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"Churning" on the Margins: How the Poor Respond to Drought in South Wollo, Ethiopia

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Coping or recovering?

The South Wollo and Oromiya zones have a terrifying nickname: the "buckle of the Ethiopian famine belt." Farmers there tell of massive losses of livestock and other assets as a result of the inevitable droughts that afflict the region. It has been estimated that two-thirds of people there are poor and that one out of seven live in extreme poverty. Evidence suggests that many households "churn" in and out of poverty, often as a result of severe shocks such as drought. Aggregate statistics and one-time studies miss this poverty dynamic and cannot measure which families recover from a temporary drop into poverty, nor why. BASIS-sponsored research attempted to discover the degree to which the drought of 1999-2000 affected poverty trends in rural Ethiopia.

Asset ownership is a better measure of long-term welfare trends and household viability than are consumption, income, or other flow variables that are subject to massive measurement problems and short-term, dramatic changes. Livestock is the key measurement of wealth and poverty in the region, and in order to cope with drought, households must make drastic decisions regarding these assets. Selling the family's assets will provide food, whereas retaining those assets can force a decline in consumption. Yet many families bargain that short-term hunger will be offset by a quicker recovery after the drought precisely because the family retained its livestock.

With respect to the drought, the research reveals that during the "coping period," that is, when the drought begins to set in, the poor are less able to hold on to their assets than are the better-off farmers; yet, in the "recovery period," when conditions begin to improve and it is possible to recover assets, the opposite is true.

Everybody has land, but the poor have no animals

The study region is anchored by two market towns and ranges from highlands over 2800 meters to lowlands below 1500 meters. Unlike many areas of East Africa where highlands are the most food secure parts of a country, the opposite is true in Ethiopia, and the study site contains some of the most famine-prone areas. Ownership of livestock, not land, is the best measurement of wealth in the region. As one respondent said, "Everybody was given land at redistribution—even the poor," while another respondent pointed out, "The poor have no animals." With at least one ox, a family is said to be making progress. Owning an ox creates possibilities for borrowing and sharing to meet the

The Study

Dates: 2000-2003

Site: South Wollo and Oromiya zones, Ethiopia

Method: 7 rounds of surveys of 416 households, plus 62 case histories and detailed interviews with males, females, and mixed groups

required two oxen for plowing. A household that controls fewer than 2.0 tropical livestock units (TLUs) can be considered poor or very poor; one that has fewer than 4.0 TLUs can be considered vulnerable to becoming impoverished, especially from a shock. (TLUs approximate the weight, subsistence, and market value of different animals; for example, cattle have a TLU equivalent of 1.0.)

The drought of the late 1990s was a prolonged event with uneven consequences. 1998 saw a poor *belg* rainy season (January-March). The 1999 *belg* rains were even more scarce, leading to 90% loss of crops, and there also was a poor *meher* season (June-September) that year. Another bad *belg* season occurred in 2000. These events occasioned food shortages and distress sales of assets. Interviews indicate that while some livestock died, a larger number were sold at throwaway prices of 30% or less of normal rates. Livestock sales were the primary means of coping with the effects of the drought for most herd owners. Aggregate declines in oxen and livestock generally were almost 40% from late 1997 to mid-2000.

Social mobility and drought, 1997-2003

Wealth quartile	% improved	% stayed same	% declined
I. better off (4.3+TLU)	--	52.4	47.6
II. vulnerable (2.1-4.2 TLU)	46.7	46.7	6.6
III. poor (0.5-1.9 TLU)	70	20	10
IV. very poor (0-0.4 TLU)	43.7	56.3	--
ALL	32.3	46.8	20.9

*N= 62 households

Using livestock as the wealth indicator, the two poorest quartiles were hit hardest by the 1999-2000 drought. They suffered the steepest drop in herds from 1998 to 2000 and lost about 80% and 60% of their assets during this period. Those in the highest quartile lost only 6%.

By June 2000, livestock numbers began to increase as conditions improved. The poorest two quartiles recovered assets at a high rate. From 2000-2003, the average livestock assets of the poorest households grew from 0.17 to 1.85 TLUs, roughly a 1000% increase, although many of the poorest families were starting from near zero.

Signs of recovery are strong, yet there remain many virtually asset-less households. In 1997, 18% of households in the study population were asset-less, a figure that rose to 27% at the worst part of the disaster and declined to 10% by August 2003. More than three years after the drought, 38% of households in parts of South Wollo owned no oxen, a figure almost identical to the 36% of oxen-less households prior to the drought in 1997. Respondents mention that many of these families without oxen sharecrop out their land and then depend on credit to buy food, thereby becoming trapped in debt.

Recovery strategies

Case studies revealed the strategies to recover wealth status following the drought. The case studies also showed why some households were unable to improve their status, with the most vulnerable households being those with elderly or female household heads, those that were nearly landless, labor-poor, or without livestock, and those forced to sharecrop out their farms.

Selling low, buying high. Families with low or no herds confront special problems recovering since they must purchase livestock rather than rely on breeding. These households were much more active than better off households in buying livestock during the recovery period. Since these often were the same families that sold livestock during the coping period in order to live, they were selling low during drought and buying high after the drought. Nor did these families have access to the more lucrative markets. In contrast, families with more livestock assets tended to rely on reproduction as a way of maintaining or increasing herd size, and they benefited by the higher market prices in the recovery period. Post drought, the wealthiest households sold, on average, three times as many animals as they purchased.

Social networks. Kinship assistance accounts for much of the borrowing and sharecropping arrangements. Drought dampens this activity since all families suffer and the better off households cannot afford to provide help to poorer families. In the recovery period, when conditions improve and good harvests return, these activities pick up again, which might help explain why recovery for poor households is so rapid.

Remittances and food aid are less significant in recovery. Lucrative wage employment is scarce in the area and most who go off-farm for work migrate out of

the area. Not many families can rely on remittances. Nor does massive food aid show up as a statistically significant variable in recovery. Respondents say it is neither timely nor well-targeted. More than 95% of animal assets were depleted by the time food aid arrived. When it does arrive, it *can* help households retain the few animals they have, yet many pointed out that distribution seemed indiscriminate.

Non-farm employment can be a key to withstanding the devastating effects of drought and recovering more quickly afterwards. With working age family members in the household, "you are not really poor," according to one respondent. An improved policy environment for trade has allowed households near major market towns to earn sizeable proportions of their incomes from trade.

The poor show extraordinary resourcefulness in rebuilding assets. While there is a bias in the numbers, since the very poor can only improve or stay the same while the better off can stay the same or move down in status, many of the poor and very poor households improved. By contrast, almost half of the better off households declined in status. The percentage of those who escaped extreme poverty is encouraging: over half of households in the poorest two quartiles improved their status, and the number of those who entered poverty during this period was relatively low. (See tables.)

There used to be rich people

In drought-prone areas, it is important to look at both the coping and recovery periods before drawing conclusions about a shock's long-term effects. What may seem like a downward trend from a two to three year vantage point can look very different from a longer perspective. The 1999-2000 drought devastated many families, especially the poor, yet it did not significantly increase poverty in the area since even the poor were able, within three years, to return to pre-shock levels of assets. The poor pursue a range of economic activities that allow most to regain their wealth status yet not to escape poverty. In 2003, a quarter of households in the region were poor or very poor, with fewer than 2 TLUs; this situation did not grow worse because of the drought but is simply a sad reality of the area.

Analysis demonstrates that the poorest categories of households suffered disproportionately during the drought but were able to recover assets faster than others; in fact, they were more likely to improve their asset position than better-off households. It also was shown that female-headed households, though generally much poorer in assets than male-headed households, demonstrated faster asset recovery rates than others.

The ability of the poor to move beyond a certain threshold of asset viability before the next drought strikes is limited, however, and this has been the case for many households since at least the 1984 famine. Indeed, many poor households have reached a type of low-level poverty equilibrium where they move among very low levels of asset ownership and, despite intermittent droughts, return to their pre-existing asset levels. Because droughts have a much greater impact on the assets of the poor, the poor are caught in a drought-recovery cycle where they rebuild their assets only to lose those gains in the next drought.

The research revealed that social mechanisms such as kinship loans assume considerably more importance for the poor during recovery than during the coping period. Government will need to assume a greater role in providing a social safety net during the coping period since current social mechanisms are not sufficient to halt massive asset depletion and suffering. As one respondent noted, "There used to be rich people in the village, helping those who faced problems, but now they are impoverished."

Exiting versus entering poverty, 1997-2003

Wealth quartile (based on 2000)	% exit from poverty	% entry into poverty	Ratio of exit/entry
I + II better off/ vulnerable	--	7.0%	7.9:1
III + IV poor/ very poor	55%	--	
Wealth quartile (based on 1997)			
I + II better off/ vulnerable		20%	2.1:1
III + IV poor/ very poor	43%		
*n=416 Households			

Reducing persistent poverty

With so many households churning below the asset-poverty threshold and with so many others still vulnerable to hardship, what are possible policy prescriptions?

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Briefs

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Respondents identified expansion of employment opportunities, investment in irrigation schemes, and food aid as three key ways to alleviate hunger and poverty. While some researchers call for nothing short of a complete transformation of the South Wollo economy, we feel that drastic measures like the resettlement of impoverished families may only create additional problems. Less radical and more incremental investments hold good promise for alleviating poverty.

If the immediate effects of a drought could be ameliorated through external transfers (income or food) that could assure subsistence, the poor might not have to deplete their limited assets just to eat. They also might be able build up sufficient assets to withstand the next drought and avoid drought-induced poverty. There is strong justification for creating a safety net that insures households access to food and income *before* the debilitating impacts of drought. As our data show, once the food crisis ends, poor households show considerable resourcefulness in rebuilding assets and livelihoods.

Access to non-farm income can be an important aspect of asset protection and accumulation. Developing viable market towns, with reliable infrastructure and tax and credit incentives to bring in small-scale industries, would improve non-farm employment. The region's future depends on vibrant non-farm and urban sectors to generate jobs and reduce dependence on risky agriculture and external assistance.

A halt to the mini-land redistributions that have occurred since 1991 would increase land tenure security. More than one-third of household heads we interviewed fear that another land redistribution will take place, which is why some individuals do not pursue non-farm employment options. Unless they remain in the area as full-time farmers, many people fear they may lose rights to their land.

Rainfed agriculture remains the livelihood that drives most economic activities in the region. Local demand and markets are strongly determined by how agriculture is doing; this in turn affects the employment generated by trading and other small business activities. There are possibilities for improved fodder management, water harvesting techniques in dryland areas, and the extension of drought-adaptive packages. Local grant and loan programs to assist the poor to recover at least one ox for agriculture also will reduce losses through sharecropping and rentals.

These suggestions are not dramatic "development experiments" like resettlement, but they would go a long way toward improving asset levels and resiliency, which, in turn, would enhance food security and prevent massive suffering. South Wollo is never likely to be able to feed itself even in good rainfall years, but with increased investments to generate meaningful employment, urban markets, and agricultural diversification, the incidence of persistent poverty in the region could decline in this decade.

Related reading

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