FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Livestock Collective Centers – a Financial Analysis

A consulting report by Joseph G. Martin, Jr[1]

For the Graduation with Resilience to Achieve Sustainable Development (GRAD) Project

April 25, 2017

Introduction

A significant initiative of the GRAD project, funded by USAID and managed by CARE Ethiopia, was to establish livestock collection centers in target districts. GRAD's technical partner, SNV, provided leadership during the design and roll-out of all project value chain activities, including those summarized here. These centers are enabling small farmers to sell their livestock at a much higher price than would be possible otherwise. Cooperatives (or, rarely, private enterprises) were formed by the project to operate the collection centers with GRAD financing the initial facilities. These cooperatives rely on the simple and powerful concept that small farmers can increase their bargaining power by aggregating their livestock and marketing them on a collective basis. This is also an effective way to achieve economies of scale and improve the final conditioning of the livestock before sale.

Livestock Marketing in GRAD

GRAD identified livestock/meat production as a high potential value chain for project communities. Fattening was seen as the most profitable approach. The project promoted use of enclosures, improved feed and veterinary services and provided training in production techniques that would assure that the animals' meat industry standards. The last challenge was to put in place systems for collective marketing, including the establishment of livestock marketing cooperatives or enterprises, often making use of collection centers.

Findings

The collection centers are viable businesses on their own. As indicated in the projections summarized below, they can generate meaningful and dependable cash flows, based on assumptions for a typical center, with a cumulative present value that exceeds a 20% annual rate of return, even without receiving a grant from the project. Moreover, the members own the value created by the marketing cooperative and gain valuable experience in operating a business. Intangible benefits include the relationships that emerge from working together for the benefit of the community. The participants feel a justifiable and obvious pride in the success of the centers.

Raising sheep and goats (known collectively as shoats) is often the primary means of livelihood for a rural family, but it can also be an effective way to supplement other income.

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[1] GRAD ended in December 2016 but is still assessing the impact and sustainability of project outcomes. In this case, a finance expert and CARE supporter volunteered to conduct an analysis of the livestock collection centers created with project support. These centers represented the largest individual investments by the project, and therefore one of the largest risks as well.

Since a family may have several shoats at any one time, tending these animals enables the women in the household to earn additional income for the family. The collection centers help make this activity more stable and profitable. A family can keep its female goats for breeding and sell male goats on a regular basis. The center may also purchase young animals for 3-4 months of fattening. If a family can sell just five shoats over the course of a year at a price of 600 birr each, it would earn 3,000 birr or roughly $130. This can be a meaningful boost in the annual income for families in extreme poverty.

The "story" told by the financial model is that a collection center can sell shoats or even cattle to abattoirs (slaughterhouses) and others at a price that is high enough to cover the cost of acquiring the shoats, increasing their weight, and transporting them to market. The market potential appears to be virtually unlimited in the sense that the sale of livestock is constrained only by the available supply.

Financial Analysis

The economics for the typical center shown in the financial model are very favorable. Variable expenses are relatively small, and there are only a few fixed expenses that do not depend on the level of sales. The leaders of the cooperatives, often volunteers, perform the organizational and accounting work. Members of the community care for the shoats during the fattening period and provide other services at no cost to the cooperative. These efforts are essentially in-kind contributions.

However, the financial model shows that a cooperative could still earn a positive cash flow if it employed two full-time staff to operate the center and reduced the selling price of its goats by 20% from 40 to 32 birr per kg of conditioned live body weight. The facilities themselves are modest but functional. The front-end costs are thereby quite low and were paid through grants of $5,000 to $6,000 each by the project, although there is still a need in many cases for seed money to create an initial reserve for working capital.

Financial Model of a Livestock Collection Center in Ethiopia

Sources & Uses of Cash (in USD)	Start-up	Yr 1	Yr 2	Yr 3	Yr 4
Revenues	-	24,086	28,559	33,032	36,005
Variable Expenses	-	(19,510)	(23,071)	(26,632)	(29,029)
Gross Profit from Operations	-	4,576	5,488	6,400	6,976
Variable Expenses	-	(699)	(830)	(962)	(1,049)
Fixed Expenses	-	(103)	(114)	(125)	(136)
Other Income	-	1,084	1,161	1,239	1,350
Cash Flow from Operations	-	4,858	5,705	6,552	7,142
Debt Service on Loans	-	-	-	-	-
Cash Flow after Debt Service	-	4,858	5,705	6,552	7,142
Business Taxes	-	(60)	(65)	(69)	(69)
Loans & Grants for Buildings	5,161	-	-	-	-
Total Sources	5,161	-	-	-	-
Construction of Buildings	(5,161)	-	-	-	-
Cash Flow	0	4,798	5,641	6,483	7,073
Cumulative Equity	-	4,798	10,439	16,922	23,994

Terminology and Assumptions

1. Variable expenses are the expenses that increase or decrease in direct relation to the volume of sales and production. Fixed expenses do not change regardless of the scale of operation (unless the change in volume is substantial). Fixed Assets are defined to be the physical assets such as land, buildings, equipment, and vehicles, as opposed to the expenses incurred in operating the business.
2. It is assumed that the marketing cooperative which operates the center purchases the livestock from local farmers and the sells the same livestock to slaughterhouses or traders (perhaps after fattening them).
3. Inputs reflect the number of goats sold, the average live conditioned weight per goat (in kg), the selling price in birr per kg, the number of goats purchased, the average live weight per goat (in kg), and the purchase price in birr per kg. Similar figures can be used for sheep and cattle,
4. For simplicity, it is assumed that all of the development costs and start-up expenses are incurred in Year 0 and that regular operations begin in Year 1 and reach a stabilized level in Year 3.

Observations and Recommendations

1. The livestock collection centers appear to be wisely and effectively operated. I was stuck by the ability of a cooperative to adjust its operations to the local conditions. There is also a pervasive sense of good will and a common interest among the members of the cooperatives.
2. There is a need for more detailed financial records at each site, although it is unrealistic to expect a conventional accounting system. Self-policing by the members of the cooperative may be the most effective oversight anyway. It is still important, however, to make sure the cooperatives are complying with all applicable rules and by-laws in the management and distribution of funds.
3. The likely cash flows are so substantial that the initial grant from USAID could take the form of a loan, perhaps through a fund that is administered by another entity. Another alternative would be to guarantee all or part of loans by commercial lenders or investors for this purpose. Nevertheless, any such loan would have to have very flexible terms because of the many risks, and this option should not be considered unless it the only way to provide working capital to other cooperatives.
4. The initial funding should include loans for the working capital required to commence operations. The repayment of loans for this purpose would become a source of renewable funding for similar loans to other cooperatives.
5. The key management principle depicted by the financial model is to maintain enough of a difference between the cost of acquiring livestock and the revenues from selling it to the next level in the value chain. The "gross margin" is so crucial to success that each cooperative should generate a periodic report on the prices it pays for shoats and the prices it receives for selling them.
6. The marketing strategy can be adapted to the specific situation. The cooperative in Meskan (Guraghe Zone of SNNPR) sells primarily to abattoirs and engages trucks to transport the animals to the abattoirs. It does not need other employees except for specific tasks. In contrast, the cooperative in Arsi Negelle (Oromia) sells most of its shoats to local hotels and restaurants and therefore needs two full-time employees to deliver the shoats on a regular basis.

7. The role of women in the cooperatives appears to be improving over time, although they still represent a small share of the stated membership and are virtually absent among cooperative management. The male leaders at least acknowledged the importance of empowering women economically.
8. The livestock collection centers are a natural foundation for bringing additional services to the local community. They are strategically located and have become a hub for community gatherings. The operation of farm stores for the local farmers and the joint purchase of feed concentrates could be added to the present infrastructure, not only because of the existing facility but more so because of the core of leadership that has already been assembled for the current cooperatives.
9. In summary, the livestock collection centers are based on a simple concept that can and already has produced significant benefits. USAID and the participating organizations have also established a sound foundation for expanding this initiative geographically and adding complementary services. Additional seed money for working capital would be instrumental in a successful expansion of the cooperatives/enterprises.

Conclusion

GRAD's livestock collection centers have a clear and cogent business proposition. They address a pressing need in the economy, generate income for cash-poor families, and create significant benefits to the local community. The financial model demonstrates that they can be profitable. The investment by USAID through GRAD produced substantial direct and indirect benefits to the participants in this activity as well as to the fabric of the local community where the centers are located.