Livestock marketing channels, flows and prices in West Africa

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Key points

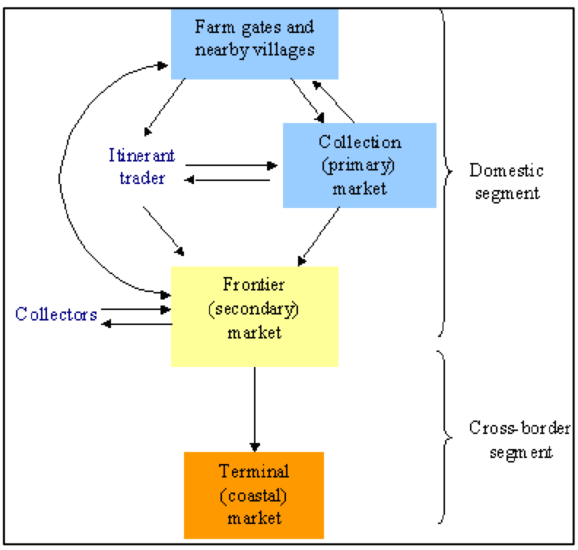
- Small-scale itinerant livestock traders are key market players in livestock exporting countries (Burkina Faso, Mali and Niger), typically purchasing five to six animals per trip at farm gates to bring to frontier markets. Working capital is a limiting constraint as payments are usually made in full and in cash at the time of purchase.
- Cross-border livestock trade is less competitive than domestic trade within exporting countries and this results in large export traders earning economic rents estimated at about US$ 11.9 million per year for cattle exports from Burkina Faso and Mali alone.
- Cross-border transportation costs are twice as high as domestic transportation and handling costs despite better trans-border highway and railroad infrastructure.
- Livestock flows indicate that producers and traders use what they consider to be the most profitable marketing channels. For producers, profits are influenced by the proximity of markets and availability of information on livestock prices.
- The bulk of livestock trade and the highest prices paid occur between April to September. Trade continues throughout the year, though cattle numbers and prices decrease from October to March.
- Export traders pay a premium for large, castrated zebu cattle in excellent physical condition. Producing such premium grade of livestock would provide an additional 34% beef, potentially increasing the value of cattle trade by 39% (US$ 50 million) per year from the same number of animals.
- Increased investment in fattening schemes could help bridge seasonal supply gaps (from October to March) and increase returns to intra-regional trade.
- Poor dissemination of market information allows livestock traders to dictate prices, especially at farm gates, creating a disincentive for increased livestock production.

In 2000–01, the International Livestock Research Institute (ILRI) carried out a study to identify economic, institutional and policy constraints to cross-border livestock marketing in West Africa conducted under the policy research component of the Common Fund for Commodities funded project "Improvement of Livestock Marketing and Regional Trade in West Africa". Frontier livestock markets—markets that are strategically located along the border of neighbouring countries to ease cross-border trade—in Mali (Sikasso) and Burkina Faso (Bittou and Niangoloko) were studied to identify livestock marketing channels from farm gates to terminal markets in the coastal countries of Côte d'Ivoire, Ghana and Nigeria. Economic operators and livestock flows within these channels were also examined along with seasonal variations and other factors affecting livestock prices. The findings, summarised in this brief, indicate that producers and operators can realise significant economic benefits by increasing meat production and livestock trade value through improved credit access and better market information.

Livestock marketing channels

Small-scale rural producers who sell their animals to itinerant livestock traders at the farm gate are at the apex of West Africa's livestock marketing channels. Collection markets—centrally located rural markets that serve groups of villages—are occasionally used by small-scale producers to sell animals and to purchase breeding and fattening stock as well as traction animals (Figure 1). Itinerant traders also use them to sell to export traders or make additional purchases for disposal at secondary (frontier) markets. Frontier markets provide a location for regrouping animals purchased upstream for export and for making purchases by both export traders and market agents (collectors), who also buy and resell animals for profit. Domestic livestock marketing ends at this point, while the cross-border segment extends to the terminal (coastal) markets in Côte d'Ivoire, Ghana and Nigeria.

Figure 1. Livestock marketing channels in West Africa.



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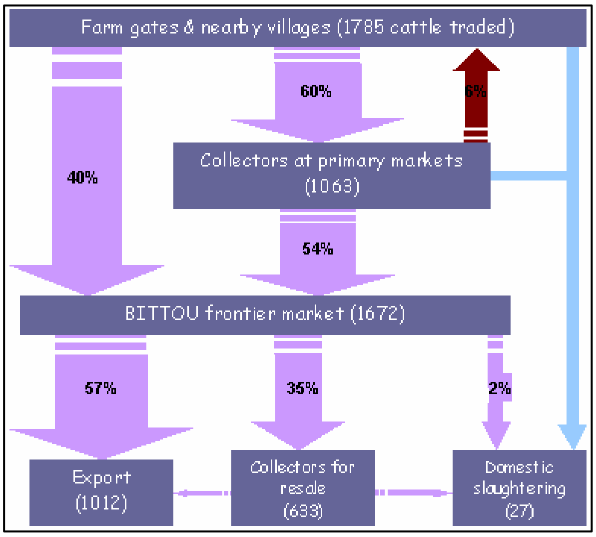
Livestock flows

Domestically, free trade ensures that the flow of livestock reflects efforts by both producers and traders to market their animals through the most profitable channels. Marketing channels for all three frontier markets were similarly organised, though important variations exist in the size of livestock flows.

A total of 1785 cattle transactions were recorded in Bittou, 2230 in Niangoloko and 7404 in Sikasso frontier livestock markets during weekly visits from January 2000 to June 2001, with export cattle accounting for 61% of transactions in Bittou (Figure 2), and 57% in Niangoloko, compared to 71% in Sikasso (Williams et al. 2004).

Figure 2. Cattle flows through the Bittou (Burkina Faso) livestock frontier market, January 2000 to June 2001 (Sky blue arrow shows existing marketing channels not investigated).



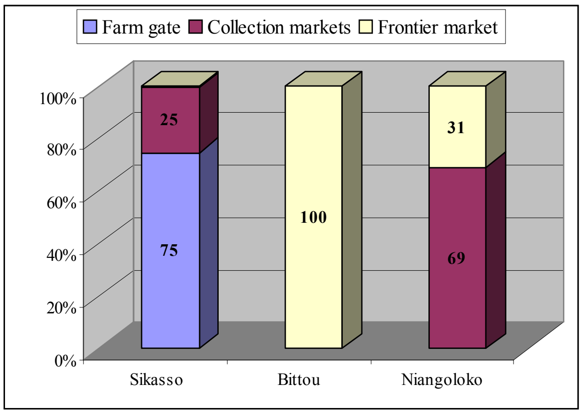
Trade arrangements vary throughout the region. All cattle for cross-border trade were purchased at the frontier market in Bittou, for example, whereas in Sikasso, most of the cattle for export were purchased at the farm gate and collection markets (Figure 3).

Farmers receive more money by taking their animals to frontier markets and prefer to do so where farm gates are less than a day's trek from these markets, as in the case of Bittou with the highest proportion of cattle sold directly by farmers at frontier markets. In Sikasso, producers can sell a 250 kg cattle for 96,700 FCFA[1] compared to the farm gate price of 89,500. FCFA. Average farm gate price for the Niangoloko frontier market was 83,500 FCFA.

Producers, therefore, benefit more by doing business directly with export traders, whereas with transactions that take place at the farm gate (Sikasso and Niangoloko) traders are likely to dictate prices. The availability of regular, reliable livestock market information at the farm gate could empower producers and increase their incomes.

[1] *During the write up of this brief, US$ 1 = 550 FCFA.*

Figure 3. Sources of export cattle traded through Sikasso (Mali), Bittou and Niangoloko (Burkina Faso) frontier livestock markets, January 2000 to June 2001.



Economic agents in livestock marketing channels

Small-scale itinerant livestock traders are key players in the domestic segment, especially at farm gates and collection markets. These traders typically buy five to six cattle per trip and have a capital base of about 500,000 FCFA. Medium-scale traders who purchase 10 to 16 cattle per trip dominate the channel between collection and frontier markets. In Sikasso and Niangoloko, large, export (cross-border) traders, to a certain extent, also operate in the hinterland at the farm gate and collection markets in addition to their activities at the frontier markets. Export traders tend to purchase about 35 cattle that constitute a truckload. The capital outlay required to market a truck of cattle from the Sahel to the coast is about 4.4 million FCFA.

As livestock move through these channels, the following events unfold:

- Trading on credit increases: Payment for all purchases at the farm-gate is usually made in full and in cash at the time of purchase. Occasionally, traders provide cash advances to small-scale producers, thereby locking them into contracts to ensure steady supplies. At the frontier market, however, a combination of cash and credit payment is used. Roughly, 24% of all transactions in the frontier markets examined were completed on credit, 56% using a combination of cash and credit, and the remaining 20% in cash. Working capital, therefore, becomes a limiting constraint for itinerant traders who mainly operate at the farm gate.
- Road infrastructure improves but cost of transportation more than doubles: Animal trekking is the predominant mode of domestic transportation due to poorly developed rural road infrastructure. Road and rail infrastructure improves significantly for cross-border transportation. However, the average cost of 48 FCFA per km to transfer the equivalent of one tonne of beef in Burkina Faso between Djefoula's farm gates and Niangoloko increased to 172 FCFA per km between Niangoloko and Abidjan (Côte d'Ivoire) despite better infrastructure. Similar domestic transfers from Niena to Sikasso (Mali) and Tenkodogo to Bittou (Burkina Faso) cost 88 FCFA and 40 FCFA respectively compared to corresponding cross-border costs from Sikasso to Abidjan (153 FCFA) and Bittou to Accra (83 FCFA). The

increased cost is, in part, due to documentation costs, high fuel taxes and illegal road taxes paid for cross-border transfers (Brief 3). Trekking animals as far as possible before trucking/railing is, therefore, a cost effective marketing strategy, particularly as truck transport in the past, when highways were less developed and less adapted trucks were used to transport animals, was frequently associated with mortality, forced sales, and animal weight shrinkage than export on the hoof (Delgado 1980). However, the trekking option is increasingly threatened by growing population and associated agricultural expansion, which encroach upon existing stock routes—routes which are specifically created to facilitate movement of animals and provide easy access to water to prevent damage to crops and property. Agricultural expansion also effectively limits the chances of developing new stock routes. Policies are needed that lower cross-border transportation costs and to develop and protect new and existing stock routes.

- Competitive behaviour declines among livestock traders: Significant competition takes place between all livestock traders in the domestic market. However, large traders in the cross-border segment have little competition due to the high capital investment required. Marketing margins for traders in the domestic segment ranged from 2.7 to 5.5% of the final animal cost compared to 11.6 to 14.3% in the cross-border segment (Brief 4). This results in an estimated economic rent of 6.5 billion FCFA per year accruing to large export traders engaged in cattle exports from Burkina Faso and Mali alone. This suggests that availability of credit to small-scale livestock traders could be a valuable option for improving market performance.

Seasonal variation in flows and prices

There are two livestock trade periods: peak (April to September) and off-peak (October to March). Both the number of transactions and the prices offered per kg liveweight increase during the peak relative to the off-peak season.

Figure 4. *Cattle transactions in Sikasso, Bittou and Niangoloko frontier livestock markets, June 2000 to June 2001.*

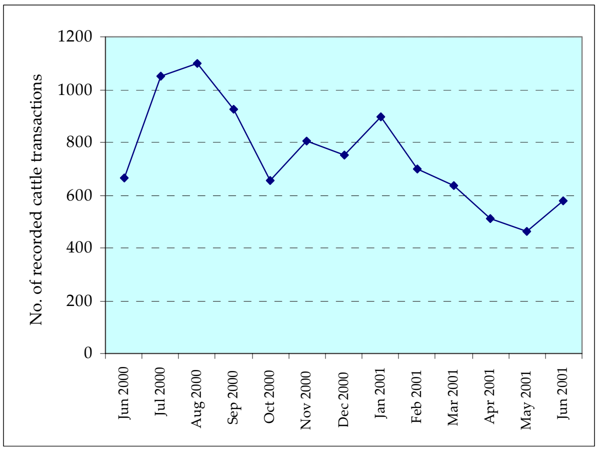


Table 1. *Seasonal variation in prices of cattle in Sikasso, Bittou and Niangoloko frontier livestock markets (peak and off-peak sales periods).*

Market	Average price per kg (FCFA)	
	Peak sales period	Off-peak sales period
Niangoloko	367	321
Bittou	415	379
Sikasso	379	377
Average	378	350

Average prices/kg differed between peak and off-peak periods at 0.001 per cent level of significance (See main report for details).

Livestock fattening to boost supply: Recorded cattle transactions reached their peak in August 2000. Sales of animals were about twice as high during the peak period compared to the off-peak (Figure 4). In 2000, beef was produced at a world price of US$ 1,900 per tonne (World Bank 2001) and at US$ 2,500 and US$ 3,100 for the United States and European Union markets respectively (Boutonnet et al. 2000). West Africa's production system depends almost entirely on natural pasture and can thus produce beef at a globally competitive price of US$ 1,500 per tonne. The relatively abundant feed supply during the rainy and harvest seasons coincides with the higher supply of animals during the peak sales period indicating that the volume of flow of animals is affected more significantly by production constraints than demand. Encouraging feeding and fattening strategies targeted at boosting the supply of export animals during the off-peak (dry) season can bridge the seasonal supply gap.

A strong demand: Even when supply was at its highest during the peak sales period, prices did not drop but continued to increase, indicating a strong and sustained demand. In Niangoloko and Bittou, prices offered during the peak sales period per kg liveweight of cattle were higher by 45 and 36 FCFA respectively (Table 1), partly due to the premium paid on animals in excellent physical condition (Figure 5).

Weak livestock price transmission: Analysis of weekly livestock prices among market pairs in the study area confirmed that transmission of livestock price information is poor. Providing up-to-date market information through radio, TV, posters, newspapers, etc. to economic actors in the supply chain is an important strategy to improve livestock marketing and trade.

What do traders value?

Biological characteristics including age, sex, body condition and breed were gathered for the 11,419 recorded cattle transactions in all three frontier markets. Results indicate that export traders paid a premium for large, castrated zebu cattle in excellent body condition. Prices paid per kg liveweight ranged from 200 FCFA for very lean cattle (197 kg) to 475 FCFA for an average liveweight of 340 kg (Figure 5). Only 14% of the cattle traded were in excellent body condition.

It is estimated that a 34% increase in beef quantity (liveweight) could be obtained from the same number of animals if all traded cattle were raised to excellent body condition. Given the premium paid for high grade animals, a 39% increase in the value of cattle trade could be achieved without increasing the number of traded cattle.

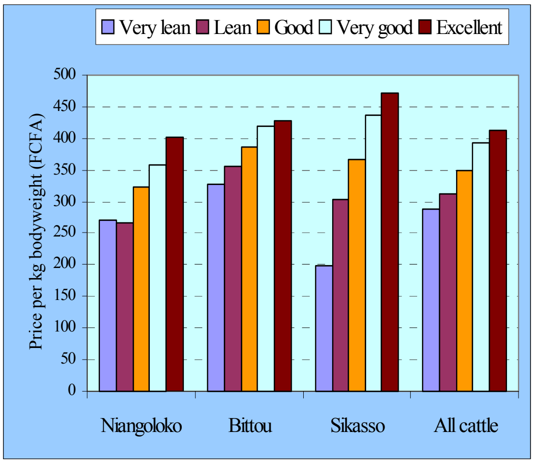
This series of four briefs (available in English and French) summarizes the key findings of the policy research component of a CFC funded project "Improvement of Livestock Marketing and Regional Trade". The objective of the policy research component was to analyse the economic, institutional and policy constraints to livestock marketing and trade in order to provide a basis for new policy interventions to improve market efficiency and intra-regional livestock trade. The study involved six countries namely: Burkina Faso, Mali and Niger as examples of livestock exporting countries and Côte d'Ivoire, Ghana and Nigeria as net importers of livestock.

For example, 523,000 cattle were traded in the Central Corridor in 2000. If these had all been in excellent condition, an additional 17,000 tonnes of beef could have been produced increasing the cattle trade value from US$ 150 million to US$ 208 million in that same year.

Fattening needs to be boosted: Recent studies in Mali show that fattening schemes are profitable, with benefit/cost ratios of 1.85 and 4.08 for large and small-scale cattle fattening operations (Diarra 1997). Fattening schemes can:

- boost producers' incomes
- increase the value of livestock trade
- improve beef supply during the off-peak season by feeding animals strategically throughout the year
- advance production towards achieving exportable surplus and participation in the lucrative global market for tender red meat (assuming sanitary and phytosanitary (SPS) requirements and technical regulations such as packaging and labelling are met).

Figure 5. *Body condition rating and prices (FCFA/kg liveweight) offered for cattle traded in Sikasso, Bittou and Niangoloko.*



Conclusions

There is much potential to increase the value of livestock trade in the Central Corridor of West Africa. This could be achieved, in part, through the following policy actions:

- increase credit availability to livestock traders to improve competition and market performance in the cross-border segment
- protect existing stock routes and develop new routes in recognition of their role as an efficient livestock transport network
- reduce the high costs of cross-border transportation (Brief 3)
- encourage dry season livestock fattening schemes, especially among smallholders where it is more profitable and likely to have widespread positive welfare impacts
- develop additional secondary markets to offer producers more marketing choices (channels) within a reasonable distance
- develop a regional network of livestock market information systems by restructuring and strengthening the capacity of existing ones and establishing new ones in strategically located frontier markets.

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