

Count on me

Shocks and formal versus informal assistance in Somalia

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Introduction

Poor households in fragile settings face frequent and often spatially correlated shocks but are able to insure against them only partially (Townsend 1994; Morduch 1995; Dercon 2002). When risk management fails ex ante, households draw on two broad sources of ex post support: formal assistance from governments, donors, and humanitarian agencies, and informal assistance from relatives, neighbors, and the diaspora. If households cannot access either, they absorb the shock through costly coping strategies such as reducing food intake, withdrawing children from school, or selling productive assets, with consequences that persist long after the shock has passed (Hoddinott 2006; Carter et al. 2008; Janzen and Carter 2019). Understanding more about the potential complementarity or overlap between formal and informal support is important for designing social safety nets.

Somalia is an acute case of high shock exposure, where recurrent drought and flooding compound inter-clan conflict and the conflict

Key messages

- Somali households face repeated drought, conflict, and price shocks, and rely on both formal and informal support to manage these shocks—but existing evidence only examines one channel at a time.
- We find that informal support reaches twice as many households as formal support (64 versus 32 percent), with 29 percent of households receiving neither. IDP residence raises formal receipt by 36 percentage points; consumption poverty predicts neither channel.
- Only informal support tracks local conditions: a one standard deviation rise in produced staple prices raises informal receipt by 6.5 percentage points. There is little evidence of pronounced gender heterogeneity in these patterns.

between the state and non-state armed groups. In 2017, the period of this study, roughly 3.2 million people were in “crisis” (IPC Phase 3) or worse (FEWS NET, 2017), alongside 1.1 million protracted internally displaced people (IDPs) (OCHA, 2016) and 680,000 people newly displaced by drought as of May 2017 (OCHA, 2017). Price risk compounds both: cereals account for close to two-thirds of weekly household food expenditure, and much of that—rice and wheat—is imported, which means that global price movements pass through to domestic prices quickly (IMF, 2022). Through the second half of 2017, humanitarian partners only reached 3 million people each month, while twice that number, 6.2 million, were assessed as in need (OCHA, 2017).

The literature offers two partial remedies, each with known limits. Formal cash and in-kind transfers can protect consumption and reduce negative coping in emergencies (Bastagli et al. 2016; Premand and Stoeffler 2022), and Somalia’s cash transfer program has moved part of the response onto a government-led, shock-responsive platform, known as Baxnaano (World Bank 2025); but coverage remains thin, with evidence showing that less than 40 percent of drought-affected Somali households received any drought-related assistance during the 2021/22 crisis (Mugera and Yoshimura 2022). Informal transfer networks can smooth idiosyncratic shocks reasonably well but perform poorly in the context of broader covariate shocks, when all households are hit simultaneously (Kazianga and Udry 2006; De Weerd and Dercon 2006). In Somalia, remittances are large, around US\$1.3 billion in 2017, which is comparable to total official development assistance (World Bank, 2020). However, they are concentrated within particular lineages and extended families, leaving marginalized groups with less support precisely when crises hit (Majid and McDowell 2012; Majid et al. 2018). Moreover, Somali household remittance receipts have been found to fall after climate shocks and fall furthest for female-headed households (Mesfin and Ahmed 2025).

The existing literature, moreover, generally examines one channel (formal or informal) at a time and predominantly one shock; it does not explore whether formal and informal support reaches the same households, nor how each respond to conflict or to price shocks as distinct from drought. In addition, the literature has generally shed little light on heterogeneity in safety net uptake with respect to household gender composition. This analysis uses cross-sectional data collected in Somalia linked with external data around conflict, food prices, and drought in order to (1) assess the predictors of uptake of both formal and informal aid, and (2) explore whether these patterns are different in households that do and do not include an economically active woman.

Data, sample, and measurement

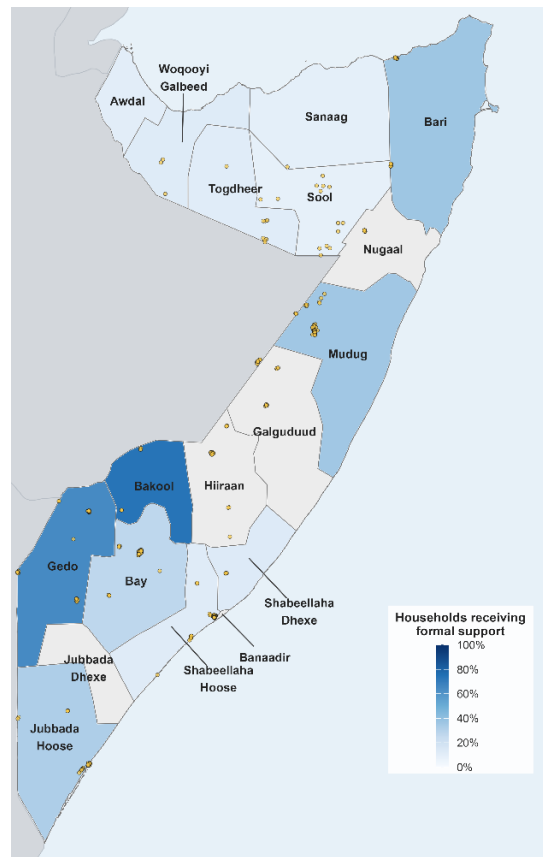
Our analysis relies primarily on the 2017 Somali High Frequency Survey, a survey conducted with 6,092 households across 17 regions with the objective of collecting information about household welfare, poverty, and living conditions.¹ It collected data about households’ socioeconomic status as well as their receipt of both formal and informal support. In this analysis, a household is coded as receiving formal support if it reports assistance from the United Nations, an NGO or development partner, or government; reports NGO or foreign aid as its main source of livelihood support; or identifies unconditional help from government or an NGO among its three most important coping mechanisms used in response to recent shocks. A household is coded as receiving informal support if it reports remittances or *zakaat* (charitable donations) as its main source of livelihood support, reports receiving internal or international remittances

¹ We primarily use the 2017 wave and do not draw extensively on the 2016 survey wave. First, the World Bank cautions that the 2016 and 2017 waves are not fully comparable, given differences in the sampling frame and in the accessibility of areas during fieldwork. Second, the measure of women’s economic activity is not harmonized across waves. All statistics are estimated using appropriate survey weights.

as income, reports borrowing food or money for food from friends or relatives, or identifies unconditional help from relatives or friends among its recent coping responses. In one analysis—looking at the association between region-level characteristics and use of formal and informal support—we also pool the 2017 wave with the 2016 survey wave to enable a richer analysis.

The household survey is enriched with four external data sources, each merged to the household by standardized region name and survey year. Conflict exposure is calculated using the Armed Conflict Location and Event Data Project (ACLED): we construct annual regional counts of fatalities and of physical violence events, the latter summing battles, violence against civilians, and explosions or remote violence. Climate exposure is drawn from the Climate Hazards Group InfraRed Precipitation with Stations (CHIRPS, version 3): we compute total annual rainfall by region and a count of drought months.² Food-price exposure is drawn from the World Food Programme’s official price series: we form two region-year indices as the mean of standardized prices for locally produced staples (white maize and red sorghum) and for imported staples (imported rice, wheat flour, and vegetable oil). Displacement infrastructure is measured by the count of Camp Coordination and Camp Management IDP sites established in the region by the end of 2017. Because these measures vary only at the region-year level, they enter the analysis at that level rather than the household level, and their coefficients are identified from variation across the 26 pooled region-year cells (17 in wave 2 alone).

Figure 1: IDP sites in Somalia, 2017



Our analysis proceeds in three steps. We first describe the prevalence of formal and informal support and its distribution across settlement types and household composition, characterizing the extent to which

² A drought month is defined as a month in which regional rainfall falls at or below the twentieth percentile of the 1981–2015 historical distribution for that calendar month and region.

the two forms of support are received jointly or separately (Figures 1 and 2). We then estimate the household-level characteristics associated with each form of support, using weighted linear probability models that condition on a common set of covariates and absorb regional fixed effects (Figure 3). Finally, we assess whether region-level exposure to conflict, drought, food prices, and displacement is associated with support receipt, pooling the two survey waves to enrich the limited region-year variation available in any single wave (Table 1). Throughout, we treat the estimated associations as descriptive rather than causal, and we rely on wild-cluster-bootstrap inference, given the small number of regional clusters.

Describing the findings

Figure 2 summarizes the patterns of receiving formal and informal support both together and separately across different settlement locations. The two categories are not mutually exclusive: 31.6 percent of households receive formal support, 63.6 percent receive informal support, 24.6 percent receive both, and 29.4 percent receive neither. We can see that receipt of formal aid alone is very rare: households are much more likely to report receipt of both formal and informal support, particularly in IDP camps. This finding suggests that both formal and informal protection networks may include households with similar characteristics, while a substantial minority of households receive neither formal nor informal support.

Figure 2: Formal and informal support by settlement type

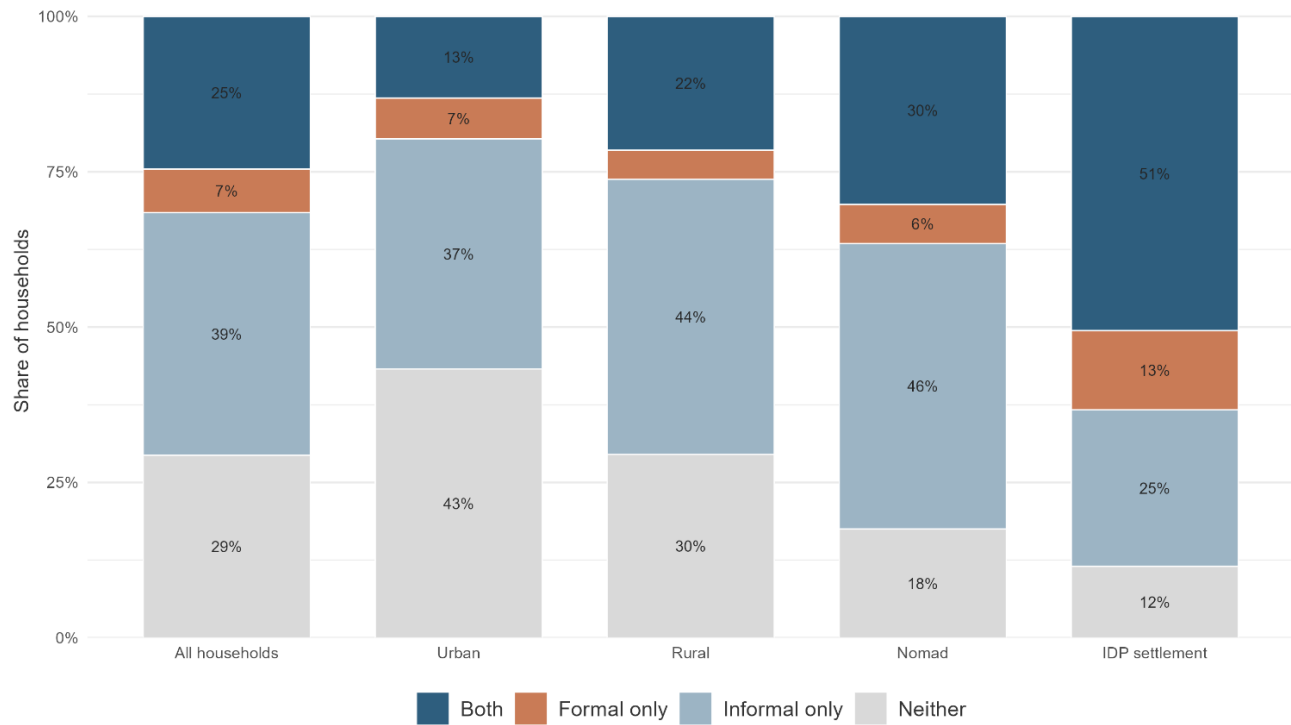


Figure 23 summarizes the probability of aid of each type by settlement type, and for households that do and do not report women who are economically active. This binary variable allows us to capture differences linked to gender of the key-income earning adults. We can see that informal support is roughly twice as prevalent as formal support in every settlement category, and that both types are substantially higher for rural and displaced households. For formal support, there is no clear pattern with respect to gender: in urban areas, households including an economically active woman are twice as likely to report receipt of formal support, but this pattern is not evident in other sites. For informal support, we consistently

observe that households including an active woman are more likely to report receipt, but the gaps are generally small in magnitude and not statistically significant.

Figure 3: Formal and informal support by settlement type

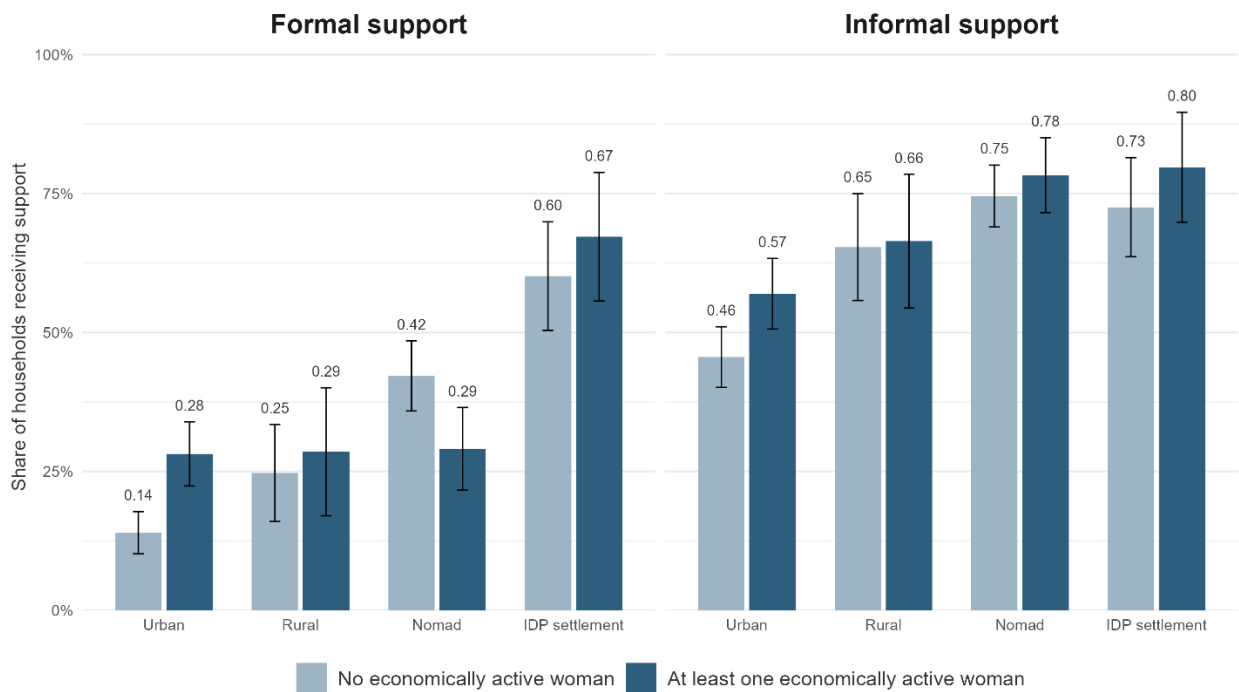
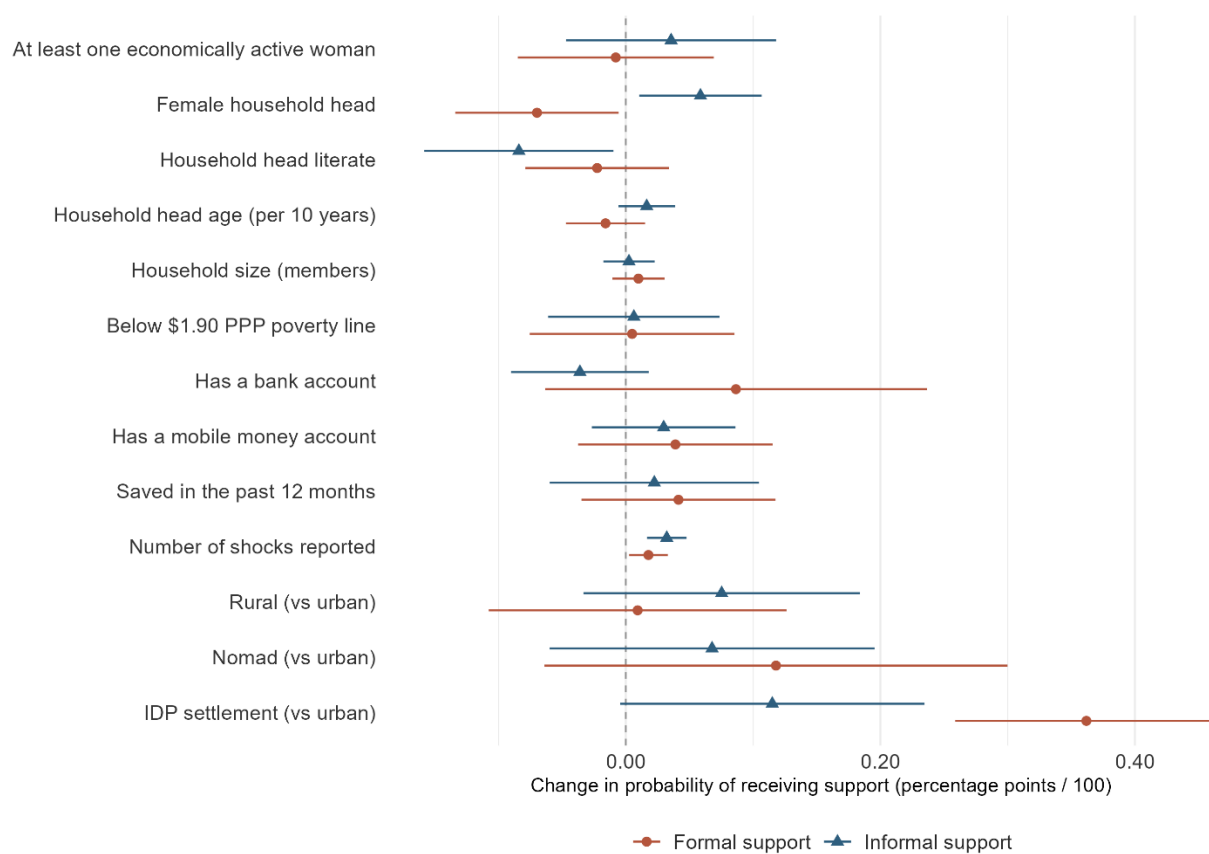


Figure 4 probes more deeply into the household-level characteristics that predict receipt of formal and informal support, reporting coefficients on household characteristics from two weighted linear probability models (one per outcome), each including region fixed effects and standard errors clustered by region. In general, we observe that very different characteristics are associated with receipt of formal versus informal support. Residence in an IDP settlement is associated with a 36.2 percentage point increase in the probability of formal support receipt (relative to a sample-wide mean of 32 percent); residence in an IDP site is also associated with more informal support, but the effect is much smaller (11.5 percentage points, relative to a mean of 64 percent). Conversely, having a literate household head is associated with an 8.4 percentage point reduction in informal receipt but with a small, statistically insignificant, and negative coefficient for formal receipt. Female headship enters with opposite signs across the two outcomes, positive for formal support (6.98 percentage points, though insignificant using wild bootstrap p-values) and negative for informal support (5.86 percentage points). The number of shocks reported predicts greater receipt of both informal and formal support, though more strongly for informal support than for formal support. Perhaps most striking, poverty status is essentially uninformative for either outcome: the coefficients are small in magnitude and statistically insignificant. One plausible interpretation is that formal assistance in this setting is allocated on the basis of displacement status and geographic accessibility rather than on measured consumption poverty, though the cross-sectional design does not permit us to distinguish targeting rules from differential uptake.

Figure 4: Household correlates of formal and informal support



Finally, Table 1 reports coefficients on regional conflict, drought, IDP site, and staple foods price exposure. Because these measures vary only at the region-year level, region fixed effects are omitted and both waves are pooled, increasing the number of identifying region-year cells from 17 to 26 and the number of clusters from 14 to 18 (10,073 households).³ Here, we see some evidence that regional characteristics predict receipt of informal support but not formal support. A one standard deviation increase in the produced staple food price index is associated with a 6.5 percentage point increase in informal receipt, relative to a pooled mean of 52.6 percent ($p = 0.015$), consistent with the hypothesis that households facing higher staple foods prices face greater need for informal support. Additionally, the produced staple price coefficients for households with and without an economically active woman are indistinguishable from each other. Households in regions that have more IDP sites are similarly more likely to report informal support, suggestive of deeper social networks in these contexts. There is no evidence that local exposure to violence predicts receipt of informal support, and no regional characteristic predicts receipt of formal support. One plausible interpretation is that households facing higher local staple foods prices draw more heavily on remittances and kin networks, while formal assistance is allocated on criteria that are not well captured by region-year exposure.

³ Coverage of the World Food Programme price series is incomplete, and 7 of the 26 cells carry no price observations; rather than drop them, which would exclude most of the northwest and materially narrow the identifying variation, we fill those cells with the region's own mean across the waves in which it is observed or, failing that, with the national mean for the survey year, and we include missing-data indicators for both indices so that the imputation cannot load onto the remaining coefficients.

Table 1: Shocks and formal and informal support

	Full sample		No active woman		Active woman	
	Formal	Informal	Formal	Informal	Formal	Informal
Violent events in region (100s)	-0.035	-0.012	-0.056	-0.024	-0.006	0.005
	(0.01)	(0.005)	(0.016)	(0.007)	(0.005)	(0.005)
	p = 0.299	p = 0.152	p = 0.303	p = 0.110	p = 0.254	p = 0.379
Drought months in region	-0.015	0.013	-0.001	0.018	-0.04	0.007
	(0.017)	(0.01)	(0.018)	(0.012)	(0.019)	(0.017)
	p = 0.524	p = 0.226	p = 0.966	p = 0.178	p = 0.122	p = 0.723
IDP sites in region (count)	0.001	0.000*	0.002	0.001	0.001	0
	(0)	(0)	(0)	(0)	(0)	(0)
	p = 0.149	p = 0.091	p = 0.165	p = 0.113	p = 0.161	p = 0.891
Produced staple food price index	-0.012	0.065**	-0.004	0.047*	-0.045	0.081*
	(0.033)	(0.033)	(0.033)	(0.03)	(0.03)	(0.041)
	p = 0.824	p = 0.015	p = 0.932	p = 0.092	p = 0.558	p = 0.095
Imported staple food price index	0.026	-0.057	0.022	-0.032	0.041	-0.087
	(0.012)	(0.015)	(0.011)	(0.014)	(0.015)	(0.021)
	p = 0.261	p = 0.403	p = 0.240	p = 0.533	p = 0.185	p = 0.207
Observations	10,073	10,073	6,610	6,610	3,463	3,463
Mean of dependent variable	0.23	0.526	0.201	0.483	0.285	0.603

Conclusions and recommendations

This study suggests that there are large gaps in support for poor households in Somalia, who face a range of adverse shocks. Many households are not able to cope effectively with such shocks and often must fill the gap with informal support from their social networks—networks that also include many individuals who are themselves poor.

Two implications follow for policymakers and humanitarian actors. First, formal social protection programs may consider incorporating the absence of informal support, not only displacement status, into their targeting protocols. Formal assistance concentrates among households that already receive informal support, leaving households that receive neither form of support particularly vulnerable. Short screening

questions about remittance receipt and support from relatives could be added to registration and vulnerability assessments at low cost. Second, this analysis highlights the potential of shock-responsive social protection systems that could link formal allocations of support to observable shock triggers, particularly staple prices. Informal support responds to local staple price movements; formal support does not respond to any of the exposure measures we examine. Building price and rainfall indicators into pre-agreed triggers for Baxnaano and for humanitarian allocations would make the formal channel responsive to conditions and would relieve pressure on informal networks at the moments they are most strained.

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