

Cross-Border Livestock Trade and Food Security in the Horn of Africa:

An Overview

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BACKGROUND

Cross-border trade and regional collaboration currently is high on the agendas of the different governments and regional organizations in the Horn of Africa. High-level bilateral and regional delegation talks have been started and the area's main regional authority, IGAD (Inter-Governmental Authority on Development), has been supportive. While the opportunities for collaboration are significant, the challenges are equally impressive. These include insecurity and political uncertainty, poor infrastructure and communications, and incompatible currency and trade policies. The reality, however, is that significant levels of cross-border trade already exists in the region conducted outside of formal channels and government negotiations. For the pastoralists who dominate the area's border regions, market alternatives to unofficial cross-border trade are minimal at present. In the Horn of Africa the pastoral nomadic groups of the borderlands are weakly integrated with most areas of their countries and official channels hardly provide adequate outlets for the sale of their livestock and livestock products. The weak link also constrains the supply of food crops from surplus grain areas to the deficit border zones; unofficial cross-border trade has been filling the gap in this demand. In short, cross-border trading is now a major economic activity in the area and this trade is conducted without official policies and support.

For the most part governments appreciate only the undesirable consequences of cross-border trade, so their normal response emphasizes control measures to curb the commerce. However, the unofficial cross border trade in the borderlands of the Horn of Africa plays vital roles for people in the borderlands and beyond. These include, among others, promoting regional integration for market creation and expansion, maintaining peace and stability in the area, and enhancing food security. Cross-border trade in the Horn of Africa has always assumed considerable importance in the economies and societies of the region, even when governments have attempted to discourage it. Incentives for cross-border trade result from geographic, ethnic as well as production and consumption characteristics that favor certain regions for particular key commodities. Throughout the region social relations based on clan affiliation, kinship, and friendship shape the existence of cross-border trade in the Horn of Africa, and is facilitated in many areas by the presence of similar ethnographic groups on both sides of the border. These trade patterns are reinforced by unattractive, highly regulated domestic prices that are lower than parallel market prices in neighboring countries' markets. Thus, despite vigilant controls by the governments in the Horn region to redirect commerce in the borderlands to official channels, substantial unofficial exchange takes place in the border areas.

This overview paper summarizes the results of a comparative research program on Cross-Border Trade and Food Security in the Horn of Africa, a joint collaborative effort between the US-based Broadening Access and Strengthening Input Market

Systems Collaborative Research Support Program (BASIS-CRSP) and the Organization for Social Science Research in Eastern and Southern Africa (OSSREA). The project was initiated in 1998 and is an interdisciplinary activity that involves US and African social scientists. The full details on the research are contained in the project's different reports (Little 2000, Teka et al 1999; and Teka and Azeze 2001). While considerable anecdotal observations and descriptions of cross-border trade in the region exist (see Gessesse 1996), this project is the first systematic effort of its kind to document the extent and nature of cross-border trade in the Horn of Africa.¹ The research focuses on four different border sites: (1) southern Ethiopia borderlands with northern Kenya and southwestern Somalia, (2) northeastern Kenya and southern Somalia border area, (3) Ethiopia and Djibouti borderlands, and (4) eastern Ethiopia border zone with Somaliland. While the information only covers these four border sites, the results have general applicability to other border areas in the Horn. Ethiopia assumed a central role in the study, because it shares borders with virtually all the countries in the Horn.

International boundaries throughout the Horn of Africa have important economic and ecological characteristics that generally distinguish the region from other parts of Africa. Most of the borders are characterized by arid and semi-arid environments and livestock-based economies and trade in livestock and livestock products assume considerable importance. The study's commodity focus, therefore, primarily is on livestock and secondarily on selected grains (e.g., maize and sorghum). As a commodity, livestock has features that make it amenable to cross-border trade even in situations of widespread insecurity. It is a mobile and high-value commodity that can be transported overland rather than on roads, and can easily be moved across borders. As noted earlier, it also is a commodity chain that at present really has no alternative to unofficial channels, since holding and veterinary certification facilities, transport infrastructure, and other necessary inputs for international animal trade are not in place to allow for official cross-border exports. In the case of the Ethiopia/Djibouti borderlands, greater attention was given to official trade channels and to products other than livestock—for example, coffee and chat and consumer goods—because this border serves as Ethiopia's main official import and export route and covers a range of different commodities. With the loss of the use of the Assab port in Eritrea due to the conflict between Ethiopia and Eritrea, much of Ethiopia's trade has been channeled through the Djibouti port. This action has made trans-border trade in that area very large and diverse, especially when compared to the other border sites. Unlike the study's other three border sites, livestock and its products (hides and skins) only rank third in importance as an agricultural commodity in the Ethiopia and Djibouti cross-border trade.

The following questions motivated the comparative research program:

¹ Since 1997, the interest in cross-border trade in the Horn of Africa has grown considerably among researchers, development organizations, and policy makers. Several reports have appeared in the past three years alone (Addou and Gedi 1999; FEWS 1997; Guvele and Lautze nd; and Nobera 1998) but formal publications on the topic remain minimal.

- (1) what is the current extent of cross-border trade in the four sites;
- (2) what role (if any) does cross-border trade play in enhancing food security and regional comparative advantage in the border sites;
- (3) what are the informal and formal financial arrangements for cross-border trade (especially in livestock) and in what ways does cross-border trade generate capital for other activities;
- (4) how do different actors (traders, middlemen, sellers) in the marketing chain manage risks associated with imperfect information, limited credit, unstable market and political conditions, and high and volatile transport costs; in what ways do social/non-economic variables (informal social networks, ethnicity, and other variables) help actors cope with uncertainty and risk;
- (5) what are the major policy and other constraints inhibiting cross-border trade in the region?

To address these questions, the remainder of the report is divided into three sections: (1) Methods and Data; (2) Summary of Key Research Findings; and (3) Policy Implications. The paper is meant only to summarize the main aspects of the study and readers are directed to the project's research reports for greater detail and analyses. The report hopes to invoke debate about the benefits and costs of cross-border trade, what—if anything—should be done about cross-border trade, and what the roles of different actors and agencies should be.

METHODS AND DATA

Research on cross-border trade in livestock and grain in the Horn of Africa raise particularly thorny methodological issues. Most of the key cross-border markets are located in dry regions, far from major urban centers, dominated by mobile pastoral production systems, and, in most cases, poorly served by transport and other infrastructure. These all add to the costs of standard survey approaches and require methodological innovations, such as key actor interviews, ethnography, and rapid appraisal techniques. In addition, on-going conflicts and random border closures in the region increase risks and uncertainties for merchants, producers, and researchers alike, and these events impacted the project. For example, in 1999 the Kenya/Somalia border was closed by the Kenya government for more than four months and conflicts in the region made data collection there very difficult. This closure did not halt livestock trade but it did slow it down, as well as increase transaction costs and risks for traders.

The lack of comparable data sets between and within countries for analysis also raise questions about existing data sets and their utility for the study. We initially hoped to conduct market integration analyses across different border sets but found that data were constraining. Different organizations often gather market data for different purposes; use different market units for classifying livestock; and in some cases utilize vastly different currency conversion rates. These limitations meant that market integration analyses were limited to individual border sites and were not conducted comparatively.

Data collection at each of the four sites was driven by a common set of data requirements that include (see Annex 1):

(a) What is known about cross-border trade in the specified border zone; and what are the general levels of trade (including migration of labor) in the zone for grain and livestock? What has been the general trend for the past 10 years?

(b) What sources of data (e.g., on-going studies, government records from Customs Offices, etc.) exist that could be used in a study of cross-border trade in the specific border zone?

(c) What are the infrastructure, policy, and other constraints that inhibit cross-border trade in the region?

(d) Who are the major actors in cross-border trade in the region: large-scale traders, small-scale traders, transporters, private firms, parastatal/government agencies; how are they organized and what are the major sources of risk they confront? How are the major actors distinguished by origin/location of residence, ethnicity, and other social variables?

As noted earlier, there were some differences in the four different research sites. The eastern Ethiopia borderlands with Djibouti and Somaliland showed considerably more complexity and diversity than the other study sites in both official and unofficial trade. The direction of trade there is structured in such a way that agricultural items are exported from Ethiopia in return for used and new manufactured imports from third countries. Because of such differences, data collection at this site was slightly different than in the other sites, and fewer livestock traders were interviewed while more use of official customs records was made. In all of the border sites slight changes to a general trader questionnaire had to be accommodated to account for local differences.

Because traders assume such a critical role in the cross-border trade, research design emphasized both structured and unstructured interviews with samples of traders. This strategy was taken rather than monitor particular marketplaces since much of the livestock trade at the lower levels bypass market centers. Trader samples were constructed for each site and stratified by scale of enterprise; location of activities; type of trade; and so on, and they provide the bulk of the project's information. In total more than 250 traders were administered a structured questionnaire at the four sites, representing a range and scale of different market activities in and near the border and at the main terminal markets of the trade. For example, in looking at Somalia/Kenya livestock trade it was important to conduct trader interviews at the main the Nairobi and Mombassa markets. Moreover, because of the volume and complexity of the Ethiopia/Djibouti border site, it was necessary to define a very large border area that encompassed production areas and markets at distances in excess of 150 km from the border.

In addition to trader surveys, additional information was obtained through informal interviews with merchants and focused interviews with key transporters, representatives of non-governmental organizations and donor agencies, government officials, producers, veterinarians, and other important actors in the border regions. Secondary data was gathered from customs offices, ministry offices, development reports and other unpublished materials. The linkages between cross-border trade and

production in key commodity (livestock and grain) production zones was assessed through trader interviews and rapid rural appraisals of groups of producers near selected borders. Because traders are greatly concerned with the condition and prices of livestock and grain and operate in market chains that often span several hundred kilometers, they can relay important information about famine-prone and insecure areas that may be difficult and risky to visit.

SUMMARY OF MAJOR RESEARCH FINDINGS

This section briefly summarizes the major findings of the comparative research program. The full details of the study are contained in the different research papers that are included in the bibliography to this report.

The Importance of Informal Finance Arrangements

More than 95 percent of cross-border commerce is financed through the trader's own resources or from funds obtained informally from kinsmen, friends, and associates. Very few traders (less than 15 percent of the total) have access to formal sources of finance. Without insurance, written contracts, and official recognition, very few financial institutions are willing to finance the activities of cross-border trade. Availability of trader finance from the very few formal sector banks branches in the area also is challenged in other aspects. One is that because cross-border trade is not licensed, traders do not have the legal bases required by formal financial institutions to enforce contracts. Another is the limited distribution of financial institutions in the area, which also constrains access regardless of the legal aspects. The lack of finance is seen as constraining to the scale and type of cross-border activity and probably results in some degree of market exclusivity based on ethnicity, clan, and other social criteria. With a need for finance, market information, and so on, traders rely on members of their own ethnic groups and create pockets of ethnic-or clan-based trading enterprises that can discourage others from entering the business. Where 'trust' relationships or social capital exists, market transaction costs are reduced because informal credit and market contracts are more easily extended without formal contracts or other agreements (see Ensminger 1992:104-105).

Informal finance partly substitutes for the lack of capital market access and as noted above trust-based relationships among livestock traders facilitate access to informal credit. The common form of credit available to livestock traders in the area is commodity credit with implicit interest. In this case traders buy animals on credit from the client and pay for them after the animals are sold. In this arrangement, the opportunity cost of money is compensated and hence traders repay their suppliers with some provision in return for the facility. Other forms of credit are interest free cash loans from relatives and friends. These loans provide more options to the trader but they are rarely available.

In the case of the Somalia border areas informal finance minimizes the risks associated with carrying large amounts of cash in an unstable environment. While much of the current livestock trade is calculated in Somali shillings (SoSh) and final payments

are in SoSh, actual cash transfers are minimal at the upper ends of the market. Credit in this trade is mediated through informal money houses, wire transfers, and middlemen, and assumes special importance in most forms of long-distance trade, including livestock-based. Many of these facilities are based in Nairobi and informal bankers will charge fees of 4-6 percent to 'wire' transfer funds from Kenya to a location in Somalia.

Thus, cross-border trade often entails elaborate informal financial and credit arrangements that, in turn, generate significant capital for local investment. This is especially the case for cross-border trade in livestock, which often is the major asset and store of capital in these areas. Our observations also indicate that informal financial arrangements associated with cross-border trade are far more complex than originally envisioned. They entail issues of foreign exchange arbitrage; informal 'letters of credit' and wire transfers; use of revenues from livestock trade to cross-finance a range of imports, food and non-food; sophisticated market information and clientage relationships; and a variety of different social mechanisms to reduce transaction costs. We also were able to assess the important role of cross-border financing (i.e., using revenues from livestock trade to finance grain imports) and its general impact on food security in the region. In each site it was possible to assess the important role of cross-border financing (i.e., using revenues from livestock trade to finance grain imports) and its general impact on food security in the region (see discussion later in the report).

The Use of Multiple Currencies

Six legal tenders, namely the US dollar, Ethiopian Birr, the Kenyan Shilling, the Somaliland shilling, and the Somali Shilling, are used in the different border markets. Even in the case of the Somalia borderlands local currencies are used even without a central bank or treasury to support the money. Indeed, in eastern Ethiopia the Somali shilling was the most preferred currency in the unofficial trade. One of the reasons for the widespread reliance on the Somali shilling is that some items imported from other countries in Asia are cheaper in Somalia than in Kenya and Ethiopia. This explains why traders who sell in the northeastern part of Kenyan markets, such as Mandera, exchange the Kenyan Shilling, received from livestock sales, for the Somali Shilling. Not all of the Somali Shillings are spent for this purpose, however. Part of them are used to buy some items in Ethiopia, since this currency is used in many areas of the Ethiopian Somali Region.

There exists considerable social and economic variation between cross-border sites, depending on the nature of currency exchanges in the area (i.e., in the Kenya/Somalia trade traders are likely to earn as much from foreign exchange arbitrage as from commodity trade), the volatility of the situation along the border (i.e., some traders avoid carrying large sums of money but instead use networks of informal banking and currency transfers), and other finance-related factors. Transactions along the Ethiopia border areas, for example, are affected by different forms and currencies. The relationship between the Ethiopian Birr to the Djibouti Franc along the Ethiopia-Djibouti border and its relationship with the Somali Shillings along the Ethiopia-Somalia border is impacted by the merchandise trade balance in the unofficial channel. When more items

are smuggled out of Ethiopia, the Ethiopian Birr tends to appreciate and vice versa vis-à-vis the other currencies. Such exchange rate variations have implications for resource transfers across different currency holders.

A final note about the financial aspects of cross-border trade. It is curious that the frequency of barter trade in the border regions is so low, especially in the case of the Somali borderlands where the currency is not backed up by a government treasury and currency notes are in poor condition. The practice of barter has been more common in Somaliland where the currency was less stable during the mid-1990s. In southern Somalia, however, the shilling has been relatively stable since 1995, and has been used in most local exchanges. Yet the stability of the currency is now threatened by a recent 'printing' of new Somali currency notes by a faction leader, which has already resulted in an approximate 20 percent devaluation since the beginning of the 2001. Based on trader interviews at other border sites, instances of barter often are found in combination with cash. Out of the total number of traders interviewed in the border markets of southern Ethiopia, only 23 percent of them told us they received payments in foodstuffs as well as money.

Social and Wealth Differentiation among Traders

In each of the border sites, similar ethnic groups are found on both sides of the border. This facilitates cross-border trade and channels the trade through certain centers and merchants. For example, in the northeastern Kenya/southern Somalia border Somali pastoralists are found on both sides, but there are marked differences in clan composition that influence the nature of cross-border trade (Little 1996a).

The boom in cross-border trade also encouraged a relatively large percentage of traders (more than 50 percent of the total) to start their businesses during the past 5-8 years. The growth in the cross-border trade, coupled with the lack of viable alternative employment options in the region, accounts for recent increases in the number of cattle traders. Many traders are young (less than 40 years old), which implies that difficulties and hardships in cross-border livestock trade are considerable.

Another important socioeconomic characteristic of traders is their engagement in multiple activities. Trader interviews in the border markets indicated that almost all traders are engaged in activities other than livestock trade. However, the activities identified are few and mainly limited to farming and small-scale business. Activities include animal husbandry, crop farming, grain trade, and retailing of manufactured items and other items. Diversification by traders is pursued because of the risks and seasonal nature of cross border trade. The risk emanates from unpredictable drops in demand for livestock due to bans by importers and governments, theft, drought, and animal diseases. Another reason for diversification is that most traders do not deal with a sufficient sales volume to allow for full time specialization in commerce. In general, the livestock trade suffers from several constraints that result in irregular income flows. Diversification allows traders to smooth consumption over time and compensate for seasonal short falls in income.

Who Benefits?

There is considerable differentiation among cross border traders, with about 20 percent of traders accounting for more than 60 percent of market transactions and 50 percent dealing with less than 15 percent of the trade. The high standard deviation and range in volume of sales in the trader samples support this pattern of inequity. For instance, in the Kenya/southern Somalia sites where cattle trade dominates 50 percent of traders sell less than 200 cattle per year and 35 percent sold less than 100 cattle (Table 1). By contrast a small minority (13 percent in 1998) had annual sales in excess of 1,200 animals. A similar trend is also observed in small stocks and camels where a few traders have annual sales three to four times higher than other merchants.

Table 1. Annual Sales of Cattle by Traders, Somalia/Kenya Border

| <u>Range of Annual Sales</u> | Percentage of Total: | |
|------------------------------|----------------------|-------------|
| | <u>1996</u> | <u>1998</u> |
| 1 to 300 | 17 | 34 |
| 301 to 600 | 18 | 26 |
| 601 to 900 | 20 | 5 |
| 901 to 1200 | 28 | 22 |
| 1200+ | <u>17</u> | <u>13</u> |
| TOTAL | 100 | 100 |
| Average Sales (Mean): | 943 | 855 |
| Standard Deviation: | 760 | 883 |

Note: Based on Little (2000); n=94 traders.

It is possible to calculate the costs and returns to traders at different levels in the market chain, and to determine where revenues are accrued. Table 2 uses the most common cross-border market route, Afmadow-Liboi-Garissa-Nairobi, for the Somalia/Kenya trade and the most common trade animal, quality cattle-2, to calculate trader margins. As would be expected, the highest risks in the cattle trade involve the initial purchase and transport of the animal. The table presupposes that three different purchase transactions take place: (1) the purchase at Afmadow, (2) the reselling at Garissa, and (3) the final sale at Nairobi. It also assumes that two traders are involved. When two traders (Trader 1 and 2 in Table 2) are involved in the market chain, then the net return for the trader who buys directly from Somalia and sells at Garissa is 15 percent. The return on investment is 16 percent for the trader (Trader 2) who purchases at Garissa and then resells in Nairobi—the high cost of transport between Garissa and Nairobi (about 12 percent of the purchase price) accounts for much of Trader 2's costs. As Table 2 shows, however, if Trader 2 purchases an animal directly from a middleman based in Somalia rather than at the Garissa market, which some traders do, then the net return per animal can be as high as 31 percent. Once again, while the risks can be high in some years (1997 and 1999),

the returns in the cross-border trade also are very high—well above profits in other types of livestock and agricultural trade (see Little 1996b; and Little and Dolan, 1994).

Table 2. Trader Returns in the Somalia/Kenya Cross-Border Trade, 1998-1999

| ITEM | Amount US\$ | % Net Return |
|--|-------------|--------------|
| | Per cattle | |
| Initial Purchase Price, Afmadow | 128.00 | |
| Transport cost (Afmadow-Garissa) | 3.00 | |
| Hired Herd Labor | 1.60 | |
| Security/Transit Fees | 0.40 | |
| Water (50 days @ .08) | 4.00 | |
| Medicine/dips | 1.82 | |
| Fodder (Garissa market) (dry sea. only) | 0.60 | |
| Risk from loss (theft, drought, etc.) (6%) | 7.68 | |
| Broker Fee (Afmadow) | 1.25 | |
| Broker Fee (Garissa) | 1.67 | |
| Council Tax (Kenya) | 1.33 | |
| Currency transaction/conversion fees | 5.28 | |
| Trader 1 Costs | 156.63 | |
| Sale Price, Garissa | 176.00 | |
| TRADER 1 RETURN | | 15% |
| Transport Cost (Garissa-Nairobi) | 20.15 | |
| Movement Permit/Fees | 1.33 | |
| Hired Labor | 0.33 | |
| Security | 0.33 | |
| Water | 1.00 | |
| Fodder (Garissa and Nairobi) | 0.60 | |
| Market/Municipal Tax—Nairobi | 1.33 | |
| Broker Fee (Garissa) | 1.67 | |
| Broker Fee (Nairobi) | 2.50 | |
| Trader 2 Costs | 204.91 | |
| Sale Price, Nairobi | 233.00 | |
| TRADER 2/MIDDLEMAN RETURN | | 16% |
| GROSS DIFFERENCE BETWEEN ORIGINAL PURCHASE AND FINAL PRICE | 105 (82%) | |
| TRADER RETURN IF ONE TRADER ONLY AND PURCHASES FROM SOMALIA AND SELLS IN NAIROBI | | 31% |

Source: Based on interviews with 84 traders.

A similar calculation can be made from the data along the southern Ethiopia borderlands, which again show that most benefits accrue to traders at the upper end of the market chain. Table 3 shows that, half of the value added for the livestock destined from southern Ethiopia to the Nairobi market is retained by Kenyan traders at the upper end of the market. Percentage shares of income by different agents are computed according to trader's gross income and profit distribution by Ethiopian and Kenyan livestock traders. The table shows that 84 and 87 percent of the Moyale-Kenya price for cattle bought at markets in Negelle and Dubluk, Ethiopia, respectively, accrue to Ethiopian small-scale traders. The share decreases by 100 percent when the Nairobi price is considered. The disparity increases even more when a profit comparison is made. The net profits made by Ethiopian traders at Moyale is only about 12 percent of the profits made by Kenyan and few other Ethiopian traders who sell in Nairobi.

Table 3. Distribution of Gross Income and Profit from sale of first quality cattle (bullock) as Percent of Gross Income and Profit from Moyale and Nairobi.

| | As % of Moyale, Kenya price | As % of Nairobi price |
|---------------------------------------|-----------------------------|-----------------------|
| Seller at Negelle (Eth) Gross Income | 84 | 44 |
| Seller at Dubluk (Eth) Gross Income | 87 | 45 |
| Negelle Bullock sold at Moyale Profit | - | 12 |
| Dublik Bullock sold at Moyale Profit | - | 9 |

Source: Teka et al. 1999.

If traders' returns in the cross-border trader can be relatively high, then what benefits accrue to the herders themselves, those producers at the end of the market chain who supply the commodity. After all, they are the individuals who most directly confront the vagaries of climate and insecurity and make the tough decisions about herd care and movements. Since there is no production cost data to utilize, the best means of calculating the extent to which herders have—or have not—captured the benefits of increased cross-border trade is to look at their shares of prices in the different markets and for different types of animals. This measurement is crude and does not actually deal with net returns, as the trader data in Table 2 do, but it provides a general indicator of how much revenue the herder is receiving from trade.

In terms of the herder's share of the final price (Nairobi sale price) in the Somalia cross border trade, it is about 46 percent or less than half of the final price in the market chain. Thus, benefits from the growth in cross-border trade have been captured more by livestock traders than herders, the latter who accrue most of the risks in insuring a healthy animal is produced. Of the \$10+ million in cattle trade generated at Garissa, Kenya, Somali herders are receiving no more than 60 to 70 percent of that revenue. Yet, as indicated

earlier, without the growth in this commerce the prices that herders received for their commodities would have been considerably lower than this.

Due to the generally positive relationship between producers' incomes and wider and more efficient markets, pastoralists in the area clearly benefit from cross-border trade. The trade enhances food security through increased prices of livestock and availability of grain, and hence enhances the income of pastoralists. However, the location of herders at the bottom of the market chain means that they accrue fewer benefits than traders.

Gender Dimensions

In terms of the gender dimension of the market, it is clear that women have reaped very few direct benefits from the growing cross-border trade in animals. Indirectly they probably have benefited from increased purchases of foodstuffs from the sales of livestock, in cases where members of their family are involved in the trade. Women are rarely involved with the cattle trade and the kind of petty trade—for example, milk—that they control does not involve trans-border exchanges. Even for related activities--butcheries, transporters, and brokers--very few women participate in the cattle business. In fact, while the data are not available it is likely that the increased trade in livestock could actually compete with their own income-earning activities, such as milk trading and production. If male herders are selling animals, such as cows, to take advantage of cross-border opportunities, then it is likely their market transactions are having a negative impact on women's income activities.

However, where considerable petty trade exists, such as along the Ethiopia/Djibouti border, benefits for women can be significant. Along this border petty traders are generally poor women based in Dire Dawa, Shinnile and Melka Jebdu, Ethiopia, who do not have any other alternative source of living. These market places have been the major unofficial trade sites and account for large numbers of women traders who move small amounts of foods to Djibouti.

In sum, those large-scale male cattle traders based in Nairobi, who also own transport, earn the highest returns in the market chain, and claim that they earn as much from transporting animals as they do from selling them. These wealthy individuals, who own trucks and who have the option of buying animals directly from the border, are the major winners in this trade. And they also are the ones who are most likely to retain and invest their profits outside the border region.

Non-Livestock Investments

Cross-border trade in the border region spurs other commerce and business activities as well. In the Kenya/Somalia borderlands the revenues associated with the cross-border trade were invested in businesses in Garissa. Based on available census figures for Garissa town and its surrounding area (a population of 42,789 in 1995, Kenya 1995:18), the per capita value of cattle trade in Garissa is about \$240 in 1998 while it was

\$275 in 1997. Not surprisingly the amount of commercial activity in Garissa town has grown considerably since 1991, due largely to the growth in cross-border trade and the exodus of traders from Somalia. In the town the growth in small self-employed businesses (i.e., trading enterprises) grew much faster than any other economic sector in the district (ibid:49). From 1989 to 1996 urban self-employed commercial operators and employees increased from 5,723 to 8,428 and the bulk of this growth was in Garissa town (op cit). Probably an additional 30 to 40 of petty traders and hawkers are not captured in these official figures. The genealogies of the town's businesses often share a common heritage: owners frequently started in a livestock-related business like trading, and then used the profits to invest in other activities.

The movement of traders from southern Somalia to Garissa has facilitated cross-border trade, because these merchants often maintained their linkages to suppliers in Somalia. Not only cattle, but food aid (especially cooking oil and wheat), pasta, and electronics from the other side of the border found their way into Garissa's retail sector. During the occasional border closures of the late 1990s, merchants made it very clear to us that their businesses were strongly dependent on trans-border trade with stateless Somalia.

Market Structures and Costs

With the exception of the Ethiopia/Djibouti border, official cross-border trade in the region is minimal. Official trade between African countries is very low generally, including within the Horn. African countries, for example, contribute very little to Ethiopia's official trade, except with a few neighboring countries: Djibouti, Kenya, and Somalia. Table 4 shows that the official share of imports from neighboring countries never exceeded 8.3 percent for Ethiopia. The contribution of official exports from Ethiopia to Somalia and Djibouti assumes importance, because of the importance of Chat in the country's export trade. This Ethiopian-grown natural stimulant is exported only to Djibouti and Somalia (Table 5). Djibouti, in turn, primarily sells port services to Ethiopia and it is the service industry in Djibouti, which is strongly linked to the

Table 4. Direction of Official External Merchandise Trade of Ethiopia (in Share of Trade Partners)

| Trading Partners | 83/84 | 84/85 | 85/86 | 86/87 | 87/88 | 88/89 | 89/90 | 90/91 | 91/92 | 92/93 | 93/94 | 94/95 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Africa | | | | | | | | | | | | |
| Imports | 1.0 | 0.6 | 0.8 | 1.7 | 2.0 | 2.1 | 3.5 | 3.7 | 6.0 | 7.9 | 8.3 | 5.8 |
| Exports | 6.9 | 7.8 | 4.4 | 7.9 | 7.0 | 3.9 | 9.3 | 11.1 | 3.2 | 8.9 | 12.4 | 7.3 |
| West Europe, Middle East and USA | | | | | | | | | | | | |
| Imports | 74.1 | 76.1 | 76.8 | 77.5 | 74.6 | 75.0 | 69.4 | 70.4 | 34.7 | 65.7 | 64.4 | 68.2 |
| Exports | 70.4 | 73.9 | 83.9 | 72.4 | 80.1 | 81.8 | 80.4 | 83.5 | 89.5 | 80.0 | 60.4 | 73.4 |
| Others | | | | | | | | | | | | |
| Imports | 24.9 | 23.3 | 22.4 | 20.8 | 23.4 | 22.9 | 27.1 | 25.9 | 59.3 | 26.4 | 27.3 | 26 |
| Exports | 22.7 | 18.3 | 11.7 | 19.7 | 12.9 | 14.3 | 10.3 | 5.4 | 7.3 | 11.1 | 27.2 | 19.3 |

Source: MEDAC, 2000.

Table 5 Ethiopia's Export to Djibouti and Somalia

| | 1996 | | 1997 | | 1998 | | 1999 | |
|-----------------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|
| | Qty (kg) | Value (Birr) | Qty (kg) | Value (Birr) | Qty (kg) | Value (Birr) | Qty (kg) | Value (Birr) |
| Djibouti | | | | | | | | |
| Chat | 4,189,522 | 178,785,397 | 5,774,777 | 258,025,682 | 6,187,307 | 291,543,492 | 4,888,502 | 229,871,863 |
| Fruits and Vegetables | 22,601,636 | 17,750,781 | 25,250,576 | 37,509,303 | 23,781,953 | 37,568,997 | 23,038,099 | 41,476,266 |
| Others* | 341,686 | 534,134 | 711,596 | 1,528,899 | 1,413,062 | 2,655,648 | 2,435,045 | 4,515,841 |
| Somalia | | | | | | | | |
| Chat** | | | | | 2,686,809 | 66,651,723 | 9,883,743 | 249,751,236 |
| Haricot Beans | | | | | | | | |
| Cement | | | | | | | | |

*Others include cereals and pulses, animal feed, beef, hens and eggs, **Export since the second half of 1998

Source: National Bank of Ethiopia, Dire Dawa

performance of Ethiopia's external trade. Officially imported food items to Ethiopia through Djibouti and Somalia include rice, sugar, wheat flour, milk powder, edible oil, spaghetti and macaroni. They are primarily destined to markets in eastern Ethiopia.

Somaliland is now the largest importer of Ethiopia's second largest export, *Chat*. The official export of this item to Somaliland started in the second half of 1998. During this period more than half million kgs of *Chat* was exported per month. The amount doubled in 1999 and hence about one million kgs of *Chat* was exported per month. The amount is almost 200 percent higher than the export to Djibouti during the same period. According to the country's national bank (Dire Dawa Branch) data, Ethiopia had also exported modest amounts of cement and haricot beans in 1996 (Table 5). The situation implies a current tendency for some products to shift from unofficial to official or legal trade. The current expansion of trade infrastructure in the area would intensify the official cross-border trade.

On the unofficial side, used clothes, commonly referred as *Bonda* by local people, are one of the most important cross-border trade items in eastern Ethiopia. In terms of their coverage, the clothes reach markets throughout the entire nation. All categories of clothes are included but shirts and coats for adult men and women dresses are the dominant types. In most cases the origin of the used clothes is Europe and North America. For example, during field visits in eastern Ethiopia, used cloth traders at Melka Jebdu, Dire Dawa and Gedamaitu, Afar, identify a pack of coats for adult men as Italian, German, French, or USA origin. The used clothes cross the borders from Somaliland and Djibouti to eastern Ethiopia.

Unofficial imports of new manufactured products to Ethiopia include clothes and shoes, textiles and fabrics, electronics, household utensils, pharmaceuticals, cosmetics and detergents. Similar to the used clothes trade, these items reach urban throughout the country. From Middle East and Asian countries, these items are unloaded from ships in Somali ports. Trucks from Somaliland (Hargiessa and Berbera) move them to the border towns of Ethiopia.

In terms of livestock trade in the study region, it is mainly affected by the significance of two important external markets. In the southern border areas of our study region it is the importance of the Nairobi market. Cattle prices in Kenya tend to be on average 20 to 25 percent higher than in neighboring countries, which explains why cross-border cattle trade, including from Tanzania is mainly unidirectional: that is, from neighboring countries to Kenya. In the early 1990s Kenya liberalized its meat trade and numerous small-scale slaughter facilities emerged. It is estimated that Nairobi purchases² about 400,000 cattle annually (1999), with about 360,000 for slaughter and 40,000 for restocking or fattening on nearby commercial ranches. Of the total number, Somalia supplies approximately 65,000 (16 percent) and Ethiopia supplies about 30,000 (8 percent) animals.

The spectacular ‘boom’ in cross-border livestock trade is reflected in the findings of trader interviews. In the case of the Somalia/Kenya border site, the aggregate value of cattle sales in Garissa, Kenya has grown by an astounding 400 percent since 1991 and 600 percent since 1989. In terms of volume, sales rapidly grew from 24,395 in 1989 to more than 100,000 cattle in 1998. Excluding Somali cattle that may enter Kenya through Hulugho (about 120 km southeast of Garissa) or along the Kenya coast, about 65,000 cattle from Somalia are marketed annually in Kenya and about 75 percent of them end up at the terminal market of Nairobi. Kenyan traders acknowledge that this dramatic increase results from the spectacular growth in cross-border imports from Somalia. In most years they account for about 65 percent of Garissa’s cattle sales, but the trade is seasonal because of water and pasture shortages along trekking routes.³ In 1998 Garissa market accounted for 659,880,500 Kenya Shillings or US \$11,783,580 in cattle sales alone. These amounts of annual revenue in compare favorably with some of Kenya’s major coffee and cash crop-producing districts, a phenomenon that is rarely acknowledged in Kenya’s official economic reports.

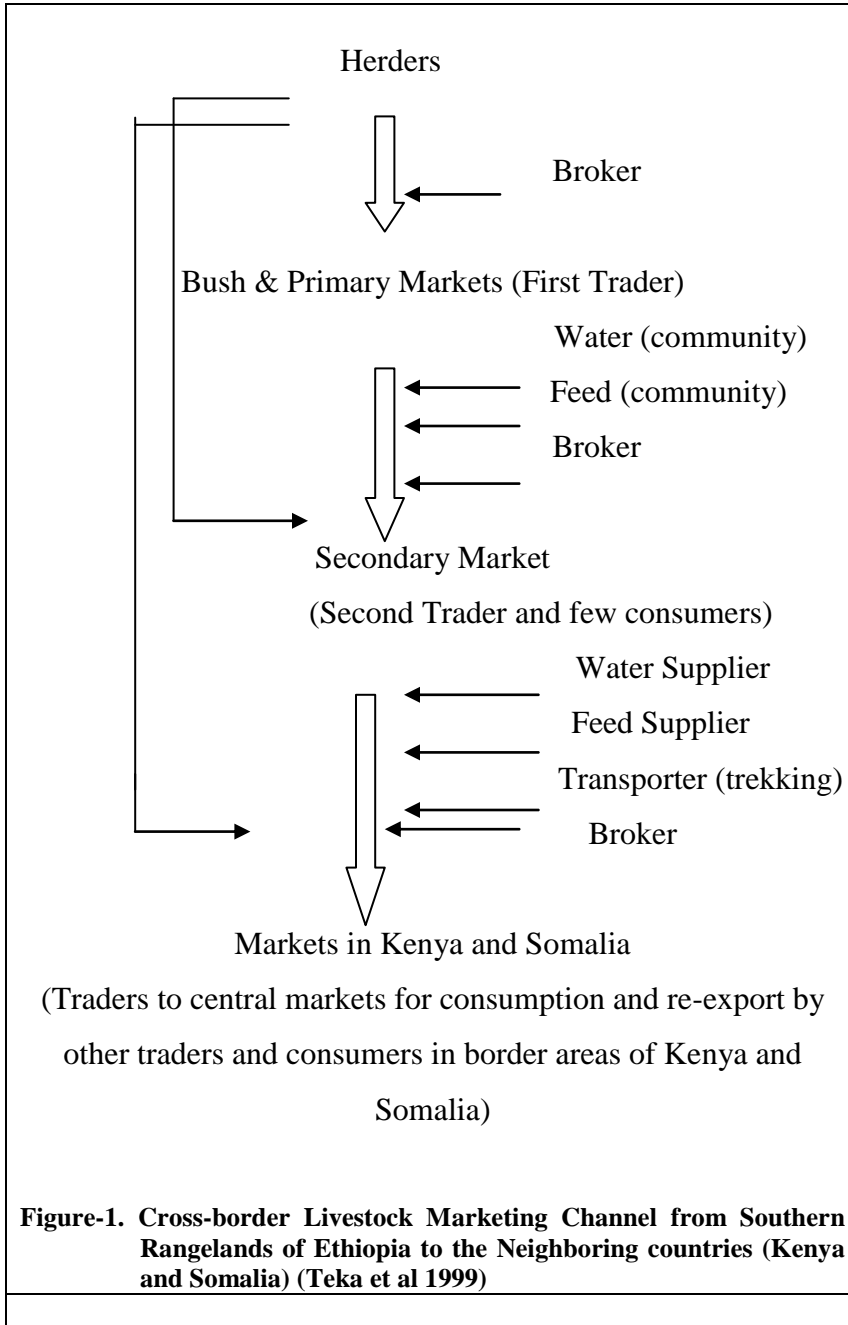
In the northern borderland sites the export trade to the Middle East, especially to Saudi Arabia, mainly determines livestock marketing patterns. Prior to the recent ban on live animal exports due to Rift Valley Fever (RVF), an estimated 50-60 percent of the 2 million+ live animals exported from Berbera, Somaliland and Bosaso, Puntland, originated from across the border in eastern Ethiopia. A modest estimate would be that this trade generates about \$25 million for the economy of eastern Ethiopia.

² It is important to note that about 10 percent of purchases at Nairobi area markets, such as in Njiru and Ngong, are for restocking or fattening on nearby commercial ranches and not for slaughter in the city. That is why it is important to distinguish overall purchases from slaughter figures.

³ This estimate is based on recorded sales at Garissa market from the author’s surveys and from using estimates of the number of Kenyan cattle sold at Garissa. The latter was calculated by using an annual commercial offtake rate of 7 percent for Garissa, Kenya cattle, which comes to about 25 to 30,000, and assuming that about 10 percent of cattle sold at Garissa market originates from other Kenyan districts (i.e., Mandera and Wajir districts). The remainder of cattle sold at Garissa are from Somalia.

Trade Channels

The number of actors involved in the livestock trade increases at higher levels suggesting various labor and capital contracts. In the cross-border livestock trade between Ethiopia and Kenya, there are a maximum of three ownership changes before the border is crossed (see Figure 1). These transactions are from the herder to the first trader, usually in primary and bush markets, and then from the first to a second trader at secondary markets. Once the Somali and the Kenyan markets are reached, the



involvement of Ethiopian traders drops substantially. The marketing channel, on the other hand, becomes more complex on the Kenyan side as different agents such as exporters, importers, consumers, and large-scale transporters become involved.

The Importance of Transport

Transportation is the most important element of marketing costs in cross-border trade. The elements of transaction costs, including those for transport, vary depending on the type of good transacted and transported. In the specific case of cross-border livestock trade, a trader incurs costs on market information, transport, feed and water, losses due to animal disease or theft, and market fees by the government at various sites. Most of these costs were incurred by livestock traders interviewed at border markets. For many of the key market routes movement costs for animals rarely exceed US\$0.18/kilometer per animal and trekking costs are relatively well integrated across different border sites.

Poor transport infrastructure in border areas is a major constraint to efficient trade among countries in the region. Transport-related expenses for the livestock trader are not only cash payments by the trader to drovers and water and feed suppliers, but also quality deterioration of animals due to live weight loss as a result of long distance trekking. Livestock transportation from southern Ethiopia to domestic markets and external markets, such as Kenya and Somalia, is undertaken by trekking. Motorized transportation is limited and is restricted within the range of official channels. These include from border markets of Kenya to Nairobi and from border markets of Ethiopia to central markets like Nazareth and Addis Ababa.

Traders incur various costs related to transport in the cross-border livestock business. They must pay off a range of different actors, including middlemen and trekkers, and cover the expenses of different services provided en route, such as veterinary and water. The higher up in the market chain the merchant works, the greater the transport costs s/he incurs. Large-scale traders can absorb these unanticipated losses and invoke strategies to shift these costs on to actors lower down in the market chain. They often do this by delaying payments to smaller traders and middlemen.

The Importance of Veterinary Services

Veterinary services for animals crossing the border are not available by official means, but in the case of Kenya they are available once they have crossed the border. In Kenya animals are required to be inspected prior to movement to domestic markets. Most of the time, however, livestock traders themselves treat common animal diseases using veterinary drugs bought in Kenyan border towns. Out of a total of 100 livestock traders interviewed in the Ethiopian border catchment 89 percent incurred some costs for veterinary services. About 55 percent of traders paid less than 500 Birr (about US \$55), which is about half of the price of one first quality cattle at Moyale, Kenya.

While traders do not frequently complain about shortages of veterinary drugs, they do lament their high costs and in the case of the Somalia border areas they use them less frequently than during the 1980s. In 1998 about 75 percent of Somalia traders purchased veterinary drugs, a rate that is below 1987-1988 when more than 90 percent of traders bought veterinary drugs for their herds (Little 2000). While it is unclear if the decreased use of veterinary inputs is due to the unavailability of drugs or to recent price increases or to both,⁴ the result is that animal health problems have increased in the region. Without a government there is little public context for organized animal vaccination campaigns and those NGOs that have tried to implement them have been able to provide only partial coverage due to insecurity and major logistical problems. There is concern in the region that an outbreak of a highly contagious and dangerous livestock disease would be difficult to contain, particularly its spread across the Kenya border. In short, the lack of public institutions for implementing animal vaccination campaigns is a casualty of the Somalia war that could eventually jeopardize the country's dynamic pastoral sector. The current import ban by Saudi Arabia on Somali livestock has raised public awareness of the importance of functioning veterinary institutions and services.

Market Volatility and Risk

Coefficients of variation were calculated for different types of livestock in different border markets. The coefficients of variation for the eastern Ethiopia border market of Jijiga show that sheep and goat prices are more volatile in markets located near the border, than in those of the interior. The border markets are supplied by feeder markets found inside the domestic territory. The values also suggest that price risks (and potential benefits) faced by different market agents vary by market type. In this regard, pastoralists and small traders tend to face lower risks but get lower prices because they concentrate equally on domestic and export (cross-border) trade. On the other hand, larger traders who sell at higher prices face higher risk of price variation because they concentrate almost exclusively on the export/border markets. In short, border markets are more lucrative than interior/domestic markets but also experience greater volatility and risk, as the recent ban by Saudi Arabian has so dramatically demonstrated.

It is important to acknowledge that wide variations in prices can occur within only a few days if a conflict erupts. Data on price patterns for livestock and non-livestock goods at the Bulla Hawo, Somalia border market indicate wide variability in prices for non-livestock goods and livestock. While both types of commodities show volatility, the swings are greater for non-livestock goods; for example, the price of imported wheat flour more than doubled in some months during 1998. What is interesting to note about this border market is that the livestock commodity produced mainly for the local market (goats) shows the least

⁴ Under externally-imposed reform programs of the World Bank and IMF, Kenya has reduced subsidies for most agricultural inputs, including veterinary ones. The rapid inflation associated with these programs may be an important reason why farmers are using less modern inputs in the 1990s than in earlier periods. The same could hold true for traders and herders regarding the purchase of veterinary supplies and might explain the decline in their use as recorded in the trader study.

price volatility, especially when compared with imported rice, imported pasta, and imported wheat flour. A similar pattern also was found for the eastern Ethiopia borderlands. The discrepancies between livestock and non-livestock products are even greater in high conflict areas, like Baidoa and Dinsoor, where food prices can increase 300 percent in months when transport and trade is disrupted.

Market risks are associated with conflict and political instability. For example, cattle prices in insecure border areas of southern Sudan are very low compared to other border markets in the region, and account for less than 25 percent of the selling price in Nairobi (see Guvele and Lautze nd). The politics and prolonged fighting around Kismayo, Somalia town also discourages market integration with other border markets in the region and has kept prices there very low. Traders throughout the study region incur high risks of livestock losses from banditry and avoid certain volatile areas, such as Kismayo (Somalia). The rapid growth in cross-border cattle trade from southern Somalia to Kenya is a result of the war that has forced local Somalia traders and herders to seek markets in Kenya.

Poor access to market information also is major risk associated with cross-border trade. As we will discuss later, prices are poorly integrated in most border areas, and traders rely on informal means of obtaining market information. Official information about prices of different types of livestock is virtually non-existent.⁵ This complicates the market search by individual traders and herders. Market search by pastoralists (primary suppliers) and traders involves negotiations and is, in most cases, facilitated by brokers locally known as *dilaal*. The broker's role is to match the buyer with a seller and to insure the legitimacy of the sale, in some cases by insuring that the animals are not stolen. Not all traders use brokers to address information constraints, but instead they may rely on their own middlemen or other contacts to find buyers. In the Nairobi marketplace, for example, Somali traders almost always deal with Somali rather than non-Somali brokers.

Lack of Spatial Market Integration

The results of the market integration tests show that with the exception of the eastern Ethiopian border area livestock prices are not integrated spatially. For example, the positive association between the border markets of Ethiopia and Kenya is not supported at conventional levels ($p < 0.05$). Moreover, the standard deviations of the price differentials are very high and correlation results on first differences are very low. Similar computations for small stock (male goat) in the same border revealed no relationship suggesting that the prices do not co-vary in border markets (also see Barrett et al. 1998).

The results of correlation analyses generally suggest that the southern Ethiopia border markets during the period July 1997-March 1998 were not contagious. Price

⁵ Some NGOs and government organisations operating in the area collect prices on different types of animals, grain and fuel wood. However, the dissemination is limited and their market coverage is limited. Moreover, neither farmers nor livestock traders use this information very often.

volatility measured for different types of livestock in the three Ethiopian markets (Moyale, Dubluk and Negelle) also supports the absence of stable spatial relationships. The coefficient of variation was high and different for the same type of livestock in different markets. The implication of the absence of spatial integration is that any intervention in one market or area will not induce significant changes in other markets. For instance, improvements in livestock price in neighboring countries may not be disseminated to supply markets in the southern rangelands of Ethiopia.

In the eastern Ethiopia border area, however, regression results show that there exists some spatial integration between livestock market centers at a statistically significant level. Hence feeder market prices respond, but weakly, to past price differentials and to price changes in different, nearby border markets. Accordingly, in contrast to other border areas in the study region market segmentation as a constraint can be rejected in eastern Ethiopia. However, a complete analysis of spatial market integration needs to investigate the relationship between Ethiopia's domestic border prices and prices in Hargessa and Berbera, Somaliland. Because of incompatibility between existing data sets this type of analysis is not feasible at present.

Food Security

Because most herders in the region finance food purchases through the sale of livestock, any downward trends in cross-border commerce and prices will have a negative effect on pastoral food security. Cross-border trade networks affect the food security situation in the border areas in one or more of the following ways. First, cross-border trade broadens available market options for commodities produced in the area and pastoralists benefit from increased demand for their animals. Secondly, people in the area consume food items produced elsewhere and imported across the border that could not be supplied officially or cheaply from domestic markets. For instance, rice, wheat flour, pasta, vegetable oil, and sugar are major food items imported across the Djibouti and Somaliland borders and sold in many places of the eastern Ethiopia. Similar items produced domestically often are unavailable and/or more expensive than their imported substitutes. Thirdly, cross-border trade widens non-pastoral employment opportunities in zones of chronically high unemployment. The absence of alternative employment in the border areas compel many people to engage in cross-border trading, in order to earn income to purchase food

A critical indicator to examine for food security in the border areas is the terms-of-trade between what herders receive for their products (livestock) and what they must pay to purchase needed grains (for example, maize flour and sorghum). Marketing patterns and incomes from livestock trade provide good indications of the conditions of the pastoral sector and of local food security. Real income to the pastoralists is a function of their sales (livestock) and their major purchases (grain). Livestock marketing is critical for understanding food security in these areas because it is the main source of income to subsidize grain consumption. Not surprisingly, combined purchases of maize grain and flour account for the largest expenditure item for herders in the region.

It should be noted that livestock prices show strong seasonal variations and fluctuate by as much as 50 to 60 percent during any single year. Nonetheless, based on available data livestock prices in the border region show considerably less volatility than prices for grains and cereal products, which for most Somalia border markets are imported from outside. As noted earlier, the Somalia border areas are major grain-deficit zones. Prices for imported wheat flour and rice can vary by as much as 250 percent in only a few months in high-risk Somalia markets, like Kismayo or Dinsoor. Unlike the livestock trade that often avoids roads and major markets, food trade can be easily disrupted by road blockades, looting, and armed conflict.

Throughout the study region the terms-of-trade for herders has deteriorated, as increases in grain prices have generally outpaced livestock prices. For instance, in three selected markets of the Afar region near the Djibouti border the terms of trade between livestock and grain shows that there has been a consistent decline. The overall drop during five years was more than 80 percent. In other parts of eastern Ethiopia, the decline in the terms of trade has ranged from about 11 to 50 percent in Jijiga and Hartishiek to about 28 to 66 percent in Kebribeyah, eastern Ethiopia during the same five year period (1995-1999). Price data show that declines are higher for locally supplied maize than for rice, which is imported unofficially across the border. The problem is more severe in the Afar region where cross-border market access is limited in comparison to the Ethiopia-Somali region.

Assessments of two other border areas, Somaliland/eastern Ethiopia and southern Somalia/northeastern Kenya, highlight the critical role of cross-border trade in regional food security. The most graphic illustrations deal with events that dramatically disrupt cross-border trade, including government border closures, widespread conflict, severe climatic events, or in the case of Somaliland the loss of a key export market. For example, during the Saudi Arabia ban on livestock exports in 1998-1999 it is estimated that cross-border commerce along the Somaliland/Ethiopia border was reduced by about 30 percent (Steffen et al. 1998). The export of animals that were critical for financing the import of rice, wheat flour, cooking oil, and pasta declined considerably. This reduction meant that Ethiopian consumers on the other side of the border were adversely affected along two fronts: their livestock prices declined while prices of imported foods (which were largely financed by livestock exports) increased. It should be noted that there already is evidence that the new ban imposed by Saudi Arabia is having similar impacts on trader and herder incomes and regional food security (see UN Office for the Coordination of Humanitarian Affairs 2000).

Table 6 shows the exchange value of livestock during 1997-1998 at three different markets in Somaliland, all of which are important in cross-border trade. Local currency equivalencies are used and five key foods that figure in cross-border trade are tracked: rice, wheat flour, pasta, rice, maize, and sorghum. As the table shows, the terms of trade between livestock and food commodities worked against the herder at every market. In some cases, the food equivalency from the sale of one small stock declined as much as 38 percent during 1998. For a herder in Borama a goat or sheep bought 79 kg of wheat flour in 1997, while it only purchased 49 kg in 1998. Prices for foods at Berbera, the export market furthest from the border, are the highest but changes in livestock-food equivalencies were less than

elsewhere. For imported foods that come through Berbera port, the terms of trade equivalent in livestock changed very little during 1997 and 1998, while the declines were substantial at the border markets of Togwajale and Borama. It is important to note that the border market, Togwajale, which is most distant from Berbera port—suffered the worst terms for small stock sales among the three markets, especially relative to imported foods. It is located along the Ethiopian border where prices for import foods are highest and livestock prices are lowest. However, prices of local foods—maize and sorghum—are lowest at the border, but most Somalis prefer rice in their diet.

Table 6. Terms of Trade between Small Stock and Foodstuffs in the Somaliland Border Markets, 1997-1998: The Effects of the Export Embargo and Decline in Cross-Border Trade

Exchange Equivalencies from sale of one small stock (export quality):

| Food Item | Berbera (in kg) | | Borama (in kg) | | Togwajale (in kg) | | Range of Change 1997-98 |
|-------------|-----------------|------|----------------|------|-------------------|------|-------------------------|
| | 1997 | 1998 | 1997 | 1998 | 1997 | 1998 | |
| Maize | 67 | 53 | 89 | 66 | 68 | 52 | -21 to -26 % |
| Wheat flour | 54 | 54 | 79 | 49 | 37 | 30 | 0 to -38 % |
| Rice | 55 | 55 | 54 | 39 | 37 | 30 | 0 to -28 % |
| Sorghum | 60 | 51 | 69 | 58 | 88 | 55 | -15 to -38 % |
| Pasta | 28 | 28 | 25 | 16 | 19 | 15 | 0 to -36 % |

Notes: Based on FEWS/FSAU market data, 1997-1998.

The El Nino catastrophe of late 1997 and early 1998 is another event that highlights the key role that cross-border trade plays in local and regional food security, in this case in the southern Somalia borderlands. Once again, we can analyze livestock exchange rates for a bundle of key cross-border commodities, in this case wheat flour, maize, rice. Here the disruption to cross-border trade was concentrated in about a four-month period, so it is important to observe monthly and weekly market data rather than only annual trends.⁶ Table 7 shows the incredible impact that the climatic events of late 1997 had on local food markets in the border market of Bulla Hawo, and what happened to the terms of trade for herders in the area. From September 1997 to December 1997 the livestock sales equivalencies for maize, wheat flour, and rice declined 79, 53, and 61 percent, respectively. Thus, a herder who sold a head of cattle in September 1997 could purchase 298 kg of maize, but in December it was only 64 kg. For an average family of 8 members who depended on livestock sales for their

⁶ Weekly market data are available and are a better source for showing drastic disruptions to markets, but to keep the analysis simple monthly aggregates were used.

maize consumption, this was equivalent to a per capita decline in food availability from 37.25 kg to 8 kg.

Table 7. Terms of Trade between Cattle and Food Products, Bulla Hawo Border Market Exchange Equivalencies from sale of one head of cattle (medium quality-2):

| Food | (Kg) 1997 | | | | (Kg) 1998 | | | Range of Monthly Change |
|-------------|-----------|-----|-----|-----|-----------|-----|-------|-------------------------|
| | Sept | Oct | Nov | Dec | Jan | Feb | March | |
| Maize | 298 | 221 | 133 | 64 | 238 | 256 | 369 | 26 to 272 % |
| Wheat flour | 162 | 115 | 58 | 76 | 115 | 47 | 170 | 31 to 262 % |
| Rice | 143 | 132 | 77 | 56 | 131 | 129 | 176 | 2 to 134 % |

Notes: Based on FEWS/FSAU market data, 1997-1998.

With the floods and the disruption of cross-border links, the price of cattle also declined during these months. This deterioration further damaged herder economies of the area, and increased their vulnerability to food shortages and hunger. As the rains subsided and international food aid became available in the area, food prices began to decline in early 1998. A massive airlift of food aid occurred in southern Somalia during January to February 1998, but not before hundred individuals had perished. By March 1998 the terms of trade for local herders had improved to the point that the equivalency rates for cattle, vis-a-vis the three food items in Table 7, were actually better than during pre-flood months. The last column in the table shows that changes in monthly food equivalencies were as high as 272 percent for particular foods in certain months. These wide swings in prices show how volatile the market can become when trade is disrupted.

In sum, although there exists a potential for cross-border trade to enhance food security in the pastoral areas of eastern Ethiopia borderlands, the distribution of the proceeds of livestock sales is biased in favor of non-pastoral agents due to weak spatial integration. Moreover, pastoralists face unfavorable terms of trade as a result of declining prices for their animals and rising prices of their major purchases. Therefore, to improve the food security situation in the area, broadening market access for both sales and purchases is required.

POLICY IMPLICATIONS

The materials presented in this paper show the extent to which cross-border trade drives the economies of the border region and areas well into the interiors of Ethiopia, Somalia, and Kenya. They provide telling evidence of how important cross-border trade is for the inhabitants of the border region and for consumers and producers located several hundred km from the borders. Examples from the comparative research program

show what happens to local incomes, food security, pastoral welfare, and local and regional markets when cross border commerce is disrupted. The critical question becomes what should governments and other parties do, if anything, to affect cross-border trade. What is particularly challenging is that because of its informal nature cross-border trade thrives in the absence of government interventions and policies, while punitive controls against it usually redirects the trade in unexpected ways.

Official Recognition of Its Importance

To address this issue the first tactic should be educational; that is, to acknowledge the extent of cross-border trade and its importance to local and regional economies. Throughout the study we have been surprised by the lack of understanding on the part of policy makers either of the scale (which is well above \$40 million annually in livestock exports alone at the four border sites) or importance of cross-border commerce, and their general sense that it because it is unofficial it should be stopped. The latter point assumes that it could be halted even if governments wished to do so. Evidence from other parts of the world with far more resources and infrastructure than Horn countries shows how hard this can be (for example, the cases of Iraq, South Africa, and Mexico). Policies that acknowledge and encourage regional trade across borders—rather than discourage it-- would capitalize on comparative advantage for different local and national economies; strengthen local food security; increase collection of state revenues and investments in key market and transport infrastructure; and reduce price volatility and market imperfections. By recognizing the importance of cross-border trade rather than discouraging it, the government could greatly expand its own revenue through customs and tax collection.

The data contained in this paper and in the case studies of the BASIS/OSSREA Cross-Border Project represent a unique data set for policy dialogue. Official trade statistics of governments and international bodies (e.g., FAO and World Bank) contain only vague estimates of the importance of cross-border trade to local, regional, and national economies. As a start, discussions of cross-border trade and its importance should be encouraged at the border sites themselves (among customs and government officials of relevant countries), national ministries, and in regional bodies, such as the Inter-Governmental Authority for Development (IGAD). The policy dialogue must occur at these three levels because: (1) the local officials are ‘on the ground’ in these sites and can play a key role in encouraging/discouraging policies—the isolation of many of these sites means that local officials have some degree of autonomy; (2) national officials and diplomats must be involved because it requires international agreements and dialogue with other states, and because domestic policies have a direct effect on cross-border trade; and (3) IGAD’s involvement is required because it is one of the few organizations in the region with a cross-border mandate and with priorities focused on trade and improved transport links between member states. These three different levels of institutions need to be involved in policy discussions about cross-border trade.

A second policy strategy would call for a series of workshops starting initially in selected border regions and national capitals at the bilateral level, and then moving to a

series of regional meetings sponsored by IGAD (or even the OAU) or COMESA. At these meetings general agreements would have to be reached on practical actions to encourage regional trade. These might include: investment plans between and within countries for needed market and transport infrastructure; regional price and market information and monitoring systems; agreements on or reductions of tax and tariff levels; liberalization of currency controls and exchanges (which in practice do not operate anyway); licensing and insurance agreements between member states, so traders could move goods from one market to the next without cumbersome fees, regulations, and harassment. Without these kinds of agreements, individual governments will lose potential revenues and local economies will be vulnerable to periodic border closures and market instability. Regional integration would help to create a common market for a wide range of goods and services.

Already there is recent evidence that some border countries of the Horn are in negotiations on encouraging cross-border trade in livestock (see *Daily Nation*, November 9, 2000), as well as relaxation of restrictions on petty trade in the border areas (e.g., Ethiopia). Bilateral discussions of this kind are important, as are multilateral meetings to ventilate differences and discuss benefits and costs of different cross-border initiatives. Not all parties will share equally from different policies and some states may lose valued foreign exchange if a critical official export, such as coffee in the case of Kenya and Ethiopia, is redirected to informal channels. Moreover, states with strong domestic manufacturing capacity also will be resistant to unofficial trade in tariff-free manufactured goods, third party imports that usually originate from Asia.

Improve Infrastructure and Communications

Roads and transportation facilities are generally lacking to and from many border markets, as are most other important infrastructure. The study has shown that the lack of infrastructure greatly increases transaction costs and inefficiencies, and that a lack of communication facilities leads to poor dissemination of market information.

Enhanced Security

The absence of security in many of the border areas is a strong impediment to efficient trade and often results in banditry, violence, and the attraction of criminal elements into the trade. It also greatly distorts markets and significantly reduces incomes for the poorest populations of the region, especially pastoralists. The study has shown the downward effect that insecurity has on producer prices for livestock. Without improved security, required investments in infrastructure, veterinary services, and communication facilities will not be possible.

Importance of Veterinary Services

The recent bans on livestock exports from the Horn region highlights the overwhelming importance of improved veterinary services in border areas. It is not expected that governments will have the resources to implement major investments in

veterinary infrastructure but there are smaller, perhaps more effective measures that can be taken. Our study has shown that traders are willing to pay for veterinary services and drugs, but that they often are limited in their availability. Efforts should be made to support para-veterinary efforts in the region. They have the potential to play critical roles in supplying services to herders and cross-border traders, and are means to combat disease epidemics before they devastate local and regional economies. Official recognition of cross-border livestock trade would also enable the development of other support agents, such as water providers and veterinary drug suppliers, so that they could operate in a more efficient manner.

Improve Market Access and Equity

The official recognition of cross-border trade would attract more traders to the business. Such increased competition would depress the marketing margin in favor of producers (herders) and ultimate consumers; that is, producer prices would rise and consumer prices would decline. Other things being constant, the food security situation, among these groups also would be enhanced as a result of increased market access and improved incomes for pastoralists. By contrast, trade restrictions would greatly limit pastoral incomes, which are required to purchase needed grains and other foodstuffs.

Given the importance of livestock to livelihoods in the region, the performance of livestock markets substantially affect welfare. However, our study showed that with one possible exception markets in the area were not well integrated based on simple correlation and regression results. Due to the absence of spatial integration in different markets, selective intervention is required to maximize benefits for all actors involved in cross border trade. In addition, in the case of the eastern Ethiopia borderlands, lack of access to cross-border livestock markets, may exert pressure on rangelands and may induce diminishing returns if other alternatives, such as domestic and official export livestock trade, cannot fill the gap. We are already seeing the strong environmental effects from overstocking in the Somali region of Ethiopia as a result of the Saudi ban.

Effects of Economic Reforms

Recent developments in Ethiopia to legalize small-scale cross-border trade between Ethiopia and Djibouti, as well as between Ethiopia and Northern Somalia could provide relevant models for other border areas. The government has recognized informal cross-border petty trade since 1998. In identifying the items that could be traded tariff free, the trade policy focused on those goods (vegetables, grains, and prepared foods) that are used by people in the borderlands and at the same time do not impact on the country's large-scale foreign trade. For instance, the prohibited commodities are those traded in the large-scale official trade that are key sources of foreign exchange. Ethiopian items excluded in the Djibouti and Somaliland trade are (i) Oil seeds, (ii) Coffee, (iii) Chat, (iv) Hides and skins, (v) Live animals, (vi) Pulses, (vii) Live wild animals, (viii) Ancient and National Heritages, and (ix) other items that are not produced in Ethiopia. The arrangement also ensures that items produced in Djibouti have improved market access in Ethiopia by allowing traders to import salt and fish free of tax. Commodities included in

this direction of trade are said to be those consumed by people in the border area and that are not supplied by domestic industries or official large-scale import. Since the maximum value of trade items carried by a trader in a single trip is Birr 2000 (about US \$55), many traders involved in cross-border are not enthusiastic about the petty trade policy because of the restrictions on volume. The policy presently has little impact on large scale traders and importers.

Government controls on cross-border trade can bring about substantial declines in the production of exportable commodities if they are not complemented by favorable macroeconomic environment. The unofficial export trade from Ethiopia is more on re-exportables such as livestock and to some extent coffee. Liberalization measures in the country were able to redirect the coffee trade to official channels. The dependence on these items by the neighboring countries for their foreign exchange earning is the most important factor. Accordingly, these countries have been paying better prices compared to domestic alternatives. The impact on the livestock trade, however, is very minimal.

In sum, regional trade collaboration between states would bring about important impacts if it focused on such issues as harmonization of fiscal and monetary policies; the control of livestock diseases (RVF), insecurity, and uncontrolled imports of third country origin; and the strengthening infrastructure in the borderlands. While many individual states fear the potential loss of national food self-sufficiency and government revenues from increased cross-border trade, this study shows that potential government revenues and contributions to food security can be increased through cross-border trade.

REFERENCES

- Addou, Sidow I. And Mahdi Gedi. 1999. Trip Report on Cross-Border Trade between Somalia, Ethiopia, and Kenya. Nairobi, Kenya: Famine and Early Warning Systems (FEWS).
- Barrett, C., Peter D. Little, D. Bailey, F. Chabari, and K. Smith. 1998. How Might Infrastructure Improvements Mitigate the Risks Faced by Pastoralists? **Ruminations:** Newsletter of the Global Livestock Collaborative Research Support Program, Fall, Pp. 1-10.
- Daily Nation*, Nov. 9, 2000, 'Livestock to move freely across Borders,' Nairobi, Daily Nation Newspaper.
- Ensminger, Jean. 1992. *Making a Market: The Institutional Transformation of an African Society*. Cambridge: Cambridge University Press.
- Famine and Early Warning Systems (FEWS). 1997. 'Regional Trade Important for Increasing Food Security.' *Special Report 97-1*, February 26, 1997.
<http://www.fews.org/fb970225/fb97srl.html>
- Gessesse, Belay. 1996. 'General Overview of Economic Cooperation in the Horn of Africa,' in: *Trading Places: Alternative Modes of Economic Cooperation in the Horn of Africa*, Pp. 1-28. Horn Africa Series 2. Uppsala, Sweden: Life and Peace Institute.
- Guvele, Cesar and Sue Lautze. Nd. *Unofficial Cross-Border Livestock Exports from Southern Sudan to Kenya*. Boston, MA: Feinstein International Famine Center, Tufts University.
- Kenya, Government of. 1995. Garissa: District Development Plan, 1994-1996. Nairobi, Kenya: Government Printers.
- Little, Peter D. 1996a. *Livestock Trade and Food Security in the Kenya/Somalia Borderlands*. Binghamton, NY: Institute for Development Anthropology.
- _____. 1996b. "Conflictive Trade, Contested Identity: The Effects of Export Markets on Pastoralists of Southern Somalia." **African Studies Review** 39(1): 25-53.
- _____. 2000. *Cross-Border Livestock Trade and Food Security in the Northeastern Kenya and Southern Somalia Borderlands*. Madison, WI: Land Tenure Center, University of Wisconsin BASIS CRSP.
- Little, Peter D. and Catherine S. Dolan. 1994. *Labor Relations and Trading in the Peri-Urban Areas of Banjul, The Gambia*. Binghamton, New York: Institute for Development Anthropology.

Nobera, Epitece. 1998. *Food Comodity Cross-Border Trade Between Uganda, Southern Sudan, Congo, Rwanda, and Tanzania*. Kampala, Uganda: FEWS Project.

Steffen, Phillip, A.H. Shirwa, and Sidow I. Addou, with contributions from Mahdi Gedi Qayad. 1998. *The Livestock Embargo by Saudi Arabia: A Report of the Economic, Financial, and Social Impact on Somaliland and Somalia*. Washington, DC: FEWS Project.

Teka, Tegegne, Alemayehu Azeze and Ayele Gebremariam. 1999. *Cross-Border Livestock Trade and Food Security in Southern and Southeastern Borderlands of Ethiopia*. OSSREA Development Research Report Series no.1. Addis Ababa: Organization for Social Science Research in Eastern and Southern Africa.

Teka, Tegegne and Alemayehu Azeze. 2001. *Cross-Border Trade and Food Security in the Horn of Africa: The Case of the Eastern Ethiopia Borderlands*. OSSREA/BASIS CRSP Project on Cross-border Trade and Food Security in the Horn of Africa. Addis Ababa, Ethiopia: OSSREA.

UN Office for the Coordination of Humanitarian Affairs. 2000. "Ethiopia: Ogadeen Livestock Traders hit hard by Ban." [Http://www.reliefweb.int/w/rwb.nsf/48fa](http://www.reliefweb.int/w/rwb.nsf/48fa).