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The role of nonfarm income in coping with the effects of drought in southern Mozambique

Benedito Cunguara[a,b,*], Augustine Langyintuo[c], Ika Darnhofer[a]

[a]*Institute of Agricultural and Forestry Economics, University of Natural Resources and Life Sciences, Feistmantelstrasse 4, 1180 Vienna, Austria*
[b]*Centre for Development Research, Gregor Mendel Strasse 33, 1180 Vienna, Austria*
[c]*Alliance for a Green Revolution in Africa (AGRA), PO Box 66773, 00800 Westlands, Nairobi, Kenya*

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Abstract

To reduce their dependence on subsistence agriculture, farm households in rural Africa may diversify their income sources by participating in the nonfarm sector. In years of drought, nonfarm income can also be part of the coping strategies. A multivariate sample selection model was used to analyze three years of data from a nationally representative household survey in Mozambique. The analysis was guided by the following three questions. During a drought year: (1) Do households increase their participation in nonfarm activities? (2) Are poorer households as likely as others to participate in and benefit from nonfarm activities? and (3) Which factors are associated with higher nonfarm incomes? The results suggest that households are more likely to engage in at least one nonfarm income-generating activity during a drought year. Although poorer households are more likely to engage in nonfarm activities, they are less likely to participate in nonfarm activities of high return. The results suggest that policies reducing entry barriers (e.g., improved road infrastructure, micro-credit schemes, and livestock promotion programs) and increasing education levels can facilitate income diversification, thus allowing rural households to better cope with the effects of drought. When designing polices, care must be taken to avoid exacerbating income inequality by targeting measures toward poorer and female-headed households.

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1. Introduction

Rural households in Africa, especially the poor, often lack access to key agricultural inputs and to the markets necessary to achieve an agricultural-led pathway out of poverty (Jayne et al., 2003; Lanjouw and Lanjouw, 2001). This is the case in southern Mozambique, where agriculture is almost entirely dominated by smallholder farmers. The average cultivated area per household is about 1.4 hectares (World Bank, 2006). Due to a high pressure on land, farm sizes cannot be expanded. In addition, smallholder farmers rarely have the means to invest in improved technologies due to a lack of resources. The agricultural options are further restricted by the fact that frequent dry spells negatively affect yields (Joubert et al., 1996; Usman and Reason, 2004). Thus, two-thirds of the production is for home consumption (World Bank, 2006), and smallholders are unlikely to move out of poverty through crop production. Therefore, one option for farmers to complement subsistence farming is to engage in nonfarm income-generating activities (Reardon et al., 1998; Walker et al., 2004). Indeed, in Mozambique, the share of nonfarm income was about 22% in 2002 (a nondrought year) and 31% in 2005 (a drought year) (Mather et al., 2008).

The promotion of nonfarm income-generating activities among farming communities has the potential to reduce poverty through several mechanisms. First, combining nonfarm portfolios of different risk profiles can buffer the fluctuation in farm income inherent in rainfed agriculture (Reardon et al., 1998). Second, nonfarm income-generating activities can create positive spillover effects on agricultural activities, as they help overcome market failures, particularly for credit (Bryceson, 1999; Reardon, 1997; Thirtle et al., 2003). Third,

*Corresponding author. Tel.: +43 1 47654–3785; fax: +43 1 47654–3592; *E-mail address*: cunguara@gmail.com (B.A. Cunguara).

Data Appendix Available Online

A data appendix to replicate main results is available in the online version of this article. Please note: Wiley-Blackwell is not responsible for the content or functionality of any supporting information supplied by the authors. Any queries (other than missing material) should be directed to the corresponding author for the article.

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