



Contents lists available at ScienceDirect

## Rangeland Ecology &amp; Management

journal homepage: <http://www.elsevier.com/locate/rama>

## Original Research

Diversified Investments of Wealthy Ethiopian Pastoralists Include Livestock and Urban Assets That Better Manage Risk<sup>☆</sup>D. Layne Coppock<sup>a,\*</sup>, DeeVon Bailey<sup>b</sup>, Medhat Ibrahim<sup>c,1</sup>, Seyoum Tezera<sup>d</sup><sup>a</sup> Professor, Department of Environment and Society, Utah State University, Logan, UT 84322, USA<sup>b</sup> Professor, Department of Applied Economics, Utah State University, Logan, UT 84322, USA<sup>c</sup> Graduate Research Assistant, Department of Applied Economics, Utah State University, Logan, UT 84322, USA<sup>d</sup> Senior Field Researcher, Managing Risk for Improved Livelihoods PLC, Addis Ababa, Ethiopia

## ARTICLE INFO

## Article history:

Received 13 June 2016

Received in revised form 8 May 2017

Accepted 10 May 2017

Available online xxxx

## Key Words:

African rangelands

African rural–urban interface

Borana Plateau

portfolio diversification

poverty mitigation

social–ecological systems

## ABSTRACT

The Borana pastoral system has long been regarded as a model for sustainable resource use in eastern Africa. Recent growth in human and livestock populations, however, has contributed to a marked decline in rangeland condition, as well as increasing poverty. Another trend is fewer pastoralists controlling more resources. Today, for example, only 10% of households own 60% of all livestock. This wealthy minority has become increasingly important but has received little research attention. We wanted to learn how such elites perceive system change and how they innovate when accumulating or managing their assets. Twelve wealthy men were interviewed. They noted that the pastoral system is in sharp decline, with the most serious livestock–production constraints including chronic shortages of forage and labor. The average value of the physical and financial assets held by these men was estimated as at least USD \$164,000, about 62-times that held by poor households. The average investment portfolio was composed of livestock (two-thirds of total value), while savings accounts in local banks and urban real estate (largely housing) made up the remainder. Livestock in general—and cattle in particular—were the riskiest physical assets given recurrent effects of drought and forage scarcity on animal productivity and mortality. When asked to identify future investment priorities, the men said that investing in urban real estate and their children was now preferred to investing in more livestock; their tradition of steady livestock reinvestment has thus changed. Recent urban growth in the rangelands has given the wealthy elite new investment options that offset heightened risks of animal losses. Urban investments are important because they could facilitate town development and provide incentives to improve range management via destocking. Outreach programs focused on the diversification of pastoral assets could include wealthy pastoralists as opinion leaders and accelerate positive change here.

© 2017 The Society for Range Management. Published by Elsevier Inc. All rights reserved.

## Introduction

A foundation of supply-driven economic growth is the need for capital investment to develop infrastructure and commercial enterprises (Khan and Reinhart, 1990). Investment can spur business expansion,

income growth, and livelihood diversification. While diverse investment opportunities are abundant in the prosperous urban centers of developed nations, they are rare in the rural areas of developing nations. Excellent examples of the latter include pastoral rangeland systems where traditional investment options have focused on livestock production (Sandford, 1983).

The problem with exclusive reinvestment in livestock, however, is that it can become risky in situations where human and livestock populations occur at high densities, forage and water are limited, droughts are common, and commercial livestock offtake is hard to sustain. Livestock reinvestment then becomes a recipe for overgrazing, herd crashes, and rangeland destruction (Holechek et al., 2010). The question then becomes, “What’s the alternative?” Exploring alternatives for a pastoral system under pressure is the premise for this paper.

The Borana pastoral system of southern Ethiopia was once a model for sustainable resource use in eastern Africa (Coppock, 1994). Today, however, the Borana society is under immense stress because it is

<sup>☆</sup> This publication is possible through support provided by the Bureau for Economic Growth, Agriculture, and Trade; US Agency for International Development (USAID), under the terms of Grant EEM-A-00-10-00001. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID or the US government. Research support was also contributed by the Utah Agricultural Experiment Station; this work has been approved as journal paper 8838. This research was conducted under the auspices of USU IRB protocol 6376.

\* Correspondence: D. Layne Coppock, 5215 Old Main Hill, Utah State University, Logan, UT, USA 84322-5215.

E-mail address: [Layne.Coppock@usu.edu](mailto:Layne.Coppock@usu.edu) (D.L. Coppock).

<sup>1</sup> Current address: Medhat Ibrahim, 272 West Antelope Dr, Apt C, Layton, UT 84041, USA.

<http://dx.doi.org/10.1016/j.rama.2017.05.004>

1550-7424/© 2017 The Society for Range Management. Published by Elsevier Inc. All rights reserved.

Please cite this article as: Coppock, D.L., et al., Diversified Investments of Wealthy Ethiopian Pastoralists Include Livestock and Urban Assets That Better Manage Risk, Rangeland Ecology & Management (2017), <http://dx.doi.org/10.1016/j.rama.2017.05.004>

enduring the scenario described above (Coppock, 2016). Poverty is also growing, and how to better create and preserve wealth is a key issue. Transforming this system requires new thinking. One idea, for example, has focused on facilitating access of pastoralists to nonlivestock forms of wealth storage such as savings accounts in local banks (Desta, 1999). Although savings accounts offer lower rates of return compared with livestock in most years, savings accounts can also offer much lower risks of asset loss during droughts or disease epidemics. Financial modeling reveals optimal combinations of cattle assets and cash savings that would better manage pastoral wealth compared with cattle alone (Desta, 1999). Modeling aside, is there any real-world evidence that pastoralists have become involved with banking as a wealth-management option? And are there other forms of nonlivestock investments available to pastoralists besides banking?

The Borana Plateau has greatly changed during the past 20 yr (Coppock, 2016). Although the pastoral system is struggling, there have been major improvements in infrastructure and public services. Towns and commerce have grown, and mobile phones are ubiquitous. This evolving scene suggests an expansion of nonlivestock investment opportunities.

If there are emerging investment opportunities besides livestock, who could be the most likely investors? In most societies, investors typically have more wealth than average and tend to exhibit innovative, risk-taking behaviors. More wealth can lead to more savings, investments, and economic growth (Al-Afeef and Al-Qudah, 2015). For the Borana Plateau, the group that probably best fits this investor profile is a small cohort of wealthy pastoralists.

There has been a clear trend on the Borana Plateau where fewer people are controlling more livestock (Desta and Coppock, 2004; McPeak et al., 2012). Recent estimates from the north-central region indicate that the wealthiest 10% of the population owns 64%, 58%, and 59% of all cattle, small ruminants, and camels, respectively, while the poorest 66% likewise own 8%, 13%, and 13% (Coppock et al., 2014; Ibrahim, 2015). While the wealthy have always had an outsized influence on local resource use, culture, and politics (Legesse, 1973; Coppock, 1994), their influence may be expanding today given their heightened hegemony over animal assets.

We therefore decided to focus our study on the wealthy elites who have previously received little research attention here. We wanted to learn how they perceive change in the Borana pastoral system and how they innovate when accumulating or managing their capital assets. And if these people were found to be investing in both livestock and urban assets, we wanted to explore the implications of this behavior for rangeland management and economic development.

## Methods

### Study Area

Research was conducted in Yabelo District (5 523 km<sup>2</sup>) in the north-central Borana Plateau. Yabelo town (10 000 residents) is the district capital (see study area map, Fig. 12.1, in Coppock (2016)). Elevation ranges from 1 000 to 1 500 m. The semiarid climate supports a mixed savanna with perennial grasses (*Cenchrus*, *Pennisetum*, *Chrysopogon* spp.) and woody plants (*Acacia*, *Commiphora* spp.). Daily mean air temperatures vary from 19° to 24°C. Annual rainfall in the north-central region averages between 550 and 700 mm, with 60% received during March to May and 30% during September to November. The intervening dry periods are when forage and surface water become scarce. Coppock (1994) has details on the biophysical environment.

The pastoral population across the plateau is about 350 000 people, while peak cattle numbers can periodically exceed 1 million head (Desta and Coppock, 2002). The pastoral population typically lives with their livestock in thousands of scattered villages or encampments called *olla*. In addition, there are about a dozen major towns ranging in population from several thousand to > 35 000 residents

(CSA, 2007). Urbanites include pastoralists, former pastoralists, and nonpastoralists from other parts of Ethiopia. Videos of towns show the residents, housing, hotels, infrastructure, and retail outlets.<sup>2</sup> The majority of people here—whether living in urban or rural settings—have incomes at or below the World Bank poverty line of \$2 per person per day (World Bank, 2014). Traditionally, Borana pastoralists had diets dominated by cow milk and supplemented with cereal grains and meat from sheep and goats. Over time as per-capita livestock holdings have declined, grain has made up a larger portion of diets, especially among poorer people. Grain is procured via local markets, small-scale cultivation, and food aid (Forrest et al., 2016).

In the north-central region the livestock species composition, on a live-weight basis, has changed from 90% cattle and 10% all other species in the 1980s to 75% cattle, 10% camels, 10% goats and sheep, and 5% equines by 2013 (Coppock et al., 2014). Livestock holdings are more diverse today in response to ecological and market dynamics; bush encroachment and increasing aridity has favored camels, while growth in export markets has stimulated goat and sheep husbandry (Desta et al., 2006; Boru et al., 2014). Livestock species have distinct attributes (Forrest et al., 2016). Grazing cattle have traditionally been the most highly prized species because of their high quality and quantity of milk production. Camels are valued for drought tolerance and their ability to feed on browse, carry heavy loads, and maintain long lactations during dry periods. As mixed feeders, goats can thrive in savanna environments; they yield milk and meat, and sales of live animals generate small amounts of cash. Sheep are similar to goats here, but the former yields much less milk. Donkeys carry water, grain, and firewood.

While droughts can greatly impair the productivity of all livestock, cattle are the most vulnerable because they depend on ephemeral grass and need frequent watering. Browsing goats, sheep, and camels, in contrast, can sustain themselves better during drought due to the extended availability of browse forage and their reduced water requirements. In terms of recruitment, goats and sheep potentially offer much faster rates of inventory growth compared with cattle or camels, but goats and sheep have a higher susceptibility to epidemic diseases (Coppock, 1994). Cattle have a higher fertility rate and much shorter calving interval than camels, and thus cattle herds can rebound faster following a calamity than camels. A diversity of livestock, indeed, form the core of a pastoral investment portfolio here, as will be shown.

### Interviews

Face-to-face private interviews were conducted with “very wealthy” pastoralists (all older men<sup>3</sup>) during February and March 2015. On the basis of previous research (Coppock et al., 2014) and expert opinion (Tezera, personal observation), we estimated the target population for this cohort to be about 30 individuals living in our project area. We did not have any detailed information on the assets or incomes for these people to help us in a screening process, but rather based our general assessment on the fact that each person was recognized as a rich and influential community member. There was also no public information to allow us to select people for interview in a randomized manner. There was uncertainty as to where people lived and whether they would be accessible to us. We prepared a working list of the 30 interview candidates and then a team drove deep into the bush, crisscrossing the study area, to locate people at their home *olla* on an opportunistic basis. When a candidate was met, he was told about the research and asked to provide informed consent. If he agreed, the interview was either conducted then or the team made an appointment to return later. Only one person refused an interview.

<sup>2</sup> <https://www.youtube.com/watch?v=JVbp0Bvwaxs>;

<sup>3</sup> Borana women largely assume traditional domestic roles and are usually not independent herd owners.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات