

Building Household Coping Mechanisms with the Effects of Droughts and Floods Using Financial Instruments

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Introduction

Effective coping mechanisms are essential to cushioning households' livelihoods from shocks of droughts and floods. The 2015/2016 Kenya Integrated Household Budget Survey (KIHBS) shows that, as the first coping measure, about one-third of households affected by droughts or floods took no action while another 47% spent cash savings, reduced consumption, or spent longer hours working. As the second most important coping measure, about 60% of households affected depended on transfers from family and friends, worked longer hours, reduced food and non-food expenditures or consumed less preferred food. The large scale and severe nature of climate-induced shocks means that dependence on informal coping mechanisms such as sale of assets, cutting on food expenditures and transfers from social networks such as family members and friends is no longer sustainable.

Coping mechanisms entail short term interventions used by households that form foundations for long-term adaptation mechanisms. Households coping mechanisms can be deployed before droughts or floods occur, where households for instance diversify economic activities to

smoothen income. Alternatively, households smoothen consumption after droughts or floods have occurred by drawing down personal savings, borrowings, selling of assets, adjustments to labour supply, and utilization of formal and informal insurance arrangements.

Use of financial instruments including savings, credit and insurance provide market-based coping mechanisms and they tend to be more effective compared to informal coping mechanisms. Kenya has made significant strides in financial inclusion, with the 2016 FinAccess Household Survey showing that the proportion of the adult population with access to formal financial

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services has increased from 26.7% in 2006 to 75.3% in 2016. The expansion in financial inclusion is, however, largely due to payment services and to some extent savings products, while use of insurance and credit that is expected to cushion households from external shocks is still low. The proportion of adult population in Kenya with insurance (excluding NHIF) stands at about 6% as per the 2016 FinAccess Household Survey, with those using formal credit also remaining low.

Deepening Financial Instruments for Climate Change Effects

Recently, financial products to build households resilience to mitigate the impacts of climate-related shocks have emerged. Some of the initiatives have been rolled out by the government while others are private sector initiatives with support from development partners and research institutions. Examples of these initiatives include the Agriculture and Climate Risk Enterprise Ltd (ACRE) Africa, formerly Kilimo Salama (safe agriculture) that supports provision of micro insurance to small scale famers; Index-Based Livestock Insurance (IBLI) piloted by the International Livestock Research Institute (ILRI) in partnership with local financial institutions; and the Index-Based Livestock Takaful (IBLT) rolled out by the Takaful Insurance of Africa as a scale up programme of IBLI to provide Shariah compliant products.

In addition, the government implemented the Kenya Livestock Insurance Programme (KLIP) in 2015 which covers Turkana, Wajir, Mandera, Garissa, and Isiolo counties. KLIP is a public-private sector partnership between the national government, World Bank, ILRI and private insurance companies.

The index-based insurance products have been beneficial in overcoming the onsite loss verification costs required in conventional indemnity insurance. They help overcome information asymmetry between the insurer and the insured given that index-based compensation is not prone to behavior of the insured, such as failure to use due diligence to mitigate the impacts of risks, or the possibility that only high-risk households purchase insurance contracts. The approach is particularly useful in crop and livestock insurance given the small-scale nature of farmers spread over a wide area, and pastoral livelihoods that involve migration of households in search of water and pasture.

Nonetheless, one unique challenge associated with index based insurance is basis risk, which means that the index may only partially reflect actual losses suffered by a farmer or livestock keeper because the index is based on satellite images or data from weather stations.

Index-based insurance in Kenya and the Eastern Africa region, despite slow growth in early years, is realizing gradual growth. ACRE Africa has expanded to Tanzania and Rwanda while Index-Based Livestock Takaful has expanded to eight counties in Kenya. Some of the challenges include low awareness, low financial literacy to understand the design of the products, weak infrastructure in rural areas such as telecommunication network, limited distribution of weather stations for crop insurance, low initial trust by target clients, and low affordability of premiums.

One solution to basis risk as has been tested in countries such as India is to use innovative approaches such as Picture-Based Insurance (PBI) to better reflect actual loss suffered by a farmer and win ownership of the product through farmer involvement in the process. The PBI requires the farmer to use a smartphone to download an application (app) and take initial picture of the farm site, with a unique fixed feature in the background, say a tree or a hill. This is followed by the farmer taking pictures from the same view at regular intervals with the time series data then analyzed to verify losses suffered, which forms the basis for compensation.

Technology such as mobile money has also proved to be useful in making premium payments and receiving of insurance claims. In some instances, such as Elimsis smartphone application rolled out by the Kenya Agricultural and Livestock Research Organization (KALRO), farmers can access educative resources on smartphone applications and interact with scientists in real time on specific crops and seasons. Such practices facilitate improvements in quality and yield of specific crops such as wheat. Upgrading of such applications to other crops and livestock can help reduce weather-related losses due to better agricultural production practices. This can in turn serve as an incentive in the development of credit and insurance markets in sectors that are prone to weather shocks.

Uptake of Financial Products

The 2018 KIPPRA Survey on “Building Resilience to Mitigate the Impact of Drought and Floods”, carried out in 27 sampled counties, shows low uptake of formal financial products to mitigate impacts of droughts and floods. Only 24% of the respondents borrowed to manage the last drought or flood experienced. About 30% of those who reported to have borrowed did so from formal financial institutions such as banks,

microfinance institutions, SACCOs and government funds, with majority borrowing from informal sources such as chamas (informal groups), family and friends. The main reasons why most households fail to borrow to manage emergencies of droughts and floods include insufficient income to facilitate loan repayments, high costs of credit, and religious reasons that prohibit charging or receiving of interest under the conventional system.

For insurance, 10.6% of the respondents reported to have used insurance to manage the last drought or flood experienced. Of those who reported to have used insurance, 0.9% had used crop insurance while 2.8% had used livestock insurance. The majority of the insurance uptake was generally for household health purposes, which may not necessarily be targeted at droughts and floods. The main reasons cited for not using weather-related insurance (crop or livestock) for droughts and floods include lack of knowledge on how insurance works, high cost of premiums, perceptions of lack of benefits of insurance, and lack of knowledge on where to get insurance.

With regard to savings, 35% of the respondents used savings to manage impacts of droughts or floods. Of those who reported to save for droughts or floods, 56% saved in formal financial institutions such as banks, microfinance institutions and SACCOs. The main reasons for not allocating savings to cope with droughts or floods include insufficient household income, perception of lack of benefits for saving for uncertain future events, and lack of financial institutions in the locality.

Conclusion and Recommendations

Financial instruments provide important market-based coping mechanisms to mitigate the impacts of droughts and floods. Uptake of financial products as a coping measure is, however, low. Demand-side

constraints including low financial literacy and low income; and supply-side constraints include unavailability of financial institutions, and high costs of borrowing which constrain deepening of financial products. Adoption of technology such as index-based insurance that link weather-related information with insurance compensation, and use of mobile money platforms and applications to support financial transactions and access to information promise a brighter future for building household coping measures.

Addressing demand and supply constraints and supporting investments in technology through collaborations and partnerships remains a policy priority.

Further Reading

United Nations (2015), Sendai Framework for Disaster Risk Reduction 2015 - 2030. <https://www.unisdr.org/we/inform/publications/43291>

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