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Introduction

1. The Lesotho cattle industry is characterized by overstocking, range degradation, low marketed offtake, low fertility, and high mortality. The overstocking situation is paradoxically accompanied by an ownership pattern which leaves many households with an insufficient number of cattle for draught purposes, and the absence of a large commercial beef sector. In this setting a number of analysts have suggested that the increased provision of market outlets would allow Basotho[1/] to sell 'surplus' culled animals which would in turn promote reduced stocking and increased productivity. Regardless of the effect of marketing on the stocking rate, the current low levels of commercial marketing may be symptomatic of certain structural flaws which limit market performance. Modifications of the marketing system may be in order to enhance performance. What form these modifications should take, and their likely consequences, are the policy issues addressed in this case study of the Lesotho cattle marketing system.

2. Four alternative conceptual frameworks are commonly employed in the analysis of cattle marketing in Africa. These frameworks can be grouped into two main categories:

   i) those which relate producer marketing decision to the overall production environment—marketing to meet cash needs, marketing of capital assets, marketing to promote commercialization of the cattle insutry; and

   ii) those which relate market structure and conduct to market performance.

3. Each framework had distinct implications for the design, implementation and evaluation of cattle marketing policy. As these implications are often contradictory, it is important that the makers and implementers of policy understand these frameworks and formulate policy on the basis of the most appropriate framework. In this paper a number of alternative conceptual frameworks are summarized, major implications drawn, and those implications analyzed for the particular case of Lesotho.

Historical background

4. The end of the lifaqane[2/] wars of circa 1818-1824 marked the beginning of the historical development of Lesotho under the guidance of Paramount

Chief Moshoeshoe I. Basotho rapidly expanded their cultivation of the fertile lowlands area of the country and traded surplus food grain for cattle and manufactured foods. Through trade, natural increase and cattle raids, Lesotho's cattle population expanded, reaching a peak in 1921. At the same time the sheep and goat populations also expanded; the goat population peaked in 1911, the sheep population in 1931. The 1930 to 1965 period was marked by large year-to-year fluctuations, but generally cattle and sheep herds declined while the goat herd increased. The early 1970s was a period herd construction, and the early 1980s another period of herd reduction (Figure 1).

5. While Lesotho has historically been a net importer of cattle, there have been four periods since 1900 when significant net exports have been reported. 1916-1920, 1930-1937, 1952-1955, and 1966-1974. Even in those years when net imports have been reported, exports have often been significant. Between 1933 and 1973, the average number of cattle exported each year was 10,516. Since 1973 exports have been at their lowest since the turn of the century (Figure 2).

6. Prior to Lesotho's independence in 1966 private traders dominated formal marketing channels for cattle. From the 1890s to 1920s the principal marketing channels were private traders — either itinerant traders called hawkers or fixed trading stations. Cattle were exported by the traders to South Africa where they were primarily used for draught purposes. During the same period large numbers were marketed directly to South African farms and South African butchers. In the 1930s a number of speculators became involved in the trade. These speculators either paid cash, traded young animals called tollies (two-year olds) and cash for older oxen, or traded two tollies for each old ox.

7. Between the late 1930s and early 1950s the Department of Agriculture operated the Livestock Auction Sales Scheme. Under this scheme the Department of Agriculture arranged auction sales in various locations throughout the country. The main buyers at these sales were South African private traders and speculators who in turn sold to South African butchers. In 1956 the Department of agriculture attempted to expand the auction sales scheme to be a one-channel marketing system. Under this system

all cattle leaving the lowland districts during the selling season of January to May were to pass through auction sales organized by the Department of Agriculture. By 1957 the system was terminated due to insufficient volume and low competition.

8. When the one-channel marketing system failed, private traders began organising auction sales on their own. Traders facilitated sales and provided the necessary infrastructure, but took no part in the actual buying and selling. The traders were paid flat commissions for their services. The cattle were exchanged for either cash alone or for young animals with a cash adjustment. Private traders palyed a major role in the marketing system until 1971.

9. Cooperative marketing societies first became involved in the marketing of cattle in 1956. Unlike the private traders, cooperative marketing societies weighed and graded the cattle, then sent them on a consignment basis to South African markets. Individual cooperative marketing societies operated under the umbrella of the Basutoland Cooperative Banking Union (BCBU).

10. Leading up to and especially since indepence, Lesotho has experienced a move from private trade in livestock towards more government involvement. In 1963 the registration of the BCBU was cancelled and the Finance and Marketing Cooperative Union of Basutoland (FMCUB) took over its assets and liabilities as a parastatal marketing agency. The FMCUB marketed modest numbers of cattle until 1971 when the Lesotho Farmers' Produce Marketing Corporation (LFPMC) was established. The LFPMC was a government controlled company under which frequent livestock auction sales were held at locations around the country. The LFPMC became the sole agency through which livestock could be exported or imported across Lesotho's borders.

11. The Livestock Marketing Corporation (LMC) was established in 1973. It took over the functions of the LFPMC in the marketing of live animals and also became involved in the marketing of wool and mohair. When the LMC ceased operations in 1980, most of its functions were transferred to the Livestock Products Marketing Service (LPMS). The LPMS was established as a result of the LMC not fulfilling the objectives set for

it. Wool and mohair producers had lost confidence in the LMC and were selling their wool and mohair to private traders. The LPMS is now the government agency responsible for facilitating farmer marketing of livestock and livestock products.

12. The National Feedlot was opened in early 1983 and the National Abattoir in late 1985. Both are public corporations and operate under common management. The LPMS, the National Feedlot, and the National Abattoir now dominate the formal cattle marketing system in Lesotho.

An Overview of the Current Production — Marketing System

13. Lesotho is now populated by 522,125 cattle, 1,412, 188 sheep, 1,028,625 goats, 110, 438 horses and 11,726 donkeys. Feed for these animals is primarily derived from grazing on communal rangeland in the summer and autumn and harvested arable land in the winter and spring. Livestock are often placed under great nutritional stress due to inadequate grazing and low levels of supplemental feeding. This nutritional stress results in low production of animal products, low reproduction and high mortality. Reproduction and mortality/slaughter data are shown in Table 1. While there are obvious inconsistencies, especially in the goat data, it is apparent that low reproduction rates have resulted in a decline in the total cattle population since 1980/81. Reproduction rates for sheep and goats, while low, have been high enough to generate net herd increases over the five-year period.

14. Range management experts charge that the current range control institution using grazing permits allocated and regulated by the chiefs has resulted in essentially unrestricted access to the range resources, and warn that this has led to extreme overstocking. The current estimate of the carrying capacity of Lesotho's range varies between 147,182 and 255,166 animal units depending on the percentage dry weight and percentage utilization assumptions used (Range Managment Division, unpublished data, 1986). When compared to the estimated livestock population of 1,210,106 animal units, this indicates overstocking of at least 400 percent. Continuing encroachment of unpalatable forage species and a further degradation of the soil base are suspected to be the results of this overstocking.

15. Basotho stockowners are linked into a cattle marketing system which also includes butchers, the Livestock Products Marketing Service, the National Feedlot, the National Abattoir, South African farmers, South African feedlots, and consumers.

16. Apart from own-herd offspring, Basotho cattle owners acquire animals through purchases and gifts. Of all animals purchased approximately one-third represent additions to the Lesotho national herd, the remainder are transfers between herds. Gifts also redistribute the national herd.

Table 1. Reproduction and mortality/slaughter statistics for Lesotho's cattle, sheep and goat populations—1980/81 - 1984/85.

	1980/1	1981/2	1982/3	1983/4	1984/5
Cattle					
Total herd size	589,975	562,372	537,517	529,125	522,125
Number of females (2 years & above)	291,752	280,074	263,547	250,500	247,406
Number of calves	38,155	42,010	54,361	58,000	40,438
Calves/female (%)	13	15	21	23	16
Total death or slaughter	58,053	74,601	80,625	85,282	89,412
Sheep					
Total herd size	1168,404	1337,448	1279,499	1280,975	1412,188
Number of females (1 year ' above)	691,316	719,721	707,089	727,575	777,031
Number of lambs	231,987	253,550	312,979	309,625	327,438
Lambs/female (%)	34	35	44	43	42
Total death or slaughter	147,019	119,949	217,600	234,594	245,051
Goats					
Total herd size	766,535	930,413	872,145	856,900	1028,625
Number of females (2 years & above)	444,964	528,350	479,550	504,925	582,562
Number of kids	161,610	222,088	227,363	184,000	242,250
Kids/female (%)	36	42	47	36	42
Total death or slaughter	179,652	58,505	103,850	136,531	162,026

Source: Lesotho Bureau of Statistics. Several years.

17. Basotho dispose of their animals in a number of ways: cattle die and are subsequently slaughtered for home consumption; cattle are given away, often as part of bridewealth payments; cattle are butchered for ceremonies or home consumption; cattle are lost or stolen; and cattle are sold or traded. Of the cattle sold (only about 17% of total disposal), most are sold to neighbouring farmers as herd replacements or for slaughter, others are sold to butchers, a small number are exported to South Africa, and a few are sold at rural auction sales or directly to the new National Abattoir/Feedlot Complex (Figure 3).

18. The National Feedlot/Abattoir complex (NFAC) is the largest single purchaser of cattle in Lesotho. The NFAC purchases animals at its premises and is the dominant, and often only purchaser of cattle at LPMS rural auction sales. Shortages of Lesotho cattle require the NFAC to rely on South African suppliers for many of the cattle to be fattened and slaughtered. The NFAC markets most of its beef carcasses to lowland butcheries. The National Abattoir also does a large business in custom slaughter (Figure 4).

19. The LPMS facilitates cattle marketing through the organisation of rural auction sales. Over the past five years sales have been held in 25 locations scattered across Lesotho. Most of the cattle marketed through the auctions originate from mountain locations. Cattle are then trekked and/or trucked to Maseru.

20. Licensed butcheries are very important actors in the marketing system. Butcheries purchase cattle from the National Feedlot (many of which are imported by the Feedlot), Lesotho farmers, South African farmers, South African feedlots, and the South African Meat Board (Figure 5).

21. In quantity terms, the most important marketing channels are the informal channels which link producers. Most of the cattle traded in these informal markets are males, primarily mature males destined for service as draught animals and ultimately for slaughter. The average price received for a sample of 90 male cattle sold between July 1984 and June 1985 was M443[3/]. This compares to the average price of M340 received by farmers at rural auction sales in 1985. This price difference is likely due to a

number of factors including: thinly-traded local markets, restrictions on imports, and the fact that live cattle produce many products, including draught, dung and milk, while dead or slughtered animals produce beef and offal.

22. After farmers (which account for a combined 71% of the number sold by cattle owners), the second most important marketing channel which cattle owners use for sale are the butcheries (14%). Butcheries dominate the formal marketing channels, purchasing live animals from Lesotho producers, the National Feedlot, and South African suppliers. They are the dominant purchasers of carcasses from the National Abattoir and have large numbers of cattle custom slaughtered at the Abattoir. Butcheries dominate commercial sale of beef and offal to Lesotho consumers in both urban and rural areas.

23. The National Abattoir/Feedlot Complex now plays important intermediary functions in the cattle and beef markets. It is the dominant purchaser of cattle at the LPMS rural auctions sales and the largest importer of live cattle into Lesotho. It sells both fattened animals and carcasses in Lesotho and South Africa, and performs a relatively large amount of custom slaughter.

24. In comparison to the other marketing channels, the LPMS rural auctions are relatively unimportant to cattle producers, butcheries and beef consumers. In 1985 only 1,155 heads of cattle were marketed through the auctions (Swallow, Mokitimi and Brokken, 1986).

Alternative conceptual frameworks

25. In this part of the paper, four conceptual frameworks which may be appropriate for the Lesotho situation are briefly discussed, with emphasis given to the major implications arising from these frameworks - marketing to meet cash needs; marketing of capital assets, and marketing to destock and transform the 'cattle complex' - are generally concerned with the relationships existing between the production and marketing decisions of stockowners. The fourth framework is concerned with the effects of market structure and conduct on market performance.

(i) Marketing to Meet Cash Needs

26. The premise of the cash needs framework is that cattle are an illiquid investment which are only sold under exceptional circumstances, that is, to meet emergency cash needs. In a series of three articles Doran, Low and Kemp (1979, 1980a and 1980b) argued that the framework is appropriate for modelling the investment and marketing decisions of cattle owners in eastern and southern Africa and presented empirical results in each of their articles to support their argument. In Low, Kemp and Doran (1980b), the authors presented a model which relates marketing to cash needs, in which total cattle slaughter is assumed to equal a fixed proportion of the herd (for ceremonial purposes), and a function of the basic cash need, the seasonal cash need, and other expenditures. Despite the statistical strength of the empirical results, however, little support was in fact provided for the cash needs hypothesis. The effects of every variable can be ascribed to economic forces other than needs. In particular, the results are very consistent with the capital asset model described below.

27. Based on their results, Doran, Low and Kemp (1979, 1980a and 1980b) cautioned development agencies and governments of the potentially harmful consequences of their efforts. Marketing initiatives may well attract more sales through the commercial channel, but total sales will actually decrease as farmers are allowed to sell less total animals to meet their cash needs. This will result in an increased stocking rate, the authors stated. Development policies which increase rural incomes will likewise promote increased stocking by decreasing cash needs. These pessimistic implications differ significantly from those derived from other models.

(ii) Marketing of Capital Assets

28. The premise of the capital asset model is that cattle owners regard their animals as capital assets which produce a stream of valuable products while held and have a capital value when sold or slaughtered. Stockowners determine the optimal age of sale or slaughter by comparing the expected net present value of the future stream of products with the expected net capital value of the animal if slaughtered or sold. Conceptually, the model implies that stockowners continually make these calculations for every animal in their herds and slaughter or sell an animal when the

calculation indicates that the slaughter value equals or exceeds the net present value of the live animal. In empirical models it is generally assumed that these calcuations are made on a monthly or yearly basis.

29. Calculations of the net present value of live animals is least complicated for production systems where meat is the only product and more complicated where there is a complex of valuable flow and stock products. In Lesotho flow products include draught power, milk, dung and progeny; while stock products include meat, offal and hides.

30. One of the implications of this conceptual frmework is that there will be a negative relationship between slaughter prices and current marketings. Everything else being equal, slaughter price increases which are expected to be permanent will result in a decrease in the number of animals marketed as stockowners attempt to build up their animal inventories to increase current production and thereby future animal sales. In a closed market system this reaction may lead to further price increases until the production from withheld animals begins to come onto the market. Increased marketings (ie. supply for sale) will eventually result in price decreases which will in turn prompt further sales by stock-owners anxious to liquidate their herds. A cyclical pattern of herd build-up and liquidation is the likely result of any price increase.

31. Lorie (1947) was the first analyst to develop the capital asset model and apply it to the United States cattle sector to explain the cattle cycle. Jarvis (1974) developed a more rigorous version of the model and applied it to the Argentine cattle sector. His findings of negative relationships between current marketings and current prices, and positive relationships between current marketings and lagged prices supported the application of the model to the Argentine situation. Since 1974 the model has been validated as applicable to cattle industries in the United States (Nordblom, 1981; Stringham, 1983), the Sahel (Ariza-Nino and Shapiro, 1984), Botswana (Ndzinge, Marsh and Greer, 1984), Zimbabwe (Rodriguez, 1985), and Swaziland (Jarvis, 1980).

iii) Marketing to Transform the 'Cattle Complex'

32. In 1926, Herskovits, described the East African 'cattle complex' as follows:

In East Africa, where currency in any form is absent, cattle constitute an almost exclusive hall-mark of wealth. The subsistence economy of these tribes is based on agriculture; but the number of cattle owned by a man correlates highly with his position. That is, among these people, as in most societies, position is related to wealth and cattle are the sole expression of wealth ... A cow is eaten only on certain ceremonial occasions, or when an animal dies; nor have cattle any other subsistence ability aside from that of supplying milk, since they are employed as beasts of burden. They are merely possessed and esteemed for the prestige their possession brings.

(Herskovits, 1926, pp. 264-265 as quoted in Schneider 1984, pp. 187-188).

33. Although sixty years have elapsed since Herskovits published this article, the characterization of African cattle owners as tradition bound and resistant to change continues to permeate the development literature. While it is generally accepted that Herskovits underestimated the importance of cattle in meeting the subsistence requirements of pastoralists (Evangelou, 1984b), there remains a great deal of debate about the importance of cattle in social relations and in conferring status and prestige on their holder (Schneider, 1984).

iv) Market Structure, Conduct and Performance

34. Concern with the performance of cattle marketing systems often prompts African governments and international agencies to initiate new marketing programmes, projects, regulations or agencies. While the assumed relationship between production and marketing often causes livestock development officers to employ measures such as the stocking rate or the use of cash to evaluate the performance of cattle marketing systems, Shaeffer (1983) suggests that the fundamental objective of marketing should be efficiency — defined as the production of the mix of products most consistent with consumer preferences at the least cost (p.233). Allocative efficiency is achieved when the optimal mix of products is produced and exchanged; technical efficiency is achieved when those products are produced at minimum cost.

35. The structure — conduct — performance framework has been demonstrated to be appropriate for evaluating the performance of African cattle marketing industries. Applications of this framework have generally found that cattle marketing systems perform relatively well in African countries when left

to private enterpreneurs (Bekure and McDonald, 1985; Evangelou, 1984a and 1984b; Sandford, 1983). However, governments and agencies intent on changing marketing performances often intervene. The efficiency criteria implies that such government intervention is only justified if it results in higher, more stable producer prices, lower and more stable consumer prices, and product quality more consistent with consumer demand.

36. Specific government initiatives in marketing can be categorized into three general types: (i) facilitation; (ii) regulation; and (iii) participation. In an earlier paper in the ALPAN series, Bekure and McDonald (1985) recommended that African governments concerned with the performance of cattle marketing systems should:
    - emphasize their facilitative role — trek routes should be well-defined and provided with adequate grazing and water;
    - be cautious of the regulative role — regulations which restrict the number of traders and administer prices should be avoided; and
    - avoid direct participation — parastatal cattle marketing agencies are rarely successful.

Appropriate coneptual frameworks for Lesotho

37. Until very recently the dominant perspective on the cattle production/ marketing environment in Lesotho has been that Basotho stockowners are traditional, subsistence-oriented peasants who place great value on their cattle for social and cultural reasons. Basotho own far too many cattle (the current estimate is that Lesotho is overstocked by 400 percent), so it is important that markets are established to introduce Basotho to the idea that their cattle are a marketable product, and to allow stockowners to dispose of surplus or culled animals. It is thus argued that a more productive livestock sector and a destocked range would result from successful marketing programmes.

38. This perspective has determined the way in which a number of livestock development programmes have been designed, implemented and evaluated in Lesotho. The Overseas Development Administration and the Ministry of Agriculture (1980) proposed a comprehensive production and marketing programme, based on the premise that the current low rate of commercial

offtake is due to "... the apparent incompatibility which exists between people's socio-cultural reasons for holding livestock and their perceptions of livestock as commercial enterprise" (Bostwick, Hesling and Headey, 1984, p. 7). The proposal recommended that a "... major livestock (especially cattle) marketing operation [be] established to provide outlets for 'surplus' culled animals" so that the Lesotho range may be destocked (p. 33). On the basis of their findings of a negative relationship between current marketings and price, they concluded that"... received economic theory does not apply to [the] curious case" of cattle owners in Lesotho (p. 34). Because cattle are viewed by Basotho as socio-cultural assets rather than productive economic assets, "... it is clear that price incentives will not stimulate the commercial sale of cattle, and may even have the reverse effect" (p.37). The authors argue that development of the commercial cattle industry so that there is a positive marketing response to price increases, and thus destocking, will require a fundamental change in the attitudes of Basotho stockowners. This will only be achieved by a long-term extension effort coupled with a functional cattle marketing system.

39. Cattle marketing was an important component of the Thaba-Tseka Mountain Development Project in Lesotho. The programme of monthly auctions, a small feedlot, and an abattoir were all justified on the grounds that an integrated formal infrastructure would result in a lower stocking rate -- by establishing a market where none existed before people would be able to dispose of surplus animals — and transformation of the traditional subsistence society into a cash economy. In an internal review of the programme of monthly auctions, which would be generally considered successful on other grounds, it was stated that:

> *although not yet making a major contribution to destocking, the monthly markets have steadily increased in popularity. They attract large crowds and offer excellent opportunities for extension. The increased response to the livestock markets reflects the increased awareness of commercial agriculture and the increased demands of the cash economy.*

(Thaba-Tseka Mountain Development Project, Review of Accomplishments August 1975 to July 1981, p. 13).

40. In reality, there is very little evidence to validate this dominant perspective and a great deal of evidence to refute it. Firstly, Basotho have been well-

integrated into the Southern African cash economy for at least 100 years through both commodity and labour flows. Secondly, Basotho have long been aware that their cattle are marketable commodities and large numbers have been exported when economic conditions forced such herd liquidations (see Figure 2). Thirdly, formal cattle markets have been very active for many years. Only during the past ten to twenty years have informal rural markets come to dominate to the present degree. Fourthly, livestock budgets recently presented in Swallow and Brokken (1987) indicate that cattle produce a variety of important cash and non-cash products, and that investments in cattle generate significant economic returns. Finally, Basotho do market singificant numbers of animals — though most of this trade occurs outside of formal marketing channels.

41. A small number of recent studies have generated substantial evidence supporting the capital asset model as appropriate to the Lesotho cattle industry. From a survey of migrant workers conducted in 1977, Van der Wiel noted that eleven percent of the cash returned to Lesotho by mine workers was in the form of livestock, compared to five percent in the form of bank savings. Van der Wiel explained this as follows:

> *The relatively large sum of cash invested in livestock, particularly cattle, is the result of the superior facilities for storing and investing wealth that cattle provide and the inadequate alternative investment opportunities.*
>
> (1977, p. 16).

42. The hypothesis that cattle were the most attractive investment available to Basotho migrants in the late 1970s and early 1980s was further supported by Fritsch (1984). Examining macro-economic data, Fritsch argued that low cattle prices, low interest rates on savings accounts, and high migrant remittances all combined to generate a strong economic incentive for Basotho to increase their herds of livestock, especially cattle. The stockowners reacted to these conditions by purchasing large numbers of livestock in South Africa and importing them into Lesotho (see Figure 1).

43. Further support for the capital asset model has recently been provided by Swallow and Brokken (1987) in the form of budgets for cattle, sheep

and goat enterprises for a sample of livestock-owning Basotho households. The authors calculated private rates of return of capital investments of 9.4 percent for cattle, 8.7 percent for sheep, and 5.7 percent for goats. These rates of return compare very favourably with the most readily available alternative investment — bank savings accounts. The inflation-adjusted real rate of return on savings accounts averaged negative ten percent (-10%) over the 1979 to 1984 period (Swallow 1985). It thus appears that Basotho stockowners make wise economic decsions when they invest in livestock rather than bank savings accounts, and that they act as portfolio managers and attempt to equate the returns generated from alternative livestock investments while simultaneously spreading their production and price risks between the different species.

44. Within the overall context of cattle being treated as capital assets, the cash needs and the market structure/performance frameworks also provide important complementary insights into the behavior of Basotho cattle owners. Informal surveys of individuals selling cattle as auction sales conducted between April 1985 and November 1986 indicated that most cattle were sold to raise income to meet pressing household financial demands. Within the overall investment framework, decisions on when and how to purchase and sell cattle are influenced by the availability of investment funds and household needs to generate cash income. This type of environment may well exist in most African countries, and perhaps all countries in the world.

45. The structure of the formal cattle marketing system in Lesotho appears to have flaws which limit its performance. Basotho stockowners have in the past had access to a large network of private traders who would purchase their animals for cash or trade them for younger animals. Over the last twenty years this market outlet has been largely eliminated. The major formal market outlets are now the auction sales conducted by the Livestock Products Marketing Service (LPMS) and the many butcheries scattered throughout Lesotho.

46. Private traders are legally restricted from dealing in live animals, while butchers are reluctant to participate in auction sales because of the strong competition of the National Abattoir/Feedlot Complex, the unreliability of the auctions, and the high transaction costs involved in using the auctions.

The result is that butchers depend on individual negotiations with South African suppliers and individual farmers for their supplies of live animals. Individual producers negotiate transactions with neighbours, sell some cattle to butchers, and rely very little on the system of LPMS rural auctions.

Conclusions and Implications

47. With its problems of low productivity and overstocking, the Lesotho livestock sector poses many challenges for development. Market development initiatives appear to have some potential role in promoting that development. The appropriate form of those initiatives, and their likely consequences, depend crucially on the underlying conceptual framework.

48. A review of the Lesotho problem situation with reference to four alternative conceptual frameworks indicates that the capital assets model is most appropriate for understanding the overall production — utilization — marketing framework of Basotho stockowners. Within an overall investment framework, Basotho stockowners are subject to cash flow constrainsts which influence decisions concerning the timing of sales. The structure, conduct and performance of the market affect the timing and location of sales, the market outlet chosen, and the level and variability of prices received for marketed animals.

49. To achieve the objectives of reducing the stocking rate and increasing productivity, the implementation of a number of initiatives and instruments should be considered. These initiatives are categorized below by the relevant conceptual framework:

    (i) Cattle are generally treated as capital assets. The potential benefits and costs of initiatives which promote stronger institutions to manage the communal range, increase the opportunity cost of capital invested in livestock, increase the cost of producing livestock products, or reduce the revenues generated from livestock products should all be considered. Grazing permits or grazing associations are two possible range management institutions. Increased returns from alternative productive enterprises such as intensive livestock crop production or expanded and improved bank saving facilities would reduce the relative attractiveness of livestock as a form of investment. Grazing fees, grazing taxes or lower values of livestock

or livestock products would make livestock less attractive investment alternatives and thus result in reduced numbers. Production or marketing initiatives which make livestock more attractive may result in greater returns to producers, but will also promote increased stocking rates.

(ii) Livestock owners face cash flow constraints. Marketing initiatives should be considered which are able to expand or contract operations depending on the prevailing economic conditions. If unfavourable external economic conditions force early disposal of animals, then the marketing system should be geared to ease the costs of such disposal. This would be accomplished by promoting market outlets which are widely dispersed geographically and flexible enough to allow sales on short notice.

(iii) The present structure of the marketing system hampers good performance. Initiatives which increase market performance with a minimum of government involvement should be encouraged. In Lesotho this would be accomplished by encouraging private trading stations to buy and sell animals, and by facilitating exchange points where all market participants from producers, butchers, feedlots, speculators, South African buyers, and consumers would be encouraged to participate. By increasing market performance these initiatives would result in increased returns to producers, but would also encourage increases in the stocking rate. The relative magnitude of these contradictory results would have to be evaluated.

FOOTNOTES

1/ The citizens of Lesotho are called Basotho (plural form) or Mosotho (singluar form).

2/ lifaqane wars: wars fought by Basotho mainly with Zulu tribes during the period, sometimes referred to as 'wars of calamity'.

3/ M = Maloti (plural form) is the national currency. In 1985, the average exchange rate of 1 Loti (singluar) was US$0.456 (FAO Trade Yearbook, Vol. 39).

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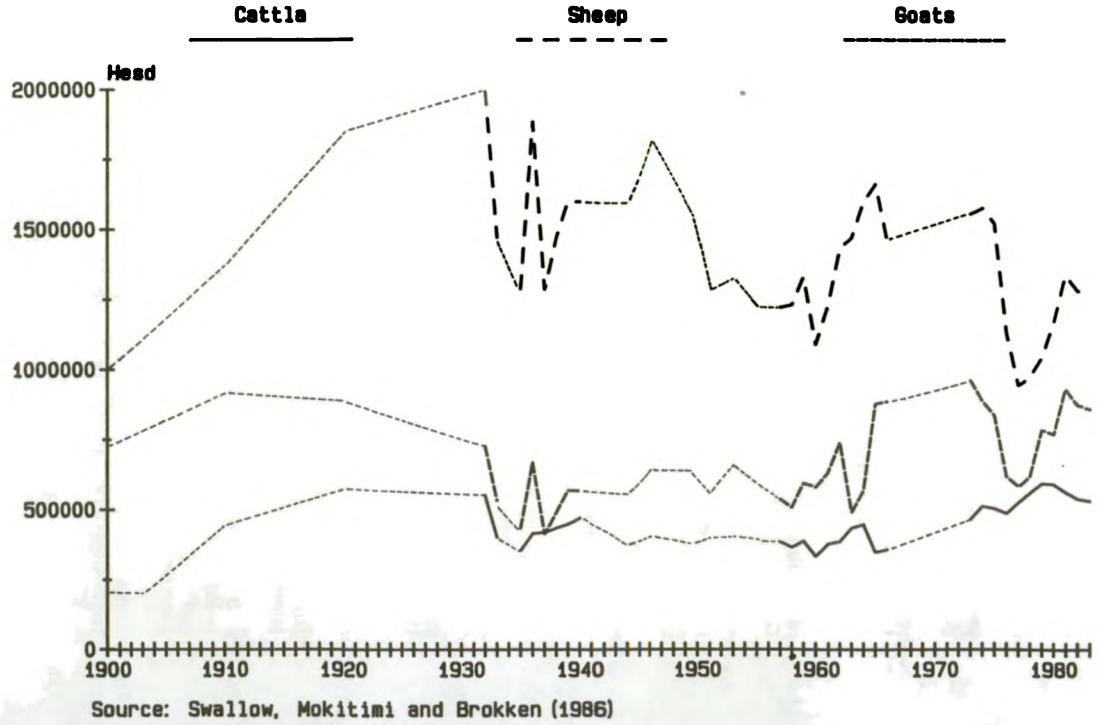
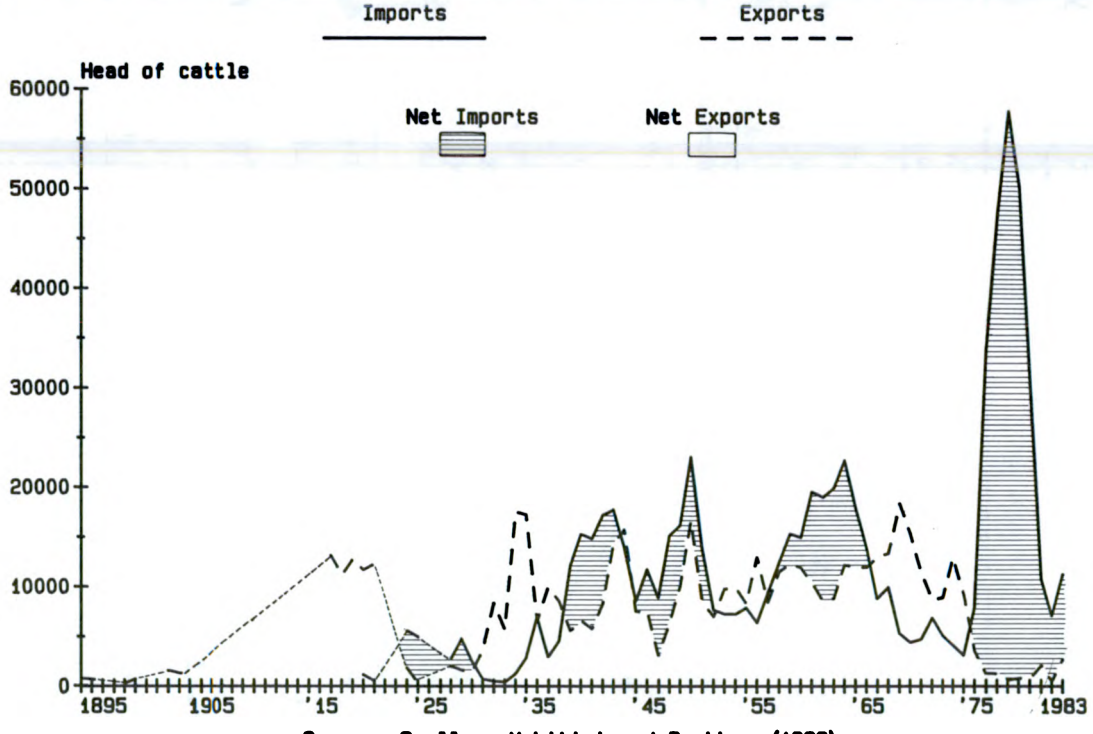
Figure 1. Lesotho populations of cattle, sheep and goats, 1900 to 1983.



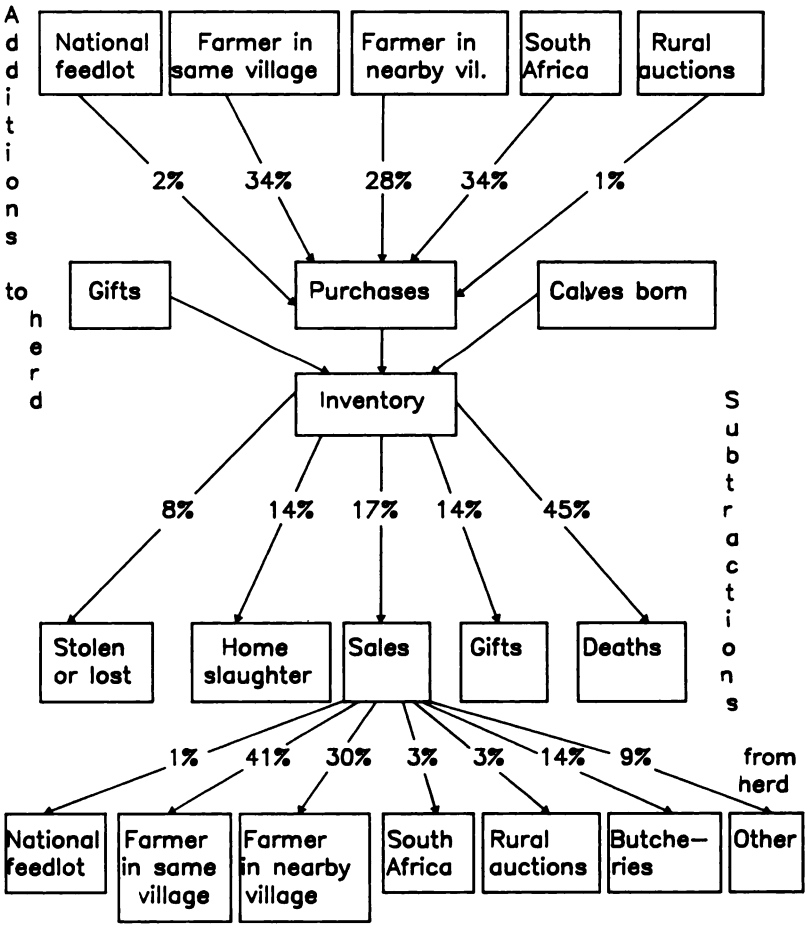
Source: Swallow, Mokitimi and Brokken (1986)

Figure 2. Lesotho exports and imports of cattle, 1893 to 1983



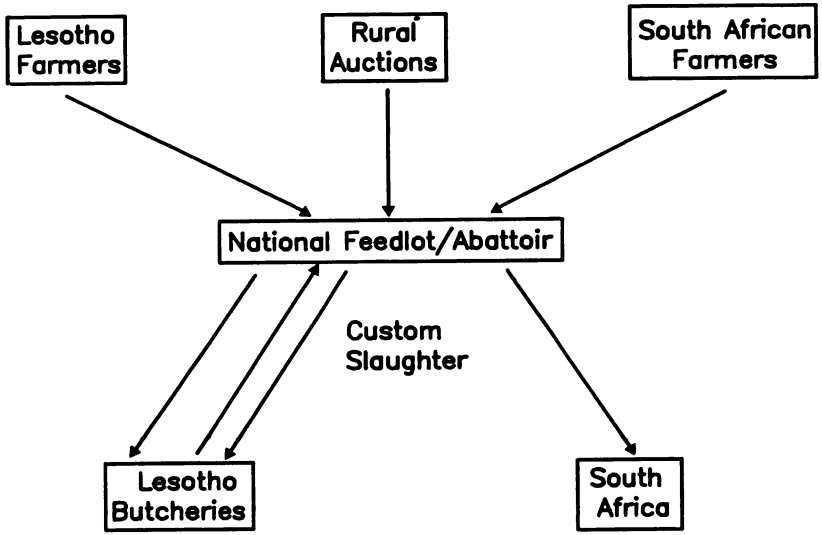
Source: Swallow, Mokitimi and Brokken (1986)

Figure 3. Marketing channels utilizied by Basotho cattle owners



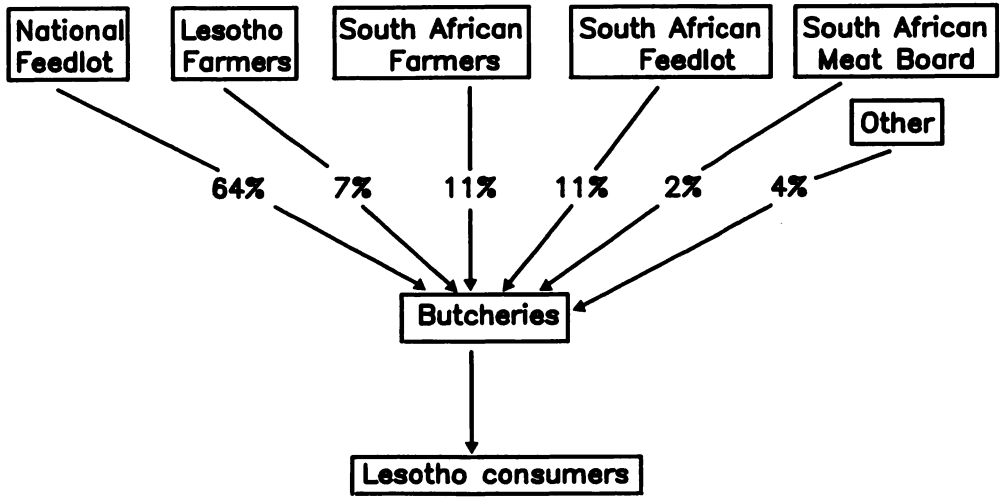
Source: Swallow, Mokitimi and Brokken (1986)

Figure 4: Marketing channels utilized by the National Feedlot/Abattoir Complex



Source: Swallow, Mokitimi and Brokken (1986)

Figure 5: Marketing channels utilized by Basotho butcheries



Source: Swallow, Mokitimi and Brokken (1986)