mothers' Perception of Quality Related to Skilled Delivery Service Utilization in Northern Ethiopia." *International Journal of Women's Health* 9 (2017): 749.

Food Security Cluster. "Somalia—Fsc Monthly Dashboard, January 2018." Food Security Cluster Somalia, 2018.

———. "Somalia—Fsc Monthly Dashboard, July 2017." Food Security Cluster Somalia, 2017.

Frankel, J. "Are Bilateral Remittances Countercyclical?". *Open Economies Review* 22, no. 1 (2011): 1–16.

FSNAU. "Food Security and Nutrition Analysis: Post Deyr 2010/11." Nairobi, 2011.

———. "Special Brief: Focus on Post Deyr 2016 Early Warning." Food Security and Nutrition Analysis Unit—Somalia, 2016a.

———. "Special Brief: Focus on Post Gu 2016 Early Warning." Food Security and Nutrition Analysis Unit—Somalia, 2016b.

———. "Special Brief: Focus on Post Gu 2017 Early Warning." Food Security and Nutrition Analysis Unit—Somalia, 2017.

FSNAU, and FEWSNET. "Quarterly Brief—Focus on Post Gu 2017 Season Early Warning." Food Security and Nutrition Analysis Unit—Somalia and Famine Early Warning Systems Network, 2017a.

———. "Somalia Food Security Alert. Severe Drought, Rising Prices, Continued Access Limitations, and Dry Forecasts Suggest Famine Is Possible in 2017." Food Security and Nutrition Analysis Unit—Somalia and Famine Early Warning Systems Network, 2017b.

———. "Somalia Food Security Outlook. Despite Improvements, 2.7 Million People Need Emergency Assistance through the Lean Season." Food Security and Nutrition Analysis Unit—Somalia and Famine Early Warning Systems Network, 2018.

———. "Somalia Food Security Outlook. Risk of Famine (Ipc Phase 5) Persists in Somalia." Food Security and Nutrition Analysis Unit—Somalia and Famine Early Warning Systems Network, 2017c.

———. "Study Suggests 258,000 Somalis Died Due to Severe Food Insecurity and Famine." Food Security and Nutrition Analysis Unit—Somalia and Famine Early Warning Systems Network, 2013.

Fund for Peace. "Fragile States Index 2018: Issues of Fragility Touch the World's Richest and Most Developed Countries in 2018," 2018.

Funk, C., P. Peterson, M. Landsfeld, D. Pedreros, J. Verdin, S. Shukla, G. Husak, et al. "The Climate Hazards Infrared Precipitation with Stations—a New Environmental Record for Monitoring Extremes." *Scientific Data* 2 (2015): 150066.

GAO. "Remittances to Fragile Countries: Treasury Should Assess Risks from Shifts to Non-Banking Channels." U.S. Government Accountability Office, 2018.

Ghorpade, Y. "Extending a Lifeline or Cutting Losses? The Effects of Conflict on Household Receipts of Remittances in Pakistan." *World Development* 99 (2017): 230–52.

Hagen-Zanker, J., F. Bastagli, L. Harman, V. Barca, G. Sturge, and T. Schmidt. "Understanding the Impact of Cash Transfers: The Evidence." *ODI Briefing.* London: Overseas Development Institute, 2016.

Haseeb, M., and K. Vyborny. "Reforming Institutions: Evidence from Cash Transfers in Pakistan," 2017.

Health Cluster Somalia. "Health Cluster Bulletin, December 2017." Health Cluster Somalia, 2017.

Himelein, K., S. Eckman, and S. Murray. "Sampling Nomads: A New Technique for Remote, Hard-to-Reach, and Mobile Populations." *Journal of Official Statistics* 30, no. 2 (2014): 191–213.

HM Government. "An Evidence Review of the Drivers of Child Poverty for Families in Poverty Now and for Poor Children Growing up to Be Poor Adults," 2014.

Hoddinott, J., J. Lind, G. Berhane, K. Hirvonen, N. Kumar, B. Nishan, R. Sabates-Wheeler, et al. "Psnp-Habp Final Report, 2014." Washington, DC: IFPRI, 2015.

Holzmann, R. "Risk and Vulnerability: The Forward-Looking Role of Social Protection in a Globalizing World." Washington, DC: World Bank, 2001.

Hoogeveen, J., E. Tesliuc, R. Vakis, and S. Dercon. "A Guide to the Analysis of Risk, Vulnerability and Vulnerable Groups." World Bank. Washington, DC. Available online at http://siteresources. worldbank. org/INTSRM/Publications/20316319/RVA. pdf. Processed, 2004.

Horst, C., and N. Van Hear. "Counting the Cost: Refugees, Remittances and The 'War against Terrorism'." *Forced Migration Review* 14 (2002): 32–34.

"Iasc Framework on Durable Solutions." Brookings Institution, 2010.

Imbens, G., and J. Wooldridge. "What's New in Econometrics? Lecture Notes 10, Difference-in-Differences Estimation." Cambride, MA: National Bureau of Economic Research, 2007.

IMF. "IMF Executive Board Concludes 2017 Article Iv Consultation with Somalia, and Completion of the First Review under the Staff-Monitored Program (Smp)." news release, 2018a.

———. "IMF Staff Completes Review Visit and Reaches Staff-Level Agreement on a Third Staff-Monitored Program with Somalia." news release, 2018b.

———. "World Economic Outlook: Globalization and External Imbalances." Washington, DC: International Monetary Fund, 2005.

"The Impact of War on Somali Men." news release., 2015, http://www.logica-wb.org/PDFs/LOGICA_The_Impact_of_War_on_Somali_Men.pdf.

Institute for Economics and Peace. "Global Peace Index 2017," 2017a.

———. "Global Terrorism Index 2017: Measuring and Understanding the Impact of Terrorism," 2017b.

International Monetary Fund. "Somalia: 2017 Article Iv Consultation and First Review under the Staff-Monitored Program—Press Release; Staff Report; and Statements by Executive Director for Somalia, February 2018." International Monetary Fund, 2018.

Jack, W., and T. Suri. "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution." *American Economic Review* 104, no. 1 (2014): 183–223.

Jalan, J., and M. Ravallion. "Is Transient Poverty Different? Evidence for Rural China." *The Journal of Development Studies* 36, no. 6 (2000): 82–99.

Jean, N., M. Burke, M. Xie, W.M. Davis, D.B. Lobell, and S. Ermon. "Combining Satellite Imagery and Machine Learning to Predict Poverty." *Science* 353, no. 6301 (2016): 790–94.

Kelley, A., and R. Schmidt. "Economic and Demographic Change: A Synthesis of Models, Findings, and Perspectives," 1999.

Kimball, M.S. "Precautionary Saving and the Marginal Propensity to Consume." National Bureau of Economic Research, 1990.

Lall, S.V., J.V. Henderson, and A.J. Venables. *Africa's Cities: Opening Doors to the World.* The World Bank, 2017.

Lim, Y., and R.M. Townsend. "General Equilibrium Models of Financial Systems: Theory and Measurement in Village Economies." *Review of Economic Dynamics* 1, no. 1 (1998): 59–118.

Lokshin, M., M. Bontch-Osmolovski, and E. Glinskaya. "Work-Related Migration and Poverty Reduction in Nepal." *Review of Development Economics* 14, no. 2 (2010): 323–32.

Lopez, J.H., P. Fajnzylber, and P. Acosta. *The Impact of Remittances on Poverty and Human Capital: Evidence from Latin American Household Surveys.* The World Bank, 2007.

Majoka, Z. "In Somalia, Resilience Can Be Strengthened through Social Protection System." World Bank, 2017.

Maxwell, D., and R. Caldwell. "The Coping Strategies Index: A Tool for Rapid Measurement of Household Food Security and the Impact of Food Aid Programming in Humanitarian Emergencies." *Field Methods Manual,* 2nd Edition, January, 2008.

McKenzie, D.J., and M.J. Sasin. *Migration, Remittances, Poverty, and Human Capital: Conceptual and Empirical Challenges.* Vol. 4272: World Bank Publications, 2007.

Mitchell, T., and K. Harris. "Resilience: A Risk Management Approach." *ODI Background Note.* Overseas Development Institute: London, 2012.

Mohapatra, S., G. Joseph, and D. Ratha. "Remittances and Natural Disasters: Ex-Post Response and Contribution to Ex-Ante Preparedness," 2009.

Montclos, M.-A.P.d., and P.M. Kagwanja. "Refugee Camps or Cities? The Socio-Economic Dynamics of the Dadaab and Kakuma Camps in Northern

Kenya." *Journal of Refugee Studies* 13, no. 2 (2000): 205–22.

Myers, K. "Tackling Climate Change to Reduce Poverty." Concern Worldwide, https://www.concernusa.org/story/tackling-climate-change-to-reduce-poverty/, 2017.

Norwegian Refugee Council. "Thousands of People Forcibly Removed." https://www.nrc.no/news/2018/january/thousands-of-people-forcibly-removed/.

OECD. "The OECD List of Social Indicators," 1982.

Page, J., and S. Plaza. "Migration Remittances and Development: A Review of Global Evidence." *Journal of African Economies* 15, no. suppl_2 (2006): 245–336.

Pape, U., and J. Mistiaen. "Measuring Household Consumption and Poverty in 60 Minutes: The Mogadishu High Frequency Survey." World Bank, 2015.

Pape, Utz Johann, and Philip Randolph Wollburg. "Estimation of Poverty in Somalia Using Innovative Methodologies." 2019.

Plaza, S., and D. Ratha. *Diaspora for Development in Africa.* World Bank Publications, 2011.

Ralston, L., C. Andrews, and A. Hsiao. "A Meta-Analysis of Safety Nets Programs in Africa." *Working Paper,* 2017.

Ratha, D. "Leveraging Remittances for Development," Mpi Policy Brief, June 2007, Washington, 2007.

Ravallion, M., S. Chen, and P. Sangraula. "Dollar a Day Revisited." *The World Bank Economic Review* 23, no. 2 (2009): 163–84.

RMMS. "Somalia/Somaliland Country Profile." Regional Mixed Migration Secretariat, Horn of Africa and Yemen, Danish Refugee Council, 2016.

Rosenzweig, M.R., and K.I. Wolpin. "Credit Market Constraints, Consumption Smoothing, and the Accumulation of Durable Production Assets in Low-Income Countries: Investments in Bullocks in India." *Journal of Political Economy* 101, no. 2 (1993): 223–44.

Salama, P., G. Moloney, O.O. Bilukha, L. Talley, D. Maxwell, P. Hailey, C. Hillbruner, et al. "Famine in Somalia: Evidence for a Declaration." *Global Food Security* 1, no. 1 (2012): 13–19.

Schaaf, Z. "Mcd43a3 Modis/Terra+ Aqua Brdf/Albedo Daily L3 Global–500m V006. Nasa Eosdis Land Processes Daac," 2015.

Scott, K., and J. Soler. "Remittances and Their Effects on Poverty and Inequality." In Migration, Remittances, and Development: The Experience of the Northern Triangle. Edited by Tanida Arayavechkit, Kinnon Scott, and Liliana Sousa. Forthcoming, World Bank.

Singh, M.R.J., K.-w. Lee, and M.M. Haacker. *Determinants and Macroeconomic Impact of Remittances in Sub-Saharan Africa.* International Monetary Fund, 2009.

"The Sustainable Transformation of Youth in Liberia (Styl) Program." edited by World Bank, 2015.

Tesliuc, E.D., and K. Lindert. *Risk and Vulnerability in Guatemala: A Quantitative and Qualitative Assessment.* Social Protection, Labor Markets, Pensions, Social Assistance, World Bank, 2004.

UNDESA. "International Migration Stock: The 2017 Revision." UNDESA United Nations Department of Economic and Social Affairs Population Division, 2017.

UNHCR. "Mid-Year Trends 2017." United Nations High Commissioner for Refugees, 2017.

———. "Somalia 1–31 March 2018. Fact Sheet." United Nations High Commissioner for Refugees, 2018a.

———. "Somalia 1–31 March 2018. Repatriation Update." United Nations High Commissioner for Refugees, 2018b.

UNHCR (United Nations High Commissioner for Refugees). "Camp Coordination and Camp Management Cluster. February 2018." United Nations High Commissioner for Refugees, 2018a.

———. "Horn of Africa Somalia Situation." https://data2.unhcr.org/en/situations/horn, 2018b.

———. "Internal Displacement Profiling in Mogadishu," 2016.

———. "Somalia Internal Displacement: Displacements Monitored by UNHCR Protection and Return Monitoring Network (PRMN)." https://unhcr.github.io/dataviz-somalia-prmn/index.html.

———. "Somalia Situation 2017." New York, NY: United Nations, 2017.

UNICEF. "The Situation Analysis of Children in Somalia 2016," 2016.

United Nations Population Fund (UNFPA). "Somalia Population Estimation Survey 2014: For the 18 Pre-War Regions of Somalia." Nairobi, Kenya, 2014.

UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs). "2018 Humanitarian Needs Overview: Somalia," 2017a.

———. "Horn of Africa Humanitarian Outlook. January–June 2018." United Nations Office for the Coordination of Humanitarian Affairs, 2017b.

———. "Humanitarian Bulletin Somalia, June 2–July 5, 2018." New York, NY: United Nations, 2018a.

———. "Humanitarian Bulletin Somalia, March 2018." New York, NY: United Nations, 2018b.

———. "Somalia Humanitarian Response Plan 2018. January–December 2018." United Nations Office for the Coordination of Humanitarian Affairs, 2018c.

Ward, L.M., and C. Eyber. "Resiliency of Children in Child-Headed Households in Rwanda: Implications for Community Based Psychosocial Interventions." *Intervention* 7, no. 1 (2009): 17–33.

World Bank. "Bilateral Migration Matrix 2017." Washington, D.C.: World Bank Group, 2018a.

———. "Challenges and Opportunities of High Frequency Data Collection in Fragile States: Lessons from South Sudan." World Bank, 2014.

———. *Conflict in Somalia: Drivers and Dynamics.* World Bank, 2005.

———. "Global Economic Prospects 2006: Economic Implications of Remittances and Migration." Washington, D.C.: World Bank Group, 2006.

———. "Macro Poverty Outlook Somalia." Washington, DC: World Bank, 2018b.

———. "Social Risk Management: The World Bank's Approach to Social Protection in a Globalizing World." Washington, DC: World Bank, 2003.

———. "Somali Poverty Profile, June 2017: Findings from Wave 1 of the Somali Hih Frequency Survey." Washington, DC: World Bank, 2017a.

———. "Somalia Drought Impact and Needs Assessment: Synthesis Report." Washington, DC: World Bank, 2018c.

———. "Somalia Social Protection: Stocktaking of Evidence for a Social Protection Policy and Framework." Washington, DC: World Bank, 2017b.

———. "Somalia Systematic Country Diagnostic." Washington, DC: World Bank, 2018d.

———. "South Sudan Poverty Assessment." World Bank, 2018e.

———. "The State of Social Safety Nets 2018." Washington, DC: World Bank, 2018f.

———. "Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters.". Washington, DC: World Bank, 2017c.

———. "World Development Report 2011: Conflict, Security, and Development." Washington, DC: World Bank, 2011.

———. "World Development Report 2014: Risk and Opportunity—Managing Risk for Development." Washington, DC: World Bank, 2013.

World Food Programme. "Somalia: Food Market and Supply Situation in Southern Somalia, October 2011." Geneva: World Food Programme, 2011.

Xie, M., N. Jean, M. Burke, D. Lobell, and S. Ermon. "Transfer Learning from Deep Features for Remote Sensing and Poverty Mapping." arXiv preprint arXiv:1510.00098, 2015.

Yang, D., and C. Martinez. "Remittances and Poverty in Migrants' Home Areas: Evidence from the Philippines." *International Migration, Remittances and the Brain Drain,* no. 3, 2006.

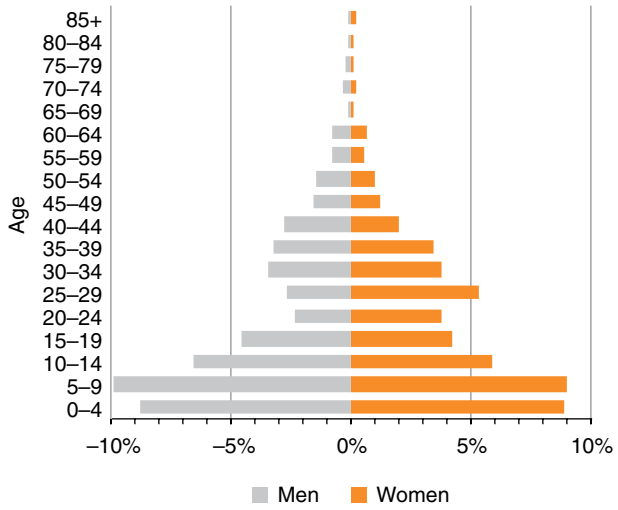
Zanini, G., S.P. D'Alessandro, V. Phipps-Ebeler, C.M. Ngumbau, P. Sanginga, J. Seevinck, Y. Cherrou, A. Read, and S. Akester. "Rebuilding Resilient and Sustainable Agriculture in Somalia: Volume 1—Main Report (English)." World Bank, 2018.

Zeldes, S.P. "Optimal Consumption with Stochastic Income: Deviations from Certainty Equivalence." *The Quarterly Journal of Economics* 104, no. 2 (1989): 275–98.

APPENDIX A

Figures and Tables

FIGURE A.1 Population pyramid



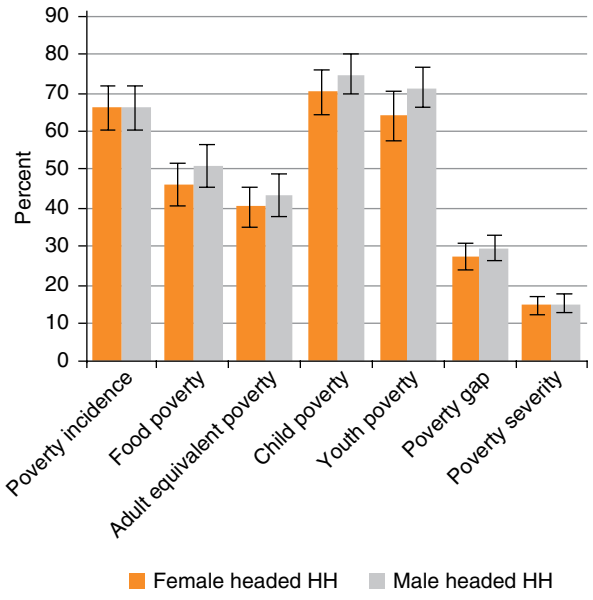
Source: Authors' calculations based on the SHFS 2017–18.

TABLE A.1 Accessibility rate of urban and rural areas

Region	Urban areas	Rural areas
Mogadishu	87%	N/A
North East	99%	89%
North West	98%	97%
Central regions	77%	52%
Jubbaland	64%	26%
South West	50%	34%

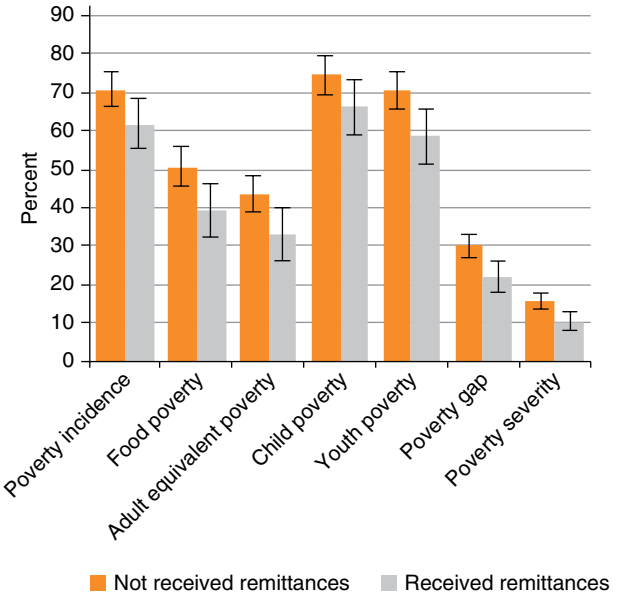
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE A.2 Poverty measures by gender of the household head



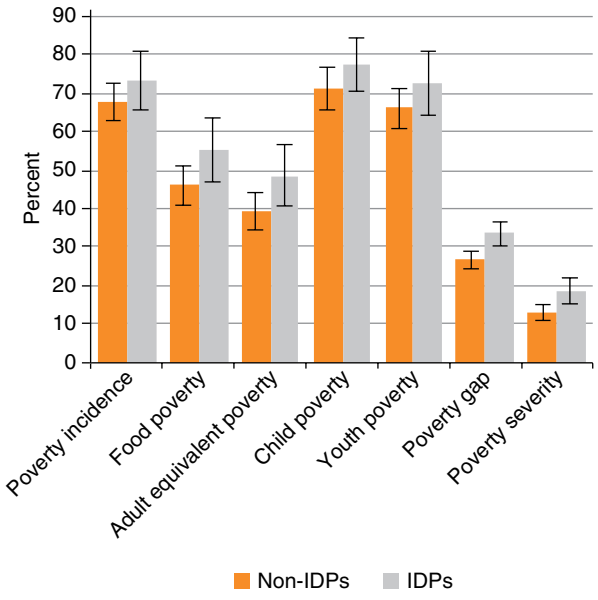
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE A.3 Poverty measures by remittance status of the household



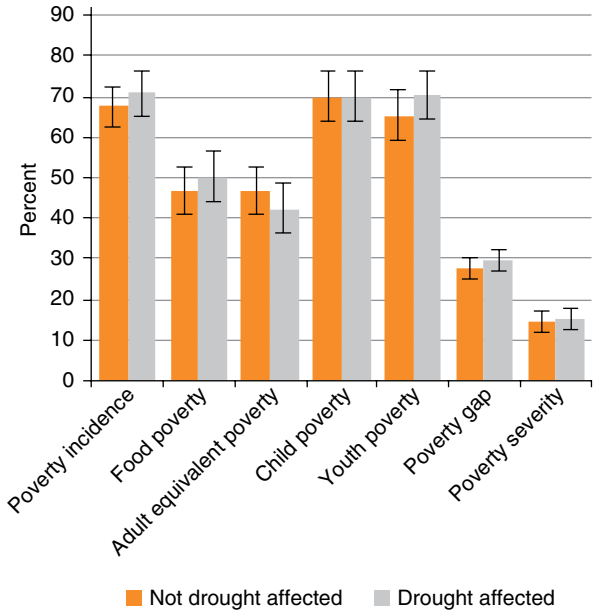
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE A.4 Poverty measures by displacement status of the household



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE A.5 Poverty measures by drought affected status of the household



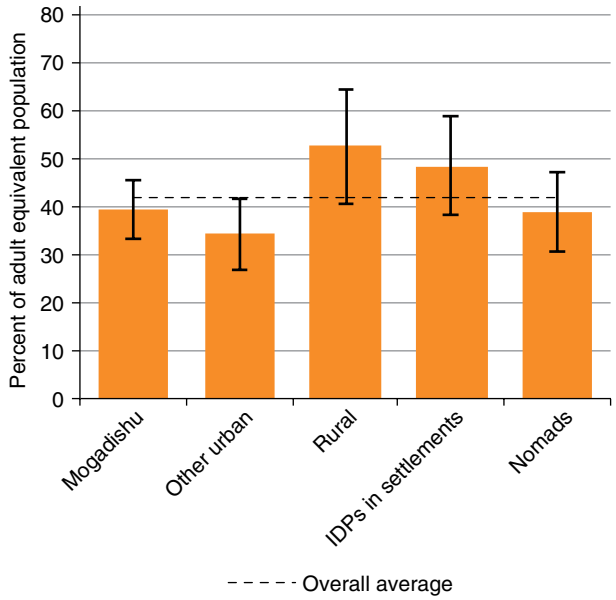
Source: Authors' calculations based on the SHFS 2017–18.

Adult equivalent measure of poverty

An adult equivalent measure of poverty considers the age and composition of households, as it recognizes economies of scale within them. Unlike the poverty headcount ratio, an adult equivalent measure of poverty incidence considers the size of the households, not in numbers of persons but in numbers of adult equivalents (AE), acknowledging economies of scale within the household. The scale used from OECD (1982) considers two children to be equivalent to an adult, and the second and subsequent number of adults in the household only as a 0.7 fraction of an effective adult equivalent.

Even though consumption per capita is a widely used measure for monetary poverty, consumption per adult equivalent acknowledges economies of scale within the household by considering the size and the age of its members. A child typically requires smaller amounts of food than an adult, and to reflect this the Organisation for Economic Co-operation and Development (OECD) scale measures the size of the households not in numbers of persons but in numbers of adult equivalents.[211] Forty-two percent of the Somali population are poor under this approach (Figure A.6).[212] Adult equivalent poverty incidence ranges from 39 to 58 percent across population groups, but its similar or not statistically different between Mogadishu (40 percent), rural areas (53 percent), IDPs in settlements (49 percent), and the nomadic population (39 percent). Households in other urban areas are less likely to be poor compared to those in rural areas (18 percentage point difference, $p<0.05$) and living in IDP settlements (14 percentage point difference, $p<0.05$). Furthermore, incidence is

FIGURE A.6 ■ Adult equivalent measure of poverty incidence



Source: Authors' calculations based on the SHFS 2017–18.

11 percentage points smaller for households that received remittances (33 percent), compared to non-receivers (44 percent, $p<0.01$), and 9 percentage points smaller for households not located in IDP settlements or not displaced (39 percent) relative to IDPs in settlements and outside of them (49 percent, $p<0.05$). Differences between households headed by men and women are found for the poverty incidence, but not when considering an adult equivalent measure since households headed by men have more children (2.8) compared to households headed by women (2.5).

[211] OECD (1982).

[212] The OECD equivalence scale is recommended for countries which have not established their own equivalence scale, like Somalia.

TABLE A.2 ■ Demographic attributes of poor households by population group

Dependent variable: Poverty status					
Independent variables	Mogadishu	Other urban	Rural	IDPs in settlements	Nomads
Household size	0.88***	0.64***	0.27	0.10	1.06***
Age dependency ratio	0.14	0.35*	0.36	–0.55	0.17
Number of children	–0.18	–0.18	0.06	0.87***	–0.33
Proportion of men in the household	8.24	–1.31	–13.27	0.69	15.8*
Share of households headed by men	4.33	–4.99*	11.28***	9.97*	4.27
Age of household head	–0.03*	–0.01	–0.01	0.04**	–0.03*
Share of literate household heads	4.77	7.69	–5.66	–3.26	–3.95
Share of literate members in the household	–14.57*	–13.57***	–1.68	–0.41	1.83
Share of households with improved sources of water	–2.23	3.92	6.63	–6.93	3.32
Share of households with improved sanitation	–3.90	–4.92*	6.80	0.55	–3.96
Share of households with access to electricity	–8.96*	–12.48***	–15.72***	–13.37***	12.44**
Main source of income: Salaried labor	Reference	Reference	Reference	Reference	Reference
Main source of income: Agriculture, fishing & hunting	–9.51	12.14**	–10.15**	–9.84	7.82
Main source of income: Small family business	0.58	2.47	–15.68**	–14.22**	4.54
Main source of income: Remittances	–0.08	–1.43	–3.26	–5.99	14.56
Main source of income: Other	4.11	–4.01	–14.90***	–10.60**	11.00
Observations	5,945	888	3,098	466	487

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). The poverty status was derived from total core consumption and a rescaled poverty line. The coefficients were estimated from a logistic regression model with population and region fixed effects. The reported values correspond to the marginal effects.

TABLE A.3 ■ Child poverty and key household characteristics

Dependent variable: Poverty status of children					
Independent variables	(1)	(2)	(3)	(4)	(5)
Household headed by men	0.409**				0.405**
Receiving remittances		–0.208			–0.211
Displaced household			0.022		0.003
Household affected by the drought				0.300	0.317
Region and population fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	16,369	16,369	16,369	16,369	16,369

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Estimated coefficients from a logistic regression. The poverty status was derived from total core consumption and a rescaled poverty line.

TABLE A.4 ■ Poverty incidence and key household characteristics

Dependent variable: Poverty status					
Independent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Household headed by men	0.274*				0.276*
Receiving remittances		–0.417**			–0.419**
Displaced household			–0.001		–0.005
Household affected by the drought				0.009	0.020
Region and population fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	6,092	6,092	6,092	6,092	6,092

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Estimated coefficients from a logistic regression. The poverty status was derived from total core consumption and a rescaled poverty line.

TABLE A.5 ■ Poverty gap and key household characteristics

Dependent variable: Poverty gap					
Independent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Household headed by men	0.023				0.022
Receiving remittances		–0.068***			–0.069***
Displaced household			0.036		0.037
Household affected by the drought				–0.007	–0.007
Region and population fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	6,092	6,092	6,092	6,092	6,092

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Estimated coefficients from an OLS regression.

TABLE A.6 ■ Youth poverty and key household characteristics

Dependent variable: Poverty status of youth					
Independent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Household headed by men	–0.029				–0.024
Receiving remittances		–0.524**			–0.525**
Displaced household			0.489		0.481
Household affected by the drought				–0.132	–0.165
Region and population fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	4,866	4,866	4,866	4,866	4,866

Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Estimated coefficients from a logistic regression. The poverty status was derived from total core consumption and a rescaled poverty line.

TABLE A.7 ■ Hunger and key household characteristics

Dependent variable: Experiencing hunger					
Independent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Poor household	0.035	0.014	0.030	0.024	0.021
Household headed by men	–0.137				–0.145
Receiving remittances		–0.335*			–0.364*
Displaced household			0.360		0.373
Household affected by the drought				0.547***	0.548***
Region and population fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	6,063	6,063	6,063	6,063	6,063

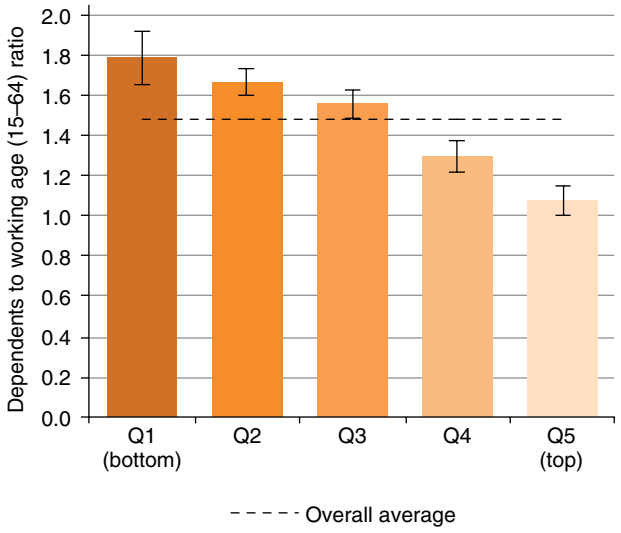
Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Estimated coefficients from a logistic regression.

TABLE A.8 ■ Education of the household head

Dependent variable: Household head with some formal education					
Independent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Poor household	0.282	0.305*	0.279	0.282	0.304*
Household headed by men	0.752***	0.766***	0.808***	0.756***	0.825***
Age of household head	–0.031***	–0.032***	–0.030***	–0.031***	–0.032***
Receiving remittances		0.552***			0.558***
Displaced household			–1.683***		–1.682***
Household affected by the drought				0.188	0.220
Region and population fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	4,279	4,279	4,279	4,279	4,279

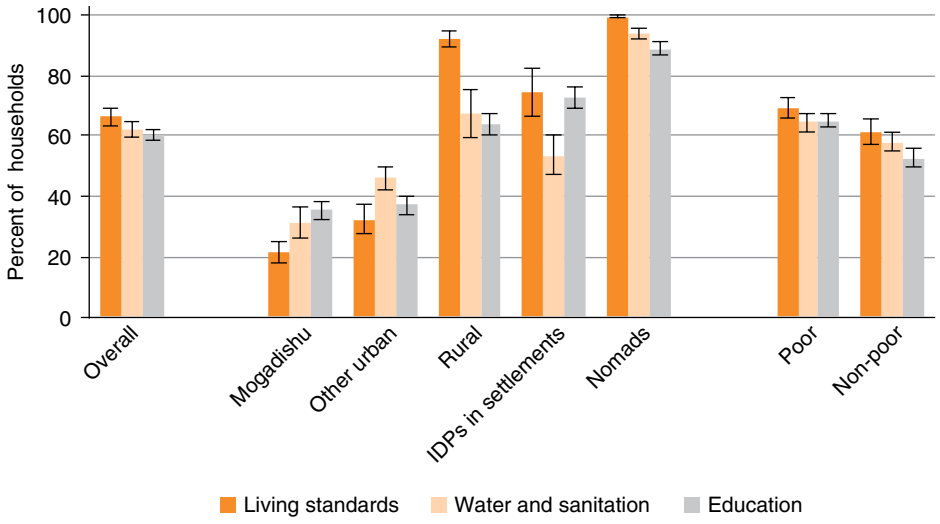
Source: Authors' calculations based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*). Estimated coefficients from a logistic regression.

FIGURE A.7 ■ Age dependency ratio by quintile



Source: Authors' calculations based on the SHFS 2017–18.

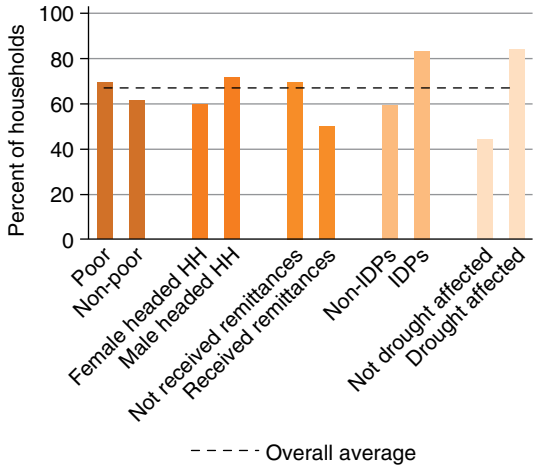
FIGURE A.8 ■ Households deprived in each dimension[213]



Source: Authors' calculations based on the SHFS 2017–18.

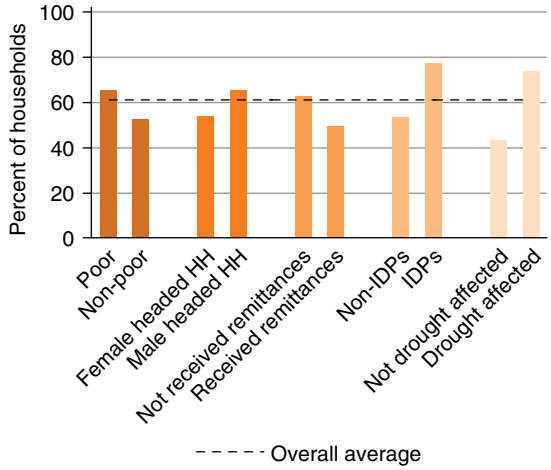
[213] A living standards dimension captures the type of dwelling, access to electricity, and source of energy for cooking. A household is deemed deprived along this dimension if they meet at least one of the following three criteria: (i) does not have access to electricity; (ii) the dwelling is not classified as improved housing (apartment or house); and (iii) uses dung, wood, charcoal, or grass as the main source of energy for cooking.

FIGURE A.9 ■ Households deprived in living standards dimension by group



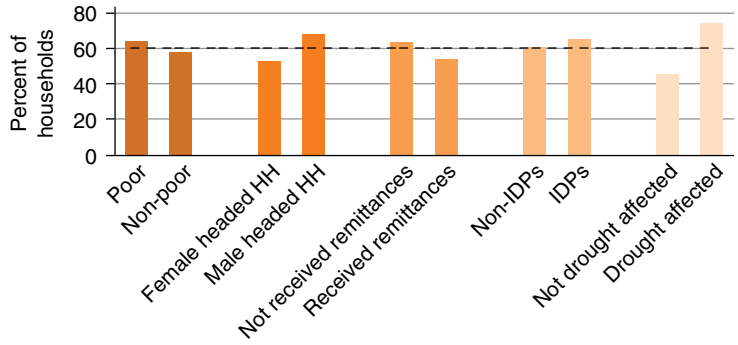
Source: Authors' calculations based on the SHFS 2017–18.

FIGURE A.10 ■ Households deprived in educational dimension by group



Source: Authors' calculations based on the SHFS 2017–18.

FIGURE A.11 ■ Households deprived in water and sanitation dimension by group



Source: Authors' calculations based on the SHFS 2017–18.

TABLE B.1 ■ Urban non-settlement and settlement IDPs have better access to services than rural IDPs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Electricity	Water	Improved housing	Sanitation	Proportion enrolled	Proportion literate	At least one employed	Own dwelling	Internet
Rural IDPs	–1.612***	–0.693	–2.855***	–1.824***	0.196**	–0.0151	0.0722	–0.0399	–0.0785
	–0.527	–0.907	–0.626	–0.578	–0.0838	–0.057	–0.0822	–0.0977	–0.0575
IDPs in settlements	–0.291	–0.374	–0.528	0.622	0.0152	0.0856	0.103	–0.0500	0.0368
	(0.431)	(0.411)	(0.488)	(0.457)	(0.0730)	(0.0681)	(0.0707)	(0.0753)	(0.0588)
Poverty incidence	–1.137***	–0.178	–0.0396	–0.128	–0.0811	–0.0649	0.0233	–0.0210	0.000978
	(0.295)	(0.390)	(0.515)	(0.518)	(0.0689)	(0.0576)	(0.0773)	(0.0952)	(0.0622)
Female-headed household	0.0749	0.448*	0.342	–0.541	0.00546	0.0158	0.0764	–0.0635	0.0471
	(0.388)	(0.234)	(0.303)	(0.354)	(0.0479)	(0.0442)	(0.0533)	(0.0558)	(0.0447)
Constant	1.048**	–0.136	–0.418	2.046***	0.348***	0.459***	0.620***	0.384***	0.127**
	(0.462)	(0.432)	(0.476)	(0.407)	(0.0811)	(0.0648)	(0.0797)	(0.0917)	(0.0637)
N	1,028	1,028	1,028	1,028	732	1,027	1,028	1,028	1,023

Source: Authors' calculations based on the SHFS 2017–18.
Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0.01.

TABLE B.2 ■ Urban IDPs are consistently worse off in terms of access to services compared to other urban households

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Electricity	Water	Improved housing	Sanitation	Proportion enrolled	Proportion literate	At least one employed	Own dwelling	Internet
IDPs	–1.893***	–1.342***	–1.310***	–1.163***	–0.309***	–0.264***	–0.120**	–0.144**	–0.108**
	(0.310)	(0.334)	(0.287)	(0.369)	(0.0685)	(0.0514)	(0.0584)	(0.0663)	(0.0419)
Poverty incidence	–0.491*	0.451	–0.122	–0.248	0.0470	–0.0255	0.0403	0.0323	–0.0511
	(0.266)	(0.290)	(0.205)	(0.369)	(0.0465)	(0.0373)	(0.0352)	(0.0366)	(0.0429)
Female-headed household	–0.0386	–0.114	–0.148	–0.164	–0.0110	–0.0154	0.0862**	–0.0474	–0.0377
	(0.213)	(0.234)	(0.187)	(0.320)	(0.0367)	(0.0360)	(0.0426)	(0.0499)	(0.0470)
Constant	2.612***	1.171***	1.217***	3.044***	0.585***	0.719***	0.725***	0.489***	0.312***
	(0.265)	(0.310)	(0.218)	(0.298)	(0.0397)	(0.0339)	(0.0464)	(0.0425)	(0.0507)
N	4011	4011	4011	4011	2733	4010	4011	4011	3994

Source: Authors' calculations based on the SHFS 2017–18.
Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0.01.

APPENDIX C

Estimating the Drought Impact with a Difference-in-Differences Model

Motivating the difference-in-differences model. The difference-in-differences approach is appropriate where household or individual outcomes (y) are observed in two periods, before and after exposure to a treatment, and where there is variation among households or individuals in the exposure to treatment. In the simplest case of a binary treatment, there are two groups. The first group is exposed to the treatment in the second period but not in the first. The second group is not exposed to the treatment in either of the two periods, but is otherwise subject to the same influences as the treatment group except to the treatment itself. This eliminates pretreatment differences in the outcome variables and controls for factors changing over time and affecting both groups. The validity of the difference-in-differences approach is contingent on a common trend assumption: that differences in outcomes would be similar in both groups if it had not been for the treatment.[214] Then the difference between the difference in outcomes over time for the treatment group and the difference in outcomes over time for the control group can be interpreted as the effect of treatment (Equation (1)). Here, $\hat{\beta}_3^{DD}$ is the difference-in-differences estimator.

$$\hat{\beta}_3^{DD} = (\bar{y}_{2017}^{Treatment} - \bar{y}_{2016}^{Treatment}) - (\bar{y}_{2017}^{Control} - \bar{y}_{2016}^{Control}), \quad (1)$$

Implementing the difference-in-difference model. With repeated cross-sections, this continuous difference-in-difference model is estimated in the following equation:

$$Y_{it} = \beta_0 + \beta_1 post_t + \beta_2 DroughtIntensity_i + \beta_3 post_t * DroughtIntensity_i + \beta_4 x_{it} + \varepsilon_{it} \quad (2)$$

This equation is implemented using OLS or Probit as appropriate. In Equation (2), Y_{it} denotes outcomes of interest for household i at time t, primarily the poverty headcount rate, but also other indicators of welfare that the drought likely affects, such as hunger and enrollment. $post_t$ is a binary variable indicating time period t (Wave 1, Wave 2), and $DroughtIntensity_i$ is the continuous treatment variable, indicating the level of drought exposure of household i in standard deviations of NDVI deviations from the 2012–2015 average. ε_{it} denotes the error term. β_1 is the expected mean change in outcome from before to after the drought among the control group. The coefficient of the drought exposure variable, β_2, is the estimated mean difference in outcomes prior to the drought: it represents whatever baseline differences existed between households before exposure to treatment. β_3 is the difference-in-difference estimator, and hence the coefficient of interest. X_{it} is a vector of control variables for household i at time t.

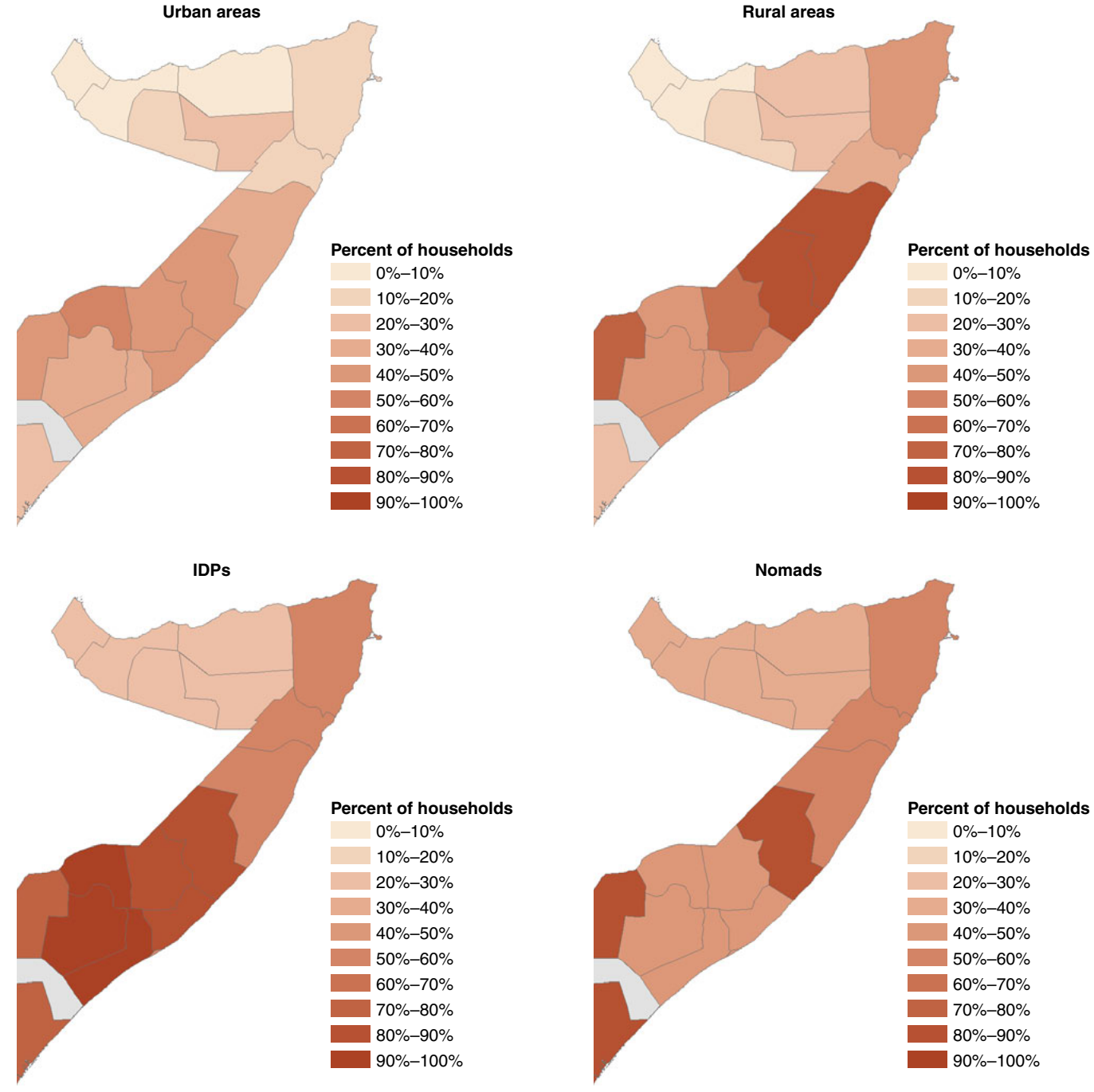
A set of control variables addresses potential bias of the estimates. Confounding factors affecting the outcome variables at the same time as the drought, such as conflict or humanitarian assistance, may violate the common trend assumption. Further, the use of repeated cross-sectional data does not allow for household-level fixed effects to control for all baseline differences. The model may therefore suffer from omitted variable bias. A vector of control variables X_{it} addresses these issues. An important baseline difference is that some regions may be more likely to experience drought than others. X_{it} therefore includes the medium-term (2002–2013) average NDVI value for each region surveyed, as a proxy for the region's propensity to experience drought. Price levels are a further potential confounding factor. They are therefore included in the regressions as controls. Further control variables fall into five categories: regional and population-type controls, household characteristics, dwelling characteristics, exposure to conflict, and humanitarian assistance.

[214] Imbens and Wooldridge (2007).

TABLE C.1 ■ List of control variables for difference-in-differences regression

Variable	Description
Average NDVI	Average value of NDVI at the district level, 2002–2013.
Price level	Price level at the disaggregation of analytical strata.
Regional and population type controls	
Region x type	Interaction takes the following values: Mogadishu—urban, NE—urban, NE—rural, NW—urban, NW—rural, Central regions—urban, Central regions—rural, Jubbaland—urban, SW—urban, SW—rural.
Type	Urban, rural indicator.
Household characteristics	
Household size	Number of members in the household.
Remittances	Household remittances receipt status (Yes/No).
Household head age	Age of the household head (years).
Household head literacy	Literacy of the household head (Yes/No)
Gender composition	Gender composition of the household (share of males).
Dwelling characteristics	
Tenure	Tenure status of household (own, rent, other).
Dwelling type	Type of the dwelling (shared, separate, other).
Roof material	Roof material of the dwelling (metal sheets, tiles, harar, wood, plastic, other).
Floor material	Floor material of the dwelling (concrete, tiles or mud, other).
Improved sanitation	Access to improved sanitation.
Conflict controls	
Conflict fatalities	Conflict fatalities in district in past 12 month according to ACLED.
Conflict x drought	Interaction of drought intensity and conflict fatalities.
Assistance controls	
Assistance in region	Percentage of beneficiaries reached through food aid and livelihood inputs in 2017 in region.

FIGURE C.1 ■ Hunger in December 2017



Source: Authors' calculations based on the SHFS 2017–18.

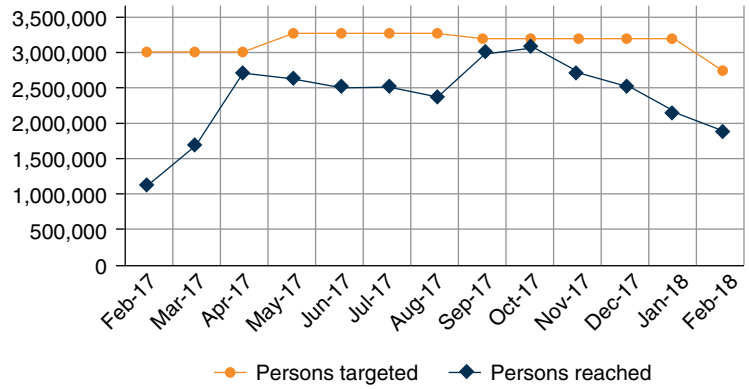
TABLE C.2 ■ IPC Phase Classification Reference Table

		Phase 1 Minimal	Phase 2 Stressed	Phase 3 Crisis	Phase 4 Emergency	Phase 5 Famine
Phase name and description		More than four in five households (HHs) are able to meet essential food and non-food needs without engaging in atypical, unsustainable strategies to access food and income, including any reliance on humanitarian assistance.	Even with any humanitarian assistance at least one in five HHs in the area have the following or worse: Minimally adequate food consumption but are unable to afford some essential non-food expenditures without engaging in irreversible coping strategies.	Even with any humanitarian assistance, at least one in five HHs in the area have the following or worse: Food consumption gaps with high or above usual acute malnutrition OR Are marginally able to meet minimum food needs only with accelarated depletion of livelihood assets that will lead to food consumption gaps.	Even with any humanitarian assistance, at least one in five HHs in the area have the following or worse: Large food consumption gaps resulting in very high acute malnutrition and excess mortality OR Extreme loss of livelihood assets that will lead to food consumption gaps in the short term.	Even with any humanitarian assistance, at least one in five HHs in the area have an extreme lack of food and other basic needs where starvation, dealth, and destitution are evident. (Evidence for all three criteria of food consumption, wasting, and CDR is required to classify as Famine).
Priority response objectives		Action required to build resilience and for disaster risk reduction	Action required for disaster risk reduction and to protect livelihoods	**Urgent Action Required to:** → Protect livelihoods, reduce food consumption gaps, and reduce acute malnutrition	Save lives and livelihoods	Prevent widespread mortality and total collapse of livelihoods
Area outcomes (directly measured or inferred)	Food consumption and livelihood change	More thatn 80% of households in the area are able to meet basic food needs without engaging in atypical strategies to access food and income, and livelihoods are sustainable	Based on the IPC Household Group Reference Table, at least 20% of the households in the area are in Phase 2 or worse	Based on the IPC Household Group Reference Table, at least 20% of the households in the area are in Phase 3 or worse	Based on the IPC Household Group Reference Table, at least 20% of the households in the area are in Phase 4 or worse	Based on the IPC Household Group Reference Table, at least 20% of the households in the area are in Phase 5
	Nutritional status*	Acute malnutrition: <5% BMI <18.5 prevalence: <10%	Acute malnutrition: 5–10%, BMI <18.5 prevalence: 10–20%	Acute malnutrition: 10–15% OR > usual and increasing BMI <18.5 prevalence: 20–40%, 1.5 x greater than reference	Acute malnutrition: 15–30%; OR > usual and increasing BMI <18.5 prevalence: >40%	Acute malnutrition: >30% BMI <18.5 prevalence: far >40%
	Mortality*	CDR: <0.5/10,000/day USDR: ≤1/10,000 day	CDR: <0.5/10,000/day USDR: ≤1/10,000/day	CDR: 0.5–1/10,000/day USDR: 1–2/10,000/day	CDR: 1–2/10,000/day OR >2x reference USDR: 2–4/10,000/day	CDR: >2/10,000/day USDR: >4/10,000/day

Source: Integrated Food Security Phase Classification, Technical Manual v 2.0.

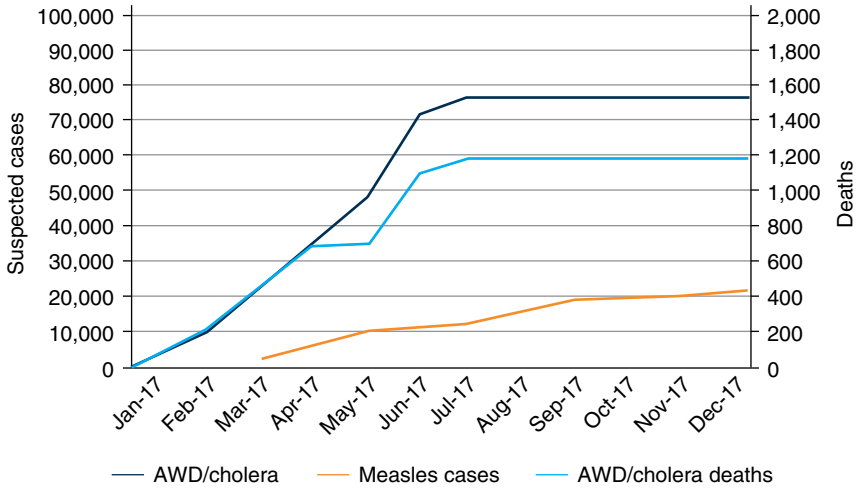
*For both nutrition and mortality area outcomes, household food consumption deficits must be an explanatory factor in order for that evidence to be used in support of a Phase classification. For example, elevated malnutrition due to disease outbreak or lack of health access—if it is determined to not be related to food consumption deficits—should not be used as evidence for an IPC classification. Similarly, excess mortality rates due to, murder or conflict—if they are not related to food consumption deficits—should not be used as evidence for a Phase classification. For Acute Malnutrition, the IPC thresholds are based on percent of children under 5 years that are below two standard deviations of weight for height or presence of oedema. BMI is an acronym for Body Mass Index. CDR is Crude Death Rate. U5DR is Under 5 Death Rate.

FIGURE C.2 ■ Humanitarian Response 2017, beneficiaries targeted and reached



Source: Food Security Cluster (2017); Food Security Cluster (2018).

FIGURE C.3 ■ Outbreak of communicable diseases 2017, all regions



Source: Health Cluster Somalia (2017).

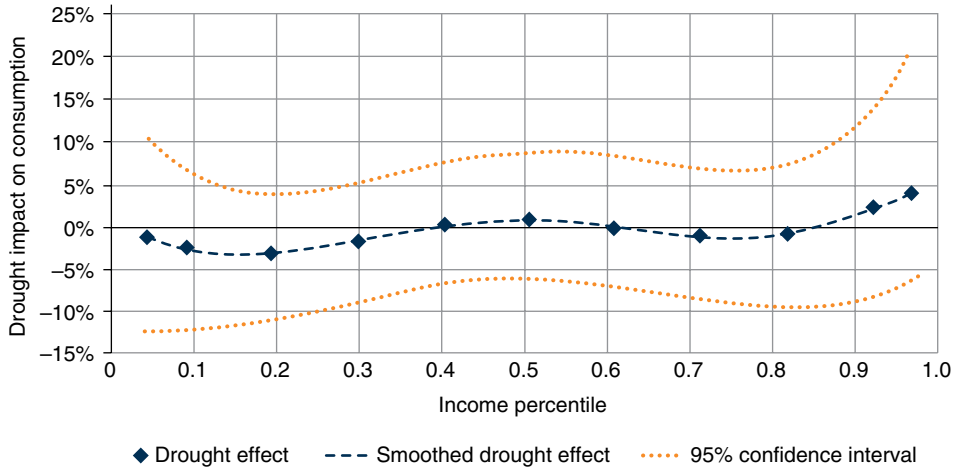
TABLE C.3 ■ Difference-in-differences results, consumption and poverty, full sample

Outcome variable	Consumption			Poverty		
Population	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Post	–0.106**	–0.086*	–0.213***	0.170***	0.257***	0.429***
	(0.047)	(0.047)	(0.066)	(0.056)	(0.077)	(0.072)
Drought intensity	–0.046	–0.024	0.097***	0.028	0.032	–0.134***
	(0.028)	(0.030)	(0.029)	(0.043)	(0.056)	(0.050)
DD estimator	0.005	0.005	–0.189**	0.006	0.007	0.238***
	(0.037)	(0.034)	(0.088)	(0.049)	(0.056)	(0.088)
Average NDVI	–1.044***	–0.490	–1.922	1.617***	0.941*	0.614
	(0.356)	(0.301)	(1.438)	(0.496)	(0.504)	(1.339)
Price level	–0.192	–0.410**	0.375	0.572***	0.475*	0.411
	(0.165)	(0.164)	(0.399)	(0.167)	(0.245)	(0.386)
Regional controls						
NE–urban	0.116	0.285***			–0.569***	
	(0.078)	(0.068)			(0.105)	
NW–urban	–0.022	0.129**			–0.260**	
	(0.072)	(0.062)			(0.108)	
NE–rural	–0.219***					
	(0.062)					
NW–rural	–0.146*		0.091			0.352***
	(0.077)		(0.068)			(0.077)
Central–urban	0.232***	0.311***			–0.609***	
	(0.073)	(0.076)			(0.120)	
Central–rural	0.188		0.800***			–0.229
	(0.190)		(0.201)			(0.172)
Jubbaland–urban	0.521***	0.473***			–1.162***	
	(0.098)	(0.085)			(0.163)	
SW–urban	0.403***	0.295***			–0.539***	
	(0.099)	(0.089)			(0.155)	
SW–rural	0.248**		1.191***			–0.550**
	(0.112)		(0.355)			(0.271)
Household controls						
HH head literacy	0.046***	0.066***	0.013	–0.049	–0.061*	–0.039
	(0.016)	(0.015)	(0.030)	(0.030)	(0.032)	(0.055)
HH head age	0.001**	0.001	0.002**	–0.001	–0.000	–0.003**
	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.002)
Received remittances	0.068***	0.075***	0.031	–0.141***	–0.145***	–0.125
	(0.014)	(0.014)	(0.032)	(0.021)	(0.020)	(0.081)
Household size	–0.058***	–0.056***	–0.056***	0.082***	0.084***	0.068***
	(0.003)	(0.003)	(0.008)	(0.005)	(0.005)	(0.017)
Gender composition	0.032	–0.003	0.104*	–0.073	–0.029	–0.205**
	(0.032)	(0.032)	(0.054)	(0.057)	(0.062)	(0.102)

Outcome variable	Consumption			Poverty		
Population	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Dwelling controls						
Dwelling tenure: Rent	0.014	0.010	0.028	–0.037	–0.044	0.032
	(0.014)	(0.016)	(0.025)	(0.025)	(0.028)	(0.051)
Dwelling tenure: Other	–0.043	–0.077**	0.047	0.099**	0.165***	–0.014
	(0.028)	(0.031)	(0.052)	(0.046)	(0.054)	(0.078)
Dwelling floor: Tiles or mud	–0.005	0.026*	–0.151***	–0.016	–0.055*	0.229***
	(0.016)	(0.015)	(0.043)	(0.027)	(0.029)	(0.071)
Dwelling floor: Other	–0.063***	–0.062***	–0.160***	0.044	0.064	0.222***
	(0.023)	(0.024)	(0.038)	(0.036)	(0.040)	(0.081)
Dwelling type: Separate	0.023	0.024	–0.081	–0.037	–0.038	–0.024
	(0.025)	(0.021)	(0.049)	(0.039)	(0.039)	(0.087)
Dwelling type: Other	0.021	–0.002	0.059	–0.038	–0.027	–0.080
	(0.022)	(0.017)	(0.040)	(0.031)	(0.030)	(0.087)
Dwelling roof: Tiles	0.014	–0.067	0.530***	0.104*	0.170**	–0.241***
	(0.062)	(0.042)	(0.120)	(0.062)	(0.074)	(0.087)
Dwelling roof: Harar	–0.048	–0.114***	0.024	0.073	0.217***	–0.052
	(0.030)	(0.029)	(0.062)	(0.051)	(0.059)	(0.078)
Dwelling roof: Raar	–0.217**	–0.283***	–0.172	0.215	0.414**	0.086
	(0.085)	(0.083)	(0.123)	(0.131)	(0.192)	(0.181)
Dwelling roof: Wood	–0.035	–0.071**	–0.012	0.095*	0.099	0.189*
	(0.032)	(0.030)	(0.057)	(0.052)	(0.061)	(0.105)
Dwelling roof: Plastic	–0.075**	–0.163***	–0.053	0.034	0.301***	–0.085
	(0.035)	(0.043)	(0.066)	(0.078)	(0.078)	(0.075)
Dwelling roof: Concrete	0.028	0.058	–0.062	0.063	0.070	0.085
	(0.054)	(0.072)	(0.090)	(0.091)	(0.111)	(0.104)
Dwelling roof: Other	–0.125	–0.104	–0.251**	0.117	0.072	0.320*
	(0.078)	(0.093)	(0.123)	(0.072)	(0.093)	(0.165)
Improved sanitation	0.020	0.026	0.054	–0.058*	–0.086***	–0.037
	(0.025)	(0.030)	(0.034)	(0.034)	(0.033)	(0.070)
Conflict controls						
Conflict fatalities in district	–0.000	–0.000	–0.000*	–0.000	–0.000*	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Conflict x drought	0.000	0.000	–0.000*	0.000	–0.000	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Assistance						
Assistance (% of beneficiaries reached)	–0.320***	–0.362***	–0.312***	0.559***	0.615***	0.418***
	(0.048)	(0.045)	(0.087)	(0.077)	(0.084)	(0.129)
Observations	7,214	5,678	1,536	7,214	5,678	1,536
R–squared	0.348	0.347	0.520			

Source: Authors' calculation based on the SHFS 2017–18.
Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors in parentheses. Poverty status results estimated using Probit, Consumption results estimated using OLS. Drought effect expressed in standard deviations of NDVI loss.

FIGURE C.4 ■ Drought effect along the income distribution, urban areas



Source: Authors' calculation based on the SHFS 2017–18.

TABLE C.4 ■ Robustness of results across various specifications

	(I)	(II)	(III)	(IV)	(V)	(VI)
Sample			**Full rural sample**			
Outcome variable			Poor PPP			
Drought impact	0.192***	0.218**	0.187**	0.176**	0.226**	0.238***
S.E.	(0.0629)	(0.0858)	(0.0803)	(0.0822)	(0.0913)	(0.0880)
Outcome variable			ln (core consumption)			
Drought impact	–0.107**	–0.192***	–0.152**	–0.143**	–0.173*	–0.189**
S.E.	(0.0428)	(0.0715)	(0.0677)	(0.0696)	(0.0885)	(0.0876)
Controls						
Regional	No	Yes	Yes	Yes	Yes	Yes
Household	No	No	Yes	Yes	Yes	Yes
Dwelling	No	No	No	Yes	Yes	Yes
Conflict	No	No	No	No	Yes	Yes
Assistance	No	No	No	No	No	Yes
Observations	1,591	1,591	1,563	1,536	1,536	1,536
R-squared	0.032	0.250	0.370	0.485	0.501	0.520

Source: Authors' calculation based on the SHFS 2017–18.
Note: ***p<0.01, **p<0.05, *p<0.1. Poverty status results estimated using Probit, Consumption results estimated using OLS. Drought effect expressed in standard deviations of NDVI loss.

TABLE C.5 ■ Difference-in-differences results with restricted sample

Sample	Rural, NE excluded		Rural, Central excluded		Rural, SW excluded	
Outcome variable	Poverty					
Drought impact	0.197***	0.213**	0.137**	0.115	0.224***	0.415***
S.E.	(0.066)	(0.088)	(0.038)	(0.052)	(0.059)	(0.087)
Outcome variable	ln (core consumption)					
Drought impact	–0.129***	–0.191**	–0.051	–0.048	–0.128***	–0.296***
S.E.	(0.048)	(0.093)	(0.038)	(0.052)	(0.043)	(0.080)
Controls	No	Yes	No	Yes	No	Yes
Observations	1,511	1,456	1,087	1,035	1,319	1,277
R-squared	0.054	0.508	0.029	0.515	0.065	0.564

Source: Authors' calculation based on the SHFS 2017–18.
Note: ***p<0.01, **p<0.05, *p<0.1. Poverty status results estimated using Probit, Consumption results estimated using OLS. Drought effect expressed in standard deviations of NDVI loss.

TABLE C.6 ■ Difference-in-differences results, consumption and poverty, overlapping sample

Outcome variable	Consumption			Poverty		
Sample	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Post	–0.193***	–0.221***	–0.229***	0.323***	0.321**	0.515***
	(0.058)	(0.062)	(0.076)	(0.108)	(0.151)	(0.092)
Drought intensity	–0.036	–0.067**	0.055	0.002	0.070	–0.114
	(0.026)	(0.032)	(0.045)	(0.036)	(0.062)	(0.090)
DD estimator	–0.042	–0.042	–0.117**	0.127	0.050	0.223*
	(0.036)	(0.043)	(0.052)	(0.079)	(0.096)	(0.112)
Average NDVI	0.016	0.082	1.155	1.559	1.468	–0.783
	(0.536)	(0.536)	(1.412)	(1.094)	(1.200)	(2.448)
Price level	–0.127	–0.108	–0.146	0.585***	0.360	0.963***
	(0.220)	(0.192)	(0.275)	(0.219)	(0.387)	(0.331)
Regional controls						
NW–urban	0.163**	0.136*			–0.178	
	(0.066)	(0.070)			(0.142)	
NE–rural						
NW–rural	0.079					
	(0.073)					
Household controls						
HH head literacy	0.077***	0.081***	0.044	–0.090***	–0.079**	–0.141***
	(0.014)	(0.014)	(0.049)	(0.029)	(0.031)	(0.038)
HH head age	0.001	0.000	0.003*	–0.001	0.000	–0.005***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Received remittances	0.074***	0.076***	–0.026	–0.143***	–0.146***	–0.115**
	(0.014)	(0.016)	(0.043)	(0.024)	(0.026)	(0.056)

—continued

TABLE C.6—continued

Outcome variable	Consumption			Poverty		
Sample	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Household size	–0.058***	–0.056***	–0.078***	0.086***	0.080***	0.133***
	(0.003)	(0.003)	(0.010)	(0.005)	(0.005)	(0.010)
Gender composition	0.010	0.000	0.042	–0.048	–0.021	–0.203***
	(0.033)	(0.036)	(0.073)	(0.065)	(0.069)	(0.069)
Dwelling controls						
Dwelling tenure: Rent	0.002	0.000	0.038	–0.019	–0.022	0.038
	(0.014)	(0.015)	(0.031)	(0.023)	(0.023)	(0.049)
Dwelling tenure: Other	–0.048	–0.066*	0.202***	0.063	0.115**	–0.271**
	(0.035)	(0.036)	(0.071)	(0.052)	(0.054)	(0.115)
Dwelling floor: Tiles or mud	0.011	0.043**	–0.296***	–0.018	–0.055*	0.336***
	(0.019)	(0.018)	(0.065)	(0.032)	(0.033)	(0.077)
Dwelling floor: Other	–0.064***	–0.082***	–0.235***	0.085**	0.146***	0.224**
	(0.024)	(0.026)	(0.071)	(0.039)	(0.042)	(0.092)
Dwelling type: Separate	0.010	0.015	–0.021	–0.020	–0.025	–0.022
	(0.020)	(0.020)	(0.072)	(0.040)	(0.041)	(0.074)
Dwelling type: Other	–0.007	–0.011	0.058	–0.030	–0.032	0.013
	(0.019)	(0.019)	(0.079)	(0.028)	(0.029)	(0.077)
Dwelling roof: Tiles	–0.062	–0.079	0.382***	0.162**	0.196**	–0.249
	(0.050)	(0.051)	(0.099)	(0.069)	(0.080)	(0.156)
Dwelling roof: Harar	–0.046	–0.114***	0.165*	0.114**	0.188***	–0.089
	(0.037)	(0.032)	(0.092)	(0.052)	(0.061)	(0.066)
Dwelling roof: Raar	–0.233	–0.365***	0.042	0.308**	0.737***	–0.041
	(0.147)	(0.067)	(0.165)	(0.146)	(0.092)	(0.154)
Dwelling roof: Wood	–0.084**	–0.074**	–0.036	0.147***	0.124*	0.246**
	(0.034)	(0.031)	(0.100)	(0.052)	(0.063)	(0.119)
Dwelling roof: Plastic	–0.135***	–0.179***	0.109	0.213***	0.289***	–0.119
	(0.050)	(0.044)	(0.089)	(0.060)	(0.079)	(0.100)
Dwelling roof: Concrete	0.040	0.095	–0.025	0.062	0.032	0.011
	(0.062)	(0.061)	(0.113)	(0.071)	(0.081)	(0.169)
Dwelling roof: Other	–0.112	–0.091	–0.031	0.115	0.061	0.034
	(0.077)	(0.093)	(0.115)	(0.077)	(0.094)	(0.135)
Improved sanitation	0.025	0.017	0.056	–0.054	–0.054	–0.035
	(0.027)	(0.034)	(0.053)	(0.035)	(0.035)	(0.066)
Conflict fatalities in district	0.000	0.000	–0.014	–0.000**	–0.000*	0.014
	(0.000)	(0.000)	(0.010)	(0.000)	(0.000)	(0.013)
Conflict x drought	0.000*	0.000*	–0.002	–0.000	–0.000	0.010
	(0.000)	(0.000)	(0.008)	(0.000)	(0.000)	(0.014)
Assistance (% of beneficiaries reached)	–0.210***	–0.232***	–0.126	0.391***	0.448***	0.077
	(0.046)	(0.041)	(0.092)	(0.088)	(0.108)	(0.134)
Observations	4,044	3,348	696	4,044	3,348	696
R-squared	0.332	0.349	0.474			

Source: Authors' calculation based on the SHFS 2017–18.
Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors in parentheses. Poverty status results estimated using Probit, Consumption results estimated using OLS. Drought effect expressed in standard deviations of NDVI loss.

TABLE C.7 ■ Difference-in-differences results, hunger

	All regions			Overlapping regions		
Outcome variable	Hunger					
Sample	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Post	0.100*	0.131**	0.115	0.117***	0.123***	–0.010
	(0.057)	(0.057)	(0.129)	(0.033)	(0.033)	(0.060)
Drought intensity	–0.063	–0.089*	–0.050	–0.085***	–0.118***	–0.038
	(0.038)	(0.047)	(0.059)	(0.032)	(0.044)	(0.030)
DD estimator	0.101**	0.096*	0.166**	0.160***	0.116***	0.591***
	(0.044)	(0.053)	(0.079)	(0.038)	(0.038)	(0.129)
Average NDVI	0.360	0.512	–2.031	1.748*	1.987**	1.022
	(0.524)	(0.545)	(1.410)	(0.901)	(0.861)	(0.805)
Regional controls						
NE–urban		–0.030				
		(0.083)				
NW–urban		–0.225***			–0.098	
		(0.067)			(0.084)	
NE–rural						
NW–rural			–0.336**			
			(0.135)			
Central–urban		–0.015				
		(0.095)				
Central–rural			0.329			
			(0.233)			
Jubbaland–urban		–0.127				
		(0.176)				
SW–urban		–0.149				
		(0.128)				
SW–rural			0.213			
			(0.352)			
Household controls						
HH head literacy	–0.051**	–0.032	–0.119**	–0.027	–0.017	–0.137***
	(0.024)	(0.026)	(0.058)	(0.026)	(0.027)	(0.038)
HH head age	–0.001	–0.001*	0.002	–0.001	–0.001	0.000
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Received remittances	–0.002	–0.033	0.170***	–0.020	–0.033	–0.015
	(0.024)	(0.025)	(0.044)	(0.024)	(0.025)	(0.021)
Household size	–0.006	–0.001	–0.021	–0.012**	–0.009	–0.007
	(0.006)	(0.005)	(0.017)	(0.005)	(0.005)	(0.009)
Gender composition	–0.003	0.024	–0.019	–0.007	0.012	0.010
	(0.051)	(0.051)	(0.130)	(0.048)	(0.054)	(0.033)

—continued

TABLE C.7—continued

	All regions			Overlapping regions		
Outcome variable	**Hunger**					
Sample	**Urban + rural**	**Urban**	**Rural**	**Urban + rural**	**Urban**	**Rural**
Dwelling controls						
Dwelling tenure: Rent	0.029	0.018	0.074	0.004	0.013	–0.101***
	(0.022)	(0.020)	(0.065)	(0.020)	(0.019)	(0.028)
Dwelling tenure: Other	0.212***	0.116*	0.246**	0.153*	0.109*	0.024
	(0.070)	(0.060)	(0.112)	(0.079)	(0.063)	(0.079)
Dwelling floor: Tiles or mud	–0.010	–0.016	0.036	–0.010	–0.006	0.106**
	(0.031)	(0.030)	(0.082)	(0.028)	(0.030)	(0.042)
Dwelling floor: Other	0.003	0.051	–0.027	0.058	0.053	0.124**
	(0.041)	(0.038)	(0.087)	(0.042)	(0.043)	(0.051)
Dwelling type: Separate	–0.068	–0.087*	–0.063	–0.056	–0.085**	0.156**
	(0.054)	(0.050)	(0.100)	(0.034)	(0.036)	(0.066)
Dwelling type: Other	–0.036	–0.026	–0.130*	–0.036	–0.030	0.065
	(0.044)	(0.037)	(0.071)	(0.031)	(0.028)	(0.054)
Dwelling roof: Tiles	0.036	–0.001	0.296**	–0.143***	–0.216**	
	(0.126)	(0.125)	(0.114)	(0.034)	(0.089)	
Dwelling roof: Harar	0.130**	0.174***	0.140*	0.065	0.093	0.04
	(0.058)	(0.060)	(0.076)	(0.057)	(0.061)	(0.049)
Dwelling roof: Raar	0.070	0.099	0.120*	–0.052	0.006	0.056
	(0.068)	(0.077)	(0.067)	(0.046)	(0.072)	(0.064)
Dwelling roof: Wood	–0.059	–0.042	–0.109	–0.077*	–0.097	–0.007
	(0.064)	(0.079)	(0.146)	(0.046)	(0.072)	(0.055)
Dwelling roof: Plastic	0.091	0.076	0.124	–0.004	0.048	–0.052
	(0.063)	(0.092)	(0.075)	(0.065)	(0.086)	(0.058)
Dwelling roof: Concrete	–0.053	–0.033	–0.228			
	(0.104)	(0.119)	(0.148)			
Dwelling roof: Other	0.075	–0.000	0.161	–0.010	–0.019	–0.020
	(0.077)	(0.083)	(0.109)	(0.060)	(0.074)	(0.078)
Improved sanitation	–0.002	0.015	–0.043	–0.031	–0.045	0.013
	(0.039)	(0.043)	(0.052)	(0.030)	(0.031)	(0.035)
Conflict fatalities in district	0.000	0.000	0.001***			
	(0.000)	(0.000)	(0.000)			
Conflict x drought	–0.000	–0.000	–0.000			
	(0.000)	(0.000)	(0.000)			
Assistance (% of beneficiaries reached)	–0.052	–0.191**	0.198	0.078	–0.010	0.039
		(0.094)	(0.122)	(0.068)	(0.099)	(0.055)
Observations	7,153	5,637	1,516	3,962	3,292	663

Source: Authors' calculation based on the SHFS 2017–18.
Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors in parentheses. Results estimated with Probit. Drought effect expressed in standard deviations of NDVI loss.

TABLE C.8 ■ Difference-in-differences results, food consumption

	All regions			Overlapping regions		
Outcome variable	Food consumption					
Sample	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Post	–0.061	–0.015	–0.200***	–0.088*	–0.095*	–0.243***
	(0.041)	(0.052)	(0.062)	(0.047)	(0.057)	(0.059)
Drought intensity	–0.025	0.013	0.086***	–0.012	–0.060*	0.058
	(0.023)	(0.034)	(0.029)	(0.022)	(0.032)	(0.041)
DD estimator	–0.015	–0.039	–0.164**	0.000	0.064	–0.124***
	(0.031)	(0.041)	(0.071)	(0.029)	(0.042)	(0.046)
Average NDVI	–0.909**	–0.569*	–1.371	–0.177	–0.033	1.357
	(0.354)	(0.338)	(1.326)	(0.527)	(0.583)	(1.010)
Price level	0.034	–0.293	0.501	0.164	0.394**	0.113
	(0.160)	(0.265)	(0.326)	(0.160)	(0.181)	(0.224)
Regional controls						
NE–urban	–0.003	0.155*				
	(0.080)	(0.089)				
NW–urban	–0.036	0.125*		0.071	–0.032	
	(0.062)	(0.075)		(0.055)	(0.060)	
NE–rural	–0.440***					
	(0.055)					
NW–rural	–0.074		0.345***	0.066		
	(0.065)		(0.058)	(0.065)		
Central–urban	0.201***	0.311***				
	(0.075)	(0.104)				
Central–rural	0.210		0.918***			
	(0.147)		(0.177)			
Jubbaland–urban	0.393***	0.375***				
	(0.099)	(0.101)				
SW–urban	0.293***	0.260**				
	(0.092)	(0.108)				
SW–rural	0.240**		1.204***			
	(0.102)		(0.331)			
Household controls						
HH head literacy	0.032**	0.054***	–0.001	0.054***	0.058***	0.031
	(0.013)	(0.011)	(0.024)	(0.013)	(0.014)	(0.042)
HH head age	0.001	0.000	0.002**	0.001	0.000	0.003**
	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Received remittances	0.038***	0.046***	0.002	0.049***	0.056***	–0.047*
	(0.014)	(0.016)	(0.026)	(0.016)	(0.017)	(0.028)
Household size	–0.048***	–0.046***	–0.049***	–0.047***	–0.044***	–0.071***
	(0.002)	(0.003)	(0.007)	(0.003)	(0.002)	(0.009)
Gender composition	0.006	–0.035	0.110*	–0.014	–0.031	0.051
	(0.032)	(0.028)	(0.058)	(0.029)	(0.032)	(0.062)

—continued

TABLE C.8—continued

	All regions			Overlapping regions		
Outcome variable	Food consumption					
Sample	Urban + rural	Urban	Rural	Urban + rural	Urban	Rural
Dwelling controls						
Dwelling tenure: Rent	0.010	0.004	0.015	0.010	0.009	0.009
	(0.012)	(0.013)	(0.023)	(0.015)	(0.016)	(0.028)
Dwelling tenure: Other	–0.043*	–0.060**	0.023	–0.022	–0.038	0.187***
	(0.024)	(0.028)	(0.041)	(0.031)	(0.030)	(0.068)
Dwelling floor: Tiles or mud	–0.003	0.019	–0.114***	–0.001	0.018	–0.223***
	(0.016)	(0.016)	(0.042)	(0.018)	(0.018)	(0.057)
Dwelling floor: Other	–0.033*	–0.017	–0.128***	–0.048**	–0.054**	–0.218***
	(0.020)	(0.023)	(0.038)	(0.023)	(0.026)	(0.060)
Dwelling type: Separate	0.015	0.015	–0.091**	–0.011	–0.002	–0.055
	(0.019)	(0.017)	(0.037)	(0.018)	(0.018)	(0.060)
Dwelling type: Other	0.019	0.002	0.019	–0.012	–0.012	–0.010
	(0.018)	(0.016)	(0.030)	(0.017)	(0.017)	(0.060)
Dwelling roof: Tiles	0.045	–0.006	0.295***	–0.018	–0.035	0.364***
	(0.046)	(0.037)	(0.073)	(0.043)	(0.043)	(0.094)
Dwelling roof: Harar	–0.033	–0.077***	0.015	–0.026	–0.081***	0.144*
	(0.026)	(0.028)	(0.055)	(0.033)	(0.029)	(0.080)
Dwelling roof: Raar	–0.168***	–0.204***	–0.126	–0.158	–0.268***	0.038
	(0.064)	(0.054)	(0.093)	(0.106)	(0.044)	(0.130)
Dwelling roof: Wood	0.026	0.011	0.024	–0.008	0.004	–0.003
	(0.028)	(0.031)	(0.050)	(0.033)	(0.033)	(0.090)
Dwelling roof: Plastic	–0.027	–0.097**	–0.016	–0.082*	–0.116***	0.090
	(0.030)	(0.038)	(0.052)	(0.043)	(0.038)	(0.077)
Dwelling roof: Concrete	0.064**	0.097***	–0.062	0.046	0.090***	–0.065
	(0.027)	(0.035)	(0.075)	(0.041)	(0.028)	(0.095)
Dwelling roof: Other	–0.068	–0.063	–0.161	–0.053	–0.047	0.028
	(0.073)	(0.090)	(0.111)	(0.072)	(0.087)	(0.107)
Improved sanitation	0.003	–0.000	0.039	–0.022	–0.025	0.013
	(0.027)	(0.036)	(0.032)	(0.033)	(0.040)	(0.046)
Conflict fatalities in district	–0.000**	–0.000**	–0.000**	–0.000**	–0.000***	–0.013
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.008)
Conflict x drought	0.000	0.000	–0.000*	0.000***	0.000***	–0.002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)
Assistance (% of beneficiaries reached)	–0.197***	–0.232***	–0.240***	–0.186***	–0.174***	–0.078
	(0.035)	(0.041)	(0.081)	(0.035)	(0.034)	(0.081)
Observations	7,214	5,678	1,536	4,044	3,348	696
R–squared	0.347	0.304	0.591	0.297	0.312	0.461

Source: Authors' calculation based on the SHFS 2017–18.
Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors in parentheses. Results estimated with OLS. Drought effect expressed in standard deviations of NDVI loss.

APPENDIX D

Regression Results for Each Type of Shock

TABLE D.1 ■ What household characteristics affect the probability of reporting shocks?

	Drought	Other natural	Water shortage	Crop or livestock loss	High food prices	Income reduced	Theft	Conflict
Wealth index	–0.080***	–0.006	0.005	–0.028***	–0.005	–0.008	–0.009*	–0.002
	[0.021]	[0.005]	[0.005]	[0.005]	[0.014]	[0.011]	[0.005]	[0.006]
Head (no education)	0.041***	–0.007	–0.008	0.014**	0.001	0.002	–0.004	–0.003
	[0.013]	[0.007]	[0.006]	[0.006]	[0.011]	[0.008]	[0.003]	[0.005]
HH with employed member	0.031*	0.000	–0.007	–0.006	0.034**	0.004	0.026**	0.005
	[0.019]	[0.010]	[0.008]	[0.011]	[0.015]	[0.012]	[0.006]	[0.007]
HH has agricultural income	0.024	0.021**	0.046***	0.033**	–0.051***	–0.021	0.018*	–0.027**
	[0.016]	[0.008]	[0.009]	[0.013]	[0.011]	[0.015]	[0.010]	[0.013]
Male headed HH	0.021	0.015***	–0.013***	–0.013	–0.014	0.003	–0.006	–0.007
	[0.023]	[0.004]	[0.004]	[0.016]	[0.020]	[0.010]	[0.009]	[0.004]
HH head age	0.001	–0.000	0.000	–0.001***	0.001*	0.000	–0.000	0.000
	[0.001]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Household size	–0.008	0.001	–0.002	0.006***	0.003**	0.007***	0.003***	0.001
	[0.005]	[0.002]	[0.004]	[0.002]	[0.002]	[0.001]	[0.001]	[0.001]
HH receives assistance	–0.017	0.027**	0.030***	0.018*	0.017	0.028**	–0.001	0.001
	[0.028]	[0.012]	[0.009]	[0.010]	[0.012]	[0.013]	[0.002]	[0.010]
HH receives remittances	0.011	0.005	0.010	0.015	0.021	0.018***	–0.005	0.010***
	[0.035]	[0.008]	[0.008]	[0.013]	[0.019]	[0.007]	[0.012]	[0.003]
Household welfare								
Bottom 40%	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*
Top 60%	0.021	0.025***	0.0009	0.014	0.020	0.014**	0.010***	0.003
	[0.019]	[0.005]	[0.006]	[0.015]	[0.016]	[0.006]	[0.003]	[0.006]
Population type								
Urban	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*	*[Ref]*
Rural	0.143***	–0.016*	0.015	0.004	–0.036**	–0.022**	–0.019***	–0.006
	[0.023]	[0.009]	[0.015]	[0.010]	[0.018]	[0.009]	[0.004]	[0.009]
IDP (settlement)	0.014	–0.002	0.050**	0.032	0.034	–0.020	—	0.063***
	[0.078]	[0.020]	[0.022]	[0.019]	[0.030]	[0.021]		[0.024]
Nomad	0.256***	—	0.026	0.010	–0.057***	–0.047***	—	0.002
	[0.078]		[0.016]	[0.013]	[0.011]	[0.007]		[0.022]
Control for region	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Predicted probability	0.33	0.03	0.04	0.05	0.06	0.04	0.02	0.02
No. of observations	3,170	2,516	2,974	3,032	3,134	2,954	1,713	2,570
Pseudo R^2	0.26	0.12	0.18	0.17	0.11	0.13	0.11	0.14

Source: Authors' calculation based on the SHFS 2017–18.
Note: Significance level: 1% (***), 5% (**), and 10% (*).

APPENDIX E

Methodology for Reduced Coping Strategy Index

The Coping Strategies Index records the frequency of times a household has adopted a certain behavior in the past seven days and then assigns each behavior a certain weight. The list of questions is given below.

TABLE E.1 ■ Reduced Coping Strategy Index

In the past seven days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:	Weight
Rely on less preferred or less expensive foods?	1
Borrow food, or rely on help from a friend or relative?	2
Limit portion size at mealtimes?	1
Restrict consumption by adults in order for small children to eat?	3
Reduce number of meals eaten in a day?	1

Source: Maxwell and Caldwell (2008).

APPENDIX F

Displacement

Along with the data on IDPs and host communities used from the Somali SHFS 2017–18, the displacement chapter draws on data from the Skills Profile Survey, conducted in refugee camps and host communities in Ethiopia, in 2017.

Skills Profile Survey, Ethiopia

Sample design

Outcomes of Somali refugees in Ethiopia are analyzed using the Skills Profile Survey (SPS). The SPS is a household survey administered in and around refugee camps in Ethiopia in 2017. It surveyed South Sudanese, Somali, Eritrean, and Sudanese refugees in Ethiopia, and the Ethiopian host communities located close to the refugee camps. About 33 percent of refugee households[215] in Ethiopia are outside camps, and are primarily Eritrean. These households were excluded from the sampling frame due to feasibility constraints. The SPS is therefore only representative of refugees living in camps. The list of refugee camps, sites, and locations provided by UNHCR-Ethiopia as of January 2017 was used as the sample frame (Table F.1). Four strata were drawn based on four regions Tigray Afar (primarily Eritrean refugees), Gambella (primarily South Sudanese), Benishangul Gumuz (primarily Sudanese, with a quarter of South Sudanese), and Somali (primarily Somali). Somali refugees mostly populate the Somali region in Ethiopia (Table F.2). Since each region hosts a majority of one refugee nationality, the stratification is implicitly based on refugee nationality (Table F.3).

The sample design uses a multi-stage stratified random sample. Camps in each stratum were divided into Enumeration Areas (EAs) of 150 by 150 meters using GIS technology. The number of EAs to be selected from each camp was obtained proportional to the size of the camp. In this way, all the camps in the sample frame were selected in the sample and were surveyed. Within camps, EAs were selected using equal probability to make up the required number of EAs for that camp. In total, 82 enumeration areas were selected from each stratum. All the households in the selected EAs were listed, and 12 households were randomly selected and surveyed per enumeration area making up to a total of 900 refugee households per stratum.

TABLE F.1 ■ Camps with Somali refugees in the SPS 2017 sampling frame

Region in Ethiopia	Nationality of refugees	Camp
Somali	Somali	Ken-Borena
		Kebribeyah
		Aw-barre
		Sheder
		Bokolmanyo
		Melkadida
		Kobe
		Hilaweyn
		Buramino

Source: UNHCR.

Households within a 5-km radius of a camp were classified as host community households. Areas within a 5-km radius of camps were divided into EAs of 300 by 300 meters using GIS technology. Of these, EAs marked as residential by Open Street Maps were included in the sample frame. EAs within a stratum were then selected using proportional probability sampling with the probability of selection of an EA equal to the area of the Enumeration Area outside the camp. In total, 42 EAs were selected for each stratum. Like EAs within camps, all the households in the EAs selected for host community sampling were listed,

[215] Household is here defined as all people living in the same dwelling and sharing all meals and finances.

TABLE F.2 ■ Number of refugee and host community households interviewed by stratum

Stratum	Tigray Afar	Gambella	Benishangul Gumuz	Somali	Total
Refugees	894	439	1,423	871	3,627
Host community	412	0	975	303	1,690

Source: Authors' calculations based on the SPS 2017.

TABLE F.3 ■ Sampled population by country of nationality

Nationality	Number of households surveyed	Percentage of households in surveyed population
South Sudanese	837	16%
Somali	871	16%
Eritrean	893	17%
Sudanese	1,016	19%
Ethiopian (host community)	1,690	32%
Other country	10	0%
Total	**5,317**	**100%**

Source: Authors' calculations based on the SPS 2017.

and 12 households were selected randomly and surveyed per EA making up to a total of 500 host community households per stratum.

Conflict in Oromia and Somali regions necessitated sampling modifications. In early September 2017, violent conflict in Oromia and Somali regions escalated, rendering some of the camps in Somali stratum inaccessible. The enumeration areas of the Jijiga subregion were replaced by enumeration areas in nonviolent areas of Somali stratum. Also, as most refugee camps are in remote areas with sparse host population, the final number of host households surveyed fell short of the original intended sample of 500 host households per stratum. However, despite the changes in sampling, the survey captured roughly similar number of refugee households of the four main refugee nationalities.

Weights

Sampling weights are applied to survey observations to make them representative of refugee populations in different regions and of the overall camp-refugee population in Ethiopia. Weights for host populations are constructed to be representative of the host households living within a 5-km radius of refugee camps. The selection probability P for a household can be decomposed into the selection probability P_1 of the EA and the selection probability P_2 of the household within the EA:

$$P = P_1 P_2$$

As refugee population in the different strata lived in different camps, the selection probability P_1 of an EA k is calculated as the number of households within the EA divided by the number of households within the stratum multiplied by the number of selected EAs in the stratum

$$P_1 = \frac{\hat{n}_k * K}{N}$$

where $\hat{n}_k$ denotes the number of households in EA k (obtained by multiplying the percentage of camp area covered by the EA with the number of households in the camp as information on number of households in an EA was not available prior to listing), K is the number of EAs selected in the corresponding stratum and N is the total number of households in the stratum. For host community sampling, as information on number of host households living within 5 km of camps in a stratum was

not available, the selection probability of an EA for host sampling is calculated as the number of EAs selected divided by the total number of EAs in the stratum.

$$P_1 = \frac{K}{T}$$

Where K is the number of EAs selected in a stratum and T is the total number of EAs in the corresponding stratum. Replacement enumeration areas were assigned the sampling weight of the enumeration area that they were replacing. Due to changes in sample during fieldwork, the number of enumeration areas surveyed in each stratum differed from the original sample. The weights were therefore scaled at the end to correct for the change in the value of K.

The selection probability P_2 for a household within an EA k is constant across households and can be expressed as

$$P_2 = \frac{|H|}{n_k}$$

where $|H|$ is the number of households selected in the EA and n_k denoting the number of listed households in EA k. Usually the number of households per EA is 12, while a few exceptions exist due to invalid interviews.

Sampling weights were scaled to equal the number of households per strata using the information for number of households provided by UNHCR. There was no source of information on number of host households living within 5 km distance of the camps. The weights for host community surveys were therefore not scaled.

APPENDIX G

Data Gaps

While the knowledge base about the state of the Somali economy and living conditions has improved considerably in recent years, large gaps remain. A data ecosystem depends heavily on the ability of the government to collect and manage statistical and administrative data. This capacity is severely lacking, but it is critical to further development as the availability of more credible and reliable data sources can enable stakeholders to discuss issues based on factual information rather than perception.

A few new surveys are helping to mitigate the data gaps. Production of data on poverty in Somalia is improving, but regular collection of household surveys is needed to continue monitoring poverty and other socioeconomic indicators. More recently, the Somali High Frequency Surveys have provided invaluable insight into consumption patterns and poverty among Somalis. Since the Somali High Frequency Surveys are designed to capture the core indicators within a short timeframe, some information that may normally be captured in a multi-topic survey are not available. Thus, information on child anthropometry, fertility, price data, time use, savings, and health need to be captured in other surveys. The health sector faces an absence of national surveys and weak civil registration and vital statistics. The planned Somali Health and Demographic Survey (SHDS) will help to fill some of these data gaps.

Somalia lacks several censuses that are essential for planning and policy making. Somalis have endured over four decades without a population and housing census, which would normally provide a basis for a sampling frame, provide information for budgeting purposes, and track demographic and socioeconomic changes. While the last census was concluded in 1986, high levels of fertility, migration, and mortality render any projections based on the census highly uncertain. United Nations' efforts have shed some light on population estimates with the Population Estimation Survey for Somalia (PESS) in 2014. Although agriculture is critical to Somalia's economy in terms of contribution to the GDP, employment, and export earnings, Somalia lacks an agricultural census to help better understand the structure of the sector, its production systems, and constraints to productivity. Business/establishment censuses—which are invaluable tools for information on the structure and activities of enterprises, employment, and contribution of private sector in GDP—are currently unavailable.

There is a paucity of quantitative data upon which to evaluate macroeconomic development. The statistical system in Somalia is fragmented and lacks coordination, resulting in statistical information that is often incomparable, not nationally representative, and scattered across various national and international stakeholders. Somalia lacks a harmonized, comprehensive, nationally representative Consumer Price Index (CPI) data series which is instrumental for poverty measurement and monitoring. Often, prices are collected in geographically limited areas and for a limited set of items, and the CPI is produced differently depending on the stakeholder producing the estimates. A series of market price surveys collecting prices across various markets nationally at regular intervals and a full consumption survey are needed to support the generation of the CPI. A nationally representative labor force survey for labor market indicators is not available.

At present, many forms of administrative data are not collected, collected as a limited set of indicators, and/or disputed. Administrative data sources are critical for compiling GDP by production approach, yet the fragmented statistical system lacks coordination and resources to compile existing records, harmonize data collection methods, improve the quality of the records, and utilize the data for compiling GDP by production approach. Cadaster or business registers are incomplete and challenged. Basic data on trade volumes are only collected at regional levels; there is no common approach to classification and no system for aggregation into national estimates. This forces anyone seeking to estimate these figures to impute them by piecing together other countries' data on trade with Somalia.

Beyond administrative and statistical survey data, many biophysical datasets are missing. Particularly important for an economy in which more than two-thirds of income is derived from natural capital is a better accounting for the status and value of ecosystems and the monitoring of risks to sustainability so that issues of deforestation, flooding, overgrazing, and otherwise depleting the natural capital resources can be monitored and assessed more systematically. Similarly, data on fisheries catch and landing are missing. Improved data on hydrometeorological, water availability, and factor market conditions would be helpful as would systems that could deliver that information to market participants in urban and rural areas. In other areas, collection of seismological and other data on hydrocarbons has been contracted out to private sector actors through concession agreements, with proprietary clauses limiting the use of the data beyond the immediate concessionaire.

Finally, improving the understanding on the functioning of key sectors, in particular health and education, as well as helping to build 'fit for context' management information systems, would be important in facilitating future reform and in defining the appropriate role of the public sector in service delivery. Similarly, the understanding of internal dynamics of other sectors—from the labor market to transportation—is necessary if the government is to be able to better coordinate the variety of stakeholders active in the economy. External actors can be particularly helpful by supporting the development of the data sources and of key analytical insights that will help greater transparency about the situation on the ground and enable informed policy making.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