Research Division
Ministry of Agriculture
P.O. Box 829
Maseru 100, Lesotho

Research Division Bulletin RD-B-49
ISAS Research Report No. 13

CATTLE MARKETING IN LESOTHO

Brent M. Swallow, None Mokitimi and Ray F. Brokken

September, 1986

Institute of
Southern
African
Studies

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by

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INSTITUTE OF SOUTHERN AFRICAN STUDIES
NATIONAL UNIVERSITY OF LESOTHO
RESEARCH REPORT NO. 13

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MINISTRY OF AGRICULTURE AND MARKETING
RESEARCH DIVISION BULLETIN RD-B-49

SEPTEMBER, 1986

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ACKNOWLEDGEMENTS

An earlier draft of this paper was presented at a seminar sponsored by the Institute of Southern African Studies, National University of Lesotho, and was submitted to the International Livestock Centre for Africa (ILCA) for possible publication in their African Livestock Policy Analysis Network (ALPAN) series.

Research for this paper was conducted jointly by the Agricultural Marketing Research Project, Institute of Southern African Studies, National University of Lesotho, and the Farming Systems Research Project, Research Division, Ministry of Agriculture and Marketing. Partial funding for the research was provided by the International Development Research Centre, Canada, and by the U.S. Agency for International Development, Contract No. AID/afr - 1517. All expressed opinions, conclusions and recommendations are the authors', not the funding agencies' nor any governments'.

The authors wish to thank Winston Nts'ekhe, Director of Research and Specialist Services, and 'Maseabata Ntoanyane, Research Division, Ministry of Agriculture and Marketing; David Ambrose and Joan Khabele of the National University of Lesotho, Chris Weaver of the Land Conservation and Range Development Project, and John Hunter of the Farming Systems Research Project, for their suggestions and comments on an earlier draft of this paper. In addition, the authors wish to thank the staff of the Livestock Products Marketing Service and the National Feedlot for their cooperation in supplying unpublished data and for their assistance in the reported analyses of transportation weight losses.

PREFACE

Over the past forty years a great deal of Government and donor energy and resources have been directed to expanding the formal marketing system for cattle in Lesotho. Many of the projects and programmes have been justified, implemented and evaluated on the basis of a dominant perspective about the cattle production -- utilization -- marketing environment faced by Basotho stockowners. In this report the evolution and current structure of the cattle marketing system are described, and alternative perspectives reviewed and critiqued. Implications for cattle marketing development are drawn.

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1.1 Problem Setting

The Lesotho cattle industry is characterized by overstocking, range degradation, low marketed offtake, low reproduction, 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 by the absence of a large commercial beef sector. While changes in the rangeland tenure system appear to be necessary to avert a 'tragedy of the commons', many analysts have suggested that the increased provision of markets to allow Basotho to sell culled animals will promote destocking and increased productivity. With the current formal marketing system handling a very small percentage of the total cattle disposition each year, modifications may be required. What form these modifications should take, and their likely consequences, are the problems addressed in this report.

1.2 Objectives

The overall objectives of this report are to describe the development and structure of the current cattle marketing system in Lesotho, and to analyze the means for, and consequences of, improvements in that system. Fulfillment of these objectives will require that the following subobjectives be met:

Literature Review

(1) review relevant literature regarding alternative conceptual frameworks of the cattle production -- utilization -- marketing system;

(2) review relevant empirical studies which will provide support for the appropriate conceptual framework for the Lesotho situation;

(3) review specific studies of cattle marketing in Lesotho.

Development of the Lesotho Cattle Industry

(4) assemble relevant information and data on the development of the Lesotho livestock sector;

(5) review the major structural changes which have occurred in the cattle marketing system.

Description of the Current Marketing System

(6) describe the structure and evaluate the performance of the formal marketing system composed of the system of rural auctions, and the National Feedlot/Abattoir complex;

(7) describe the current market channels utilized by Lesotho butcheries;

(8) describe the current market channels utilized by Basotho cattle owners.

Analysis of the Appropriate Perspective on Cattle Marketing

(9) provide both conceptual and empirical evidence to support an appropriate perspective on cattle marketing;

(10) suggest implications of that perspective for cattle marketing development in Lesotho;

(11) recommend appropriate modifications to enhance the performance of the cattle marketing system in Lesotho.

1.3 Research Method

The research was generally conducted in three phases: descriptive, diagnostic, and prescriptive, as outlined in Appendix A of Swallow and Mpemi (1986). Chapter 3 presents a description of the major historical developments in the livestock sector in general, and in cattle marketing in particular, while Chapter 4 presents a description of the current cattle marketing system. The diagnostic stage was composed of two main components: analysis of the performance of the rural auction system is contained in section 4.2, while background and evaluation of the production -- utilization -- marketing environment faced by Basotho stockowners are presented in Chapters 2 and 5. Chapter 6 is prescriptive.

2. REVIEW OF LITERATURE

In this chapter, three distinct areas of literature germane to analysis of cattle marketing in Lesotho will be reviewed. The first corpus deals with alternative conceptual frameworks for the development, implementation and evaluation of cattle marketing programmes and policies. The second is a corpus of previous studies of cattle marketing in Lesotho. The third is a corpus of empirical analyses focused on the reactions of stockowners to changes in price.

2.1 Alternative Conceptual Frameworks

Four alternative conceptual frameworks are commonly employed in analyses of cattle marketing in Africa. The first framework is concerned with the effects of marketing structure and conduct on market performance. The other three frameworks -- marketing to destock and transform the 'cattle complex'; marketing to meet cash needs; and marketing of capital assets; -- are generally concerned with the relationships existing between the production and marketing decisions of stockowners.

Market Structure, Conduct and Performance

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: (1) the stocking rate; and (2) the use of cash as a means of exchange; to evaluate the performance of cattle marketing systems, Shaffer (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 least cost (p. 233). Allocative efficiency is achieved when the optimal mix of products is produced and exchanged; technical efficiency is achieved when that mix of products is produced at minimum cost.

The structure - conduct - performance framework has been employed in analyses of the performance of cattle marketing industries in several African countries. Despite the frequency of the finding that cattle marketing systems perform relatively well when left to private entrepeneurs (Bekure and McDonald 1985; Evangelou 1984a and 1984b; Sandford 1983), governments and agencies intent on improving marketing performance often intervene. Interventions are based on the assumption that

improved performance will lead to: (1) higher and more stable producer prices; (2) lower and more stable consumer prices; and (3) product quality consistent with demand.

Specific government initiatives in marketing can be categorized into three general types: (1) facilitation; (2) regulation; and (3) participation. In a recent paper, Bekure and McDonald (1985) recommended that African governments concerned with the performance of cattle marketing systems should: (1) emphasize their facilitative role -- trek routes should be well-defined and provided with adequate grazing and water; (2) be cautious in their regulative role -- regulations which restrict the number of traders and administered prices should be avoided; and (3) avoid participation -- parastatal cattle marketing agencies are rarely successful.

Marketing to Transform the 'Cattle Complex'

In 1926, Herskovits decribed 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 never employed as beasts of burden. They are merely possessed and esteemed for the prestige their possession brings. But they are not money. (Herskovits 1926, pp. 264-265, as quoted in Schneider 1984, pp. 187-188.)

Although sixty years has elapsed since Herskovits published his article, "The Cattle Complex of East Africa", the characterization of African cattle owners as tradition-bound and resistent to change continues to permeate development literature. Growing demands for meat and economic surplus produced by pastoralists, as well as concern about environmental degradation, prompts African governments to undertake programmes aimed at 'developing' pastoral societies so that they produce more beef for external consumption. Marketing projects are often the foundation of these development efforts. However, Seago (undated) suggested that a great deal of patience is required when introducing markets in pastoral economies because:

> With truly traditional people the problem of introducing them to the idea that their cattle are a saleable commodity, although not impossible, is not easy. They are no strangers to the idea of selling cattle in order to meet their committ-

ments, but regard any such sales as a necessary evil and no more. The fewer they sell the better they are pleased. There is no deliberate aim to prepare cattle for market in order to get the best prices since they regard all cattle as equal. When a government or a commercial undertaking such as the Cold Storage Commission of Central Africa or the Kenya Meat Commission sets out to purchase cattle their suspicions are aroused. Is this a way to reduce our cattle numbers? . . . Nevertheless experience in Malawi indicates that, with patience, even the traditional cattle owner will begin to regard at least a part of his herd as saleable (pp. 92-3).

Three categories of reasons are presented to explain the conservatism of African pastoralists: (1) cattle are important in meeting the subsistence requirements of stockholders; (2) cattle continue to be the best available investment; and, (3) cattle are important in social relations and confer status and prestige on their owners. 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 confering status and prestige on their holders. While Schneider (1984) admits that cattle are important in meeting the subsistence requirments, and that they are often the best available investment, he also maintains that contemporary analysts generally underestimate the value of cattle in conferring prestige:

> Herskovits' cattle complex also stressed the role of cattle in conferring prestige. It is this aspect which is now often overlooked. Implicit in it are two dimensions, that cattle are repositories of value and sources of power. Cattle hold value and their control confers power on their owner, who through patronage can control other people. The role of cattle as repositories of value can be demonstrated in various ways, beginning with their use as media of exchange (pp. 192-3).

Marketing to Meet Cash Needs

In a series of three articles centred on cattle production and marketing in Swaziland, Doran, Low and Kemp (1979, 1980a and 1980b), present the hypotheses that in Eastern and Southern Africa: (1) cattle are primarily held as a store of wealth; and (2) cattle are only marketed to meet certain cash needs.

A number of gloomy consequences are purported to result from livestock and rural development programmes undertaken in this production -- utilization -- marketing environment.

As presented in their first article (Doran, Low and Kemp 1979), the store of wealth hypothesis is very confusing. Wealth is defined as an " . . . accumulation of assets which confer,

among other things, security, prestige, and status" (p. 42). Since these "other things" are not defined, readers are left with the impression that the authors hypothesize that cattle are primarily held for the prestige value which they confer on their owners. However, the evidence they present neither supports nor refutes this hypothesis.

To comprehend the store of wealth hypothesis and the implications arising from it, it is useful to define a store of wealth as 'a stock of goods which have a monetary or exchange value'. The fact that cattle are universally bartered for goods or sold for cash then indicates general validity of the hypothesis. However, a review of the supporting arguments presented in the Doran, Low and Kemp articles indicates that, in fact, the authors hypothesize that cattle are an illiquid store of wealth, that are only sold under exceptional circumstances; that is, to meet emergency cash needs. Reference to an interface of household and investment or business decisions is not made, though this aspect of small business management is well recognized in historical farm management literature.

Doran, Low and Kemp presented empirical results in each of their articles which are purported to support the cash needs hypothesis. In Low, Kemp and Doran (1980b), the authors presented a model which relates marketing to cash needs, in which total cattle slaughter is modelled as equal to a fixed proportion of the herd (for ceremonial purposes), and as a function of the basic cash need, the seasonal cash need, and other expenditures. A time-series, aggregate econometric model of Swazi cattle marketing was formulated with slaughter rate estimated as a function of variables used as proxies for the cash needs variables. Despite the statistical strength of the results, however, little support is provided for the cash needs hypothesis. The effects of every variable can be ascribed to economic forces other than cash needs. In particular, the results are very consistent with the capital asset model described below.

Based on their results, Doran, Low and Kemp (1979, 1980a and 1980b) cautioned development agencies and the Government of Swaziland of the potential harmful effects of their development 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 state. Development policies which increase rural incomes will likewise promote increased stocking by decreasing cash needs.

Marketing of Capital Assets

Focussing on the American cattle cycle, Lorie (1947) was the first analyst of cattle economics to emphasize the importance of

separating the concepts of production and marketing. His thesis was that American cattle producers have generally responded to increases in cattle prices "above normal" by reducing current marketings in order to build up the breeding herd numbers. This buildup results in an immediate increase in current production and is necessary to increase future marketings. The decrease in current marketings will have the effect of further increasing current prices, thus reinforcing the original incentive to reduce current marketings and thereby increase current production. When, after some considerable passage of time, production from withheld animals begins to come onto the market, prices will begin to fall and continue falling to below the normal price. This price reduction causes farmers to act to reduce current and future production by liquidating part of their current herd, thus causing a further reduction in prices. At some point this reduction in the breeding herd reaches a maximum and prices a minimum, after which the reduction in production results in less marketings, pushing the prices back on an upward trend.

Lorie's insights were valuable for subsequent analyses of the American cattle cycle and for studies of cattle production and marketing elsewhere in the world. Although Lorie is not cited in the article, Jarvis (1974) follows the logic originally presented by Lorie.

Jarvis developed a mathematical model of cattle production and slaughter based on his thesis that ". . . cattle are considered to be capital goods which are held as long as their capital value in production exceeds their slaughter value" (Jarvis 1974, p. 489). One of the implications of this model is that there will be a negative relationship between price and current marketings. Jarvis explains this in terms of bidding between producers and consumers for animals, that is, ". . . producers must bid animals away from consumers to increase the capital stock which is the source of higher future beef production" (p. 491). This view is essentially identical to Lorie's. The contribution of Jarvis is his conceptual and mathematical modelling of the thesis, and his application of the thesis to the situation in Argentina.

Jarvis supported his conceptual model with an econometric model of the Argentine cattle sector. The model was developed to explain changes in herd size, the number and weight of the animals slaughtered, domestic consumption, exports, and the price of beef.

Of no surprise, Jarvis found herd size to be a very important variable for explaining total slaughter. Also significant, though exerting negative influences, were the ratios of current price to lagged price, the one year lagged price and the two year lagged price. Three and four year lagged prices exerted positive and significant effects. These results are consistent with the cattle-as-capital model. Other significant variables are the change in rural labor force and four climatic index variables.

Based on this conceptual model, Jarvis (1980) presented a thorough critique of Doran, Low and Kemp (1979). He proposed that Doran, Low and Kemp misunderstood the link between beef production and the store of wealth hypothesis and overestimate the impacts of the store of wealth motive on cattle marketing and production in Swaziland. Appealing to the 'cattle-as-capital' model, he suggests that the overwhelming factor affecting the overstocking is the communal land tenure system.

Arizo-Nino and Shapiro (1984) presented a somewhat simplified version of the Jarvis capital asset model, applied it to live-stock production conditions in the Sahel, and simulated the optimal age of sale for average Sahelian conditions. Their results generally support the capital asset model and provide some evidence that non-physical products (prestige, power and status) are of limited importance in determining age-of-sale decision for cattle in the Sahel.

Nordblom (1981) employed a bio-economic simulation model to simulate national inventory levels of the beef cow herd (beef breeding herd) in the United States. His model focussed on retainment (or recruitment) and culling rates, which were affected by both biological and economic variables. While some attrition from the herd was due to death, disease and injury, a major part of the attrition was owing to culling decisions due to economic factors. A particularly interesting feature of the model was the separation of the cow inventory into age cohorts. Since many aspects of cow productivity are related to cow age, the retainment / culling rates might vary more with varying costs and prices, among cows in age groups with lower than average expected productivity (younger and older cows). The decision to retain / cull breeding cows was related to their expected returns if kept for breeding relative to their present slaughter value. Fundamentally, this is a capital asset concept.

Nordblom's work contained some variable definition errors that made the model validation and forecasting moot. Stringham (1983) retraced the steps taken by Nordblom, redefined certain variables, and simplified the model. Generally the model validated very well, with an average annual error of less than one percent between the actual cow inventories and the simulated inventories. This model also provides strong support for the capital asset model.

Drawing implications from the capital asset model may be more complex than drawing them from the cash needs model. Production and marketing responses to changed economic conditions depend crucially on: (1) biological factors; (2) the age and sex structure of the herd; and, (3) the prevailing system of land tenure. Ceteris paribus, price increases which are expected to be permament will encourage an increase in beef production at the expense of current cattle marketings; while price increases which are expected to be temporary will tend to encourage an increase in current marketings and a corresponding temporary reduction in herd size.

2.2 Descriptive Studies of Cattle Marketing in Lesotho

Very few comprehensive analyses have been conducted of the cattle marketing system in Lesotho. One of the first reports which dealt explicitly with cattle marketing was authored by Brossard (1955). In this short paper, Father Brossard attempted to analyze both the social and technical aspects of livestock production, utilization and marketing in Lesotho. He noted low protein consumption by Basotho, and low cattle exports. He concluded that efforts should be made to: (1) introduce new cattle breeds (particularly Brown Swiss); (2) expand the use of mechanical cultivation; (3) encourage Basotho to slaughter and sell animals at younger ages; and, (4) improve marketing infrastructure.

In the six years immediately preceeding independence, three seperate reports were completed which dealt broadly with the marketing of agricultural and livestock products. The first study by Stutley (1960) was focused on the domestic and export markets for agricultural and livestock products. The study was primarily concerned with the marketing of crops, wool and mohair. Cattle marketing was mentioned only incidentally.

The second study in the 1960s was authored by Biggs (1964) and contains a review of the prevailing marketing systems for all agricultural and livestock products in Lesotho, and a series of recommendations for potential improvements in those marketing systems. Biggs described a cattle marketing system which in 1964 was comprised of cattle owners, trading stations, cooperative marketing societies, cattle speculators, South African farmers, South African meat brokers, and South African abattoirs. He reviewed a proposal for the establishment of a privately-owned meat processing facility in Maseru, and recommended that the Government not lend its support to such a venture. Rather, he recommended that the Government consider launching its own meat processing facility.

The third report of the 1960s (Basutoland National Council 1964) is the proceedings of an inquiry by the Basutoland National Council into the importation and exportation of livestock and agricultural produce. The report contains data on production, importation and exportation of the principal agricultural and livestock products produced and consumed in Lesotho. It contains testimony by farmers, government officials, private traders, and representatives of cooperative marketing societies. Interesting testimony was given by Mr. A. Bischoff, then Senior Agricultural and Livestock Officer. He described the marketing activities of the cooperative societies, and the problems and constraints of the domestic cattle industry.

More recent analyses of the cattle marketing system include the report by Moteane, Bostwick and Ronsholt (1984) and the

dissertation by Ferguson (1985). Moteane, Bostwick and Ronsholt conducted their study when it became apparent in late-1983 that markets in Lesotho and South Africa would have to absorb most of the output of the newly-constructed National Abattoir. The report contains a description of the livestock and meat marketing system, and proposals for how the system may be modified with the opening of the National Abattoir.

The most recent major study of the cattle marketing system was conducted by Ferguson (1986). Ferguson provided information about cattle marketing as part of a lengthy critique of development projects in general, and the Thaba-Tseka Mountain Development Project in particular. He described and interpreted the cattle production and marketing environment in Basotho households, and the cattle marketing activities of the Thaba-Tseka project.

2.3 Perspectives on Cattle Marketing in Lesotho

The Dominant Perspective

While the analyses of Fritsch (1984) and Ferguson (1985) are important exceptions, the dominant perspective on the livestock production -- utilization -- marketing environment in Lesotho is that Basotho stockowners are traditional, subsistence-oriented peasants who place great value on their livestock for social and cultural reasons. Basotho own far more livestock than is reasonable on economic grounds -- the current estimate is that Lesotho is overstocked by 241 percent, so it is important that markets be established to introduce Basotho to the idea that their cattle are a marketable product, and to allow stockowners to dispose of surplus culled animals. A more productive livestock sector and a destocked range are thus purported to be the results of successful marketing programmes.

This perspective has determined the way in which a number of livestock development programmes have been developed, implemented and evaluated. The Overseas Development Administration and the Ministry of Agriculture (1980) proposed a programme of range management, grazing control, extension, breeding, disease prevention and treatment, fodder production, and cattle marketing based on the premise that the current low rate of commercial offtake is due to " . . . the apparent incompatability which exists between people's socio-cultural reasons for holding livestock and their perceptions of livestock as commercial enterprise" (p. 7). Bostwick, Hesling and Heady (1984) 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 finding 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 assert that a commercial beef industry will be characterized by positive marketing responses to price increases, and thus destocking. Thus attempts must be made to generate fundamental changes in the attitudes of Basotho stockowners. This will only be achieved by a long-term extension effort coupled with a functional cattle marketing system.

Cattle marketing was an important component of the Thaba-Tseka Mountain Development Project. The programme of monthly auctions, a small feedlot, and an abattoir were all justified on the grounds that an integrated formal market infrastructure would result in:

(1) destocking -- by establishing a market where none existed before, people would be able to market their surplus animals; and

(2) transforming the traditional subsistence society into a cash economy.

In an internal evaluation of the programme of monthly auctions, which would be generally considered successful on other grounds (Ferguson 1985), it was stated that:

> Although not yet making a major contribution to de-stocking, the monthly markets have steadily increased in popularity. They attract large crowds and offer excellent opportunities for extension. The increasing 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)

The abattoir recently opened in Maseru was justified on very similar grounds to other cattle marketing infrastructure in Lesotho. It was asserted that the operation of an abattoir would result in:

> . . .increasing added value to Lesotho products, enhancing foreign exchange earnings, generating local employment and new skills, raising livestock productivity, encouraging better range management, relieving the pressure on the land by reducing stock and improving management and by raising the income of livestock farmers (UNDP and FAO 1981, p. 3).

The dominant perspective on cattle marketing in Lesotho can be separated into six major components:

(1) Basotho stockowners are traditional pastoralists who place high value on their cattle for social and cultural reasons;

(2) Before government or projects markets are organised there exists no market for cattle;

(3) Basotho are not generally familiar with the cash economy;

(4) Basotho stockowners are burdened with surplus cattle which they will sell if only a market exists;

(5) Increased market outlets for these surplus cattle will promote destocking of Lesotho's range;

(6) Private cattle traders (if they exist) engage in unfair trading practices and lead to poor market performance.

The Alternative Perspective

Fritsch (1984) was one of the first analysts of the Lesotho livestock sector to challenge the dominant perspective on the cattle production / marketing framework. Focusing on the 1970 to 1982 period, Fritsch argued that the high imports and low exports which characterised much of the period were indicative of the importance of economic criteria in the decision-making of Basotho stockowners. High migrant remittances meant that Basotho had less need to sell cattle to meet cash needs, at the same time as they had surplus funds to invest. Low cattle prices in South Africa, and low interest rates paid on savings accounts in Lesotho banks, encouraged Basotho to invest their surplus funds in cattle.

> Thus, cattle, which traditionally provided a highly liquid form of investment were held increasingly as a long term investment as the need for cash to meet living expenses was met from other sources (Fritsch 1984, p. 43).

If cattle are the preferred form of long-term investment in Lesotho, destocking will only be brought about by policies and programmes which reduce the incentive to invest in cattle. Fritsch recommended that this be done through expansion of the rural banking structure, and an increase in the rate of interest paid on savings accounts.

Focusing on a group of cattle owners in Leribe and Butha-Buthe District, Steele and Ncholu (1984) provided micro-level analysis to support the analysis of Fritsch. For the 112 cattle herds surveyed in 1983, purchases accounted for the largest increase in cattle number, followed by births and bride-wealth receipts. Despite a small increase in average herd size over the period February to August 1983, over half of the households still had either no cattle or too few cattle for draught purposes, indicating that most households continued to have strong incentives to build up their inventories of cattle. This was substantiated by the results of questions asking respondants why they did not sell cattle. Seventy-two percent of the respondants

indicated that they had too few cattle to market, and ten percent indicated that they did not market cattle because they wished to build up their herds.

Swallow (1985) supported the analysis of Fritsch with further analysis of the real and nominal rate of return from alternative investments, and with the application of the Jarvis (1984) conceptual model. Over the five-year period 1979 to 1984, real savings rates (nominal savings rate less inflation rate) fluctuated between -17.6 and 1.6 percent. The average real rate of interest on savings rates for the period was -9.3 percent. These low and negative real rates of return on savings accounts has meant that cattle need only generate small returns to be wiser economic investments.

The reality of all of the components of the dominant perspective, or the alternative perspective must be determined to evaluate the appropriateness of proposed cattle marketing schemes, and to monitor the performance of new and existing schemes. The following sections of this report will provide a variety of analyses. In the next section of this chapter, evidence of stockowner reactions to price changes will be presented for Argentina, Zimbabwe, Botswana, Swaziland and Lesotho. Historical, macro-, and micro-analyses of the cattle marketing system in Lesotho will be presented in the following two chapters. Appropriate perspectives for cattle marketing in Lesotho will be suggested, and implications for the development of the marketing system will be drawn in the following chapters.

2.4 Empirical Evidence of Stockowners Reactions to Price

Argentina

In his analysis of the Argentine cattle sector, Jarvis (1974) developed a 21 equation model to estimate the number slaughtered and average weight of those slaughtered, for six categories of cattle. The slaughter equations were estimated using time-series data from the 1943/44 to 1965/66 time period. Strong negative relationships were found between slaughter and current and one-year lagged prices. Significant positive relationships were found between slaughter and three- and four-year lagged prices. These results provide strong support for the cattle-as-capital model.

Zimbabwe

In a recent paper, Rodriguez (1985) analyzed the price structure confronting beef producers and consumers, and estimated the quantitative responses of producers and consumers of beef to

changes in beef prices in Zimbabwe. In addition to estimating equations relating aggregate beef demand to price, Rodriguez presented estimates of slaughter price response. He used ridge regression to estimate commercial cattle supply as a function of lagged price variables and two binary variables. The result of negative relationships between current prices and marketings was reported to be 'consistent with economic theory', because 'producers will hold back animals from slaughter because they need a larger herd to obtain higher slaughter offtake levels if they anticipate prices to increase'. These results indicate that 'both commercial farmers and communal areas' peasant producers respond to changes in producer prices in the same way as producers in other countries' (Rodriguez 1985, p. 16).

Botswana

Ndzinge, Marsh and Greer (1984) recently developed a rational distributed lag model of herd inventory and slaughter supply response of Botswana beef cattle producers. They hypothesized that beef cattle producers respond to fluctuating prices and range conditions in their cattle production and marketing decisions.

> Since cattle are utilised for both consumption and capital good purposes, changes in economic and noneconomic variables can elicit varying responses (Jarvis 1974). Higher slaughter prices for cattle encourage producers to sell part of their herd inventory to take advantage of immediate favourable cash returns (current consumption). At the same time, higher slaughter prices encourage producers to retain more breeding heifers and to reduce the slaughter of older cows to augment the basic breeding herd in the expectation of larger returns in the future (capital good or productive asset). The balance between the two alternatives is based on the producer's comparison of discounted future versus immediate net returns. These types of decisions coupled with biological production constraints and lags in economic adjustments give rise to beef cattle cycles occurring in production and trading systems (Ndzinge, Marsh and Greer 1984, p. 101).

Time series analyses of the herd inventory and slaughter response functions provided support for the authors' hypotheses, and for the capital asset model. Botswana cattle owners were found to react to increases in current slaughter prices by increasing their cattle inventories (at the expense of current marketings), and subsequently increasing their future marketings.

Swaziland

In their analyses of cattle marketing decisions in Swaziland, Doran, Low and Kemp (1979, 1980a and 1980b) discovered similar

negative relationships between current prices and cattle offtake. Rather than attribute this relationship to stockowner decisions to build up herd inventories, the authors argued that this indicated that the owners were able to market less animals to meet their cash needs. In his comment on the analysis, Jarvis (1980) argued that the authors misinterpreted their results, and that the statistical results actually indicate that Swazi cattle owners are responsive to price changes, and support the capital asset model.

Lesotho

While a long time series of data related to price and marketings are not available in Lesotho, some limited analysis has been conducted by Bostwick, Hesling and Headey (1984). Over a six-year period, commercial cattle supply was found to be negatively related to current price. The authors argued that this result was inconsistent with 'received economic theory', and that 'received economic theory does not apply to this curious case'. Obviously this statement is a direct contradiction of the observations of Lorie (1947) and of statements made by analysts of price / production and marketing relationships in other countries in Africa and South America. The empirical evidence, though weak, does provide limited support for the validity of the 'cattle-as-capital' model in the Lesotho case.

3. THE DEVELOPMENT OF CATTLE MARKETING IN LESOTHO

Many of the components of the dominant perspective on cattle marketing are best analyzed in light of historical information and data on the development of the Lesotho economy and the livestock sector of the economy. Two of the components: (1) before government or project markets are organised there exists no market for cattle; and (2) Basotho are not generally familiar with the cash economy; are rejected on the basis of this analysis.

3.1 Historical Development of the Lesotho Economy

The World Bank (1975) described the Lesotho of 1975 as follows:

> Few developing countries faced such bleak prospects and were so ill-prepared as Lesotho when it gained independence in October 1966. In few countries in the world was economic independence more remote from political independence than in Lesotho. In spite of the fact that Lesotho is an enclave within highly industrialized South Africa and belongs with that country, Botswana and Swaziland to the rand monetary area and the Southern African Customs Union, it was then virtually untouched by modern economic development. It was and still is, basically, a traditional subsistence peasant society (p. 1).

This contrasts fundamentally with the following description of the Lesotho of the 1870s:

> The Basotho bought ploughs, planted assiduously and sold grain to meet the needs of the distant mining camps. They responded to the incentives of the market with such zeal and success that, on one hand, the missionaries expressed anxiety lest their material prosperity endanger their spiritual progress (CB: 322) and, on the other hand, the Friend of the Free State was moved to remark, 'Nowhere else in South Africa is there a more naturally industrious nation, as honest and as peacable as the Basuto' (CB: 319). In 1873 they exported 100,000 bags of grain -- maize, wheat and sorghum -- and 2,000 bags of wool (Murray 1981, p. 11).

The end of the lifagane wars of c. 1818-24 marked the beginning of the historical development of Lesotho under the guidance of Moshoeshoe I. By the mid-1830s the worst dangers of the wars were over and scattered groups rapidly descended from the mountains into the more fertile lowland area of the country. In 1847 Moshoeshoe's kingdom reached its maximum geographical size and a population of approximately 80,000. This population engaged in five main productive activities: pastoralism, cultivation, hunting, gathering, and handicrafts and metal working.

negative relationships between current prices and cattle offtake. Rather than attribute this relationship to stockowner decisions to build up herd inventories, the authors argued that this indicated that the owners were able to market less animals to meet their cash needs. In his comment on the analysis, Jarvis (1980) argued that the authors misinterpreted their results, and that the statistical results actually indicate that Swazi cattle owners are responsive to price changes, and support the capital asset model.

Lesotho

While a long time series of data related to price and marketings are not available in Lesotho, some limited analysis has been conducted by Bostwick, Hesling and Headey (1984). Over a six-year period, commercial cattle supply was found to be negatively related to current price. The authors argued that this result was inconsistent with 'received economic theory', and that 'received economic theory does not apply to this curious case'. Obviously this statement is a direct contradiction of the observations of Lorie (1947) and of statements made by analysts of price / production and marketing relationships in other countries in Africa and South America. The empirical evidence, though weak, does provide limited support for the validity of the 'cattle-as-capital' model in the Lesotho case.

3. THE DEVELOPMENT OF CATTLE MARKETING IN LESOTHO

Many of the components of the dominant perspective on cattle marketing are best analyzed in light of historical information and data on the development of the Lesotho economy and the livestock sector of the economy. Two of the components: (1) before government or project markets are organised there exists no market for cattle; and (2) Basotho are not generally familiar with the cash economy; are rejected on the basis of this analysis.

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Hunting and gathering declined as rapidly as the population increased. The environment was well suited to the two dominant forms of production: pastoralism and cultivation (Kimble, 1978, pp. 1-24).

By the 1830s the white settlers began to exchange cattle and other commodities for the maize, sorghum and wheat (introduced into Lesotho in 1833) produced by the Basotho. During the five years of the Orange River Sovereignty (1848 - 1853), this trade flourished as Boer farmers produced cattle and wool for the market in the Cape Colony, while obtaining food crops and labour from the Basotho (Kimble, pp. 88-98).

The withdrawl of the British from the Orange River Sovereignty removed an important check on Boer expansionism which, together with Basotho cattle raiding, brought on the war of 1858 between the Basotho and the Boers. The Treaty of 1858 ended the war with the transfer of a large tract of land to the Orange Free State. In 1865 war broke out again and the Basotho territory was reduced again by the treaty. In 1868 Basutoland became a British Territory; in 1869 its current boundaries were established; in 1871 Lesotho was annexed to the Cape Colony.

After the relative stagnation of commodity trade during the late 1850s and 1860s, the discovery of diamond fields in Kimberley in 1867 and the rapid expansion of the diamond fields after 1870 led to tremendous increases in the demand for food stuffs and for labour. Basotho responded rapidly to those demand increases and consequent higher prices as described by Griffith in 1873:

> Today hundreds of wagons penetrate and traverse [the countryside] in every direction collecting the grain which the country produces. . . The cultivation of cereals has markedly increased and the plough has almost everywhere replaced the native hoe. In every direction we meet herds of cattle and sheep . . . use of money as a medium of exchange has become general . . . (Griffith, Colonial Administration Report, 1873, as quoted in Germond, Chronicles of Basutoland, 1967, p. 325).

While many Basotho responded to the developments in the diamond fields by increasing their production of agricultural products, many others migrated to the Kimberley area and to the railway lines to take up relatively well-paying employment opportunities. Income from these activities was used to purchase agricultural implements, consumer goods, and particularly cattle and sheep to build up herds dessimated during the 1860s (Kimble, pp. 216-217).

From 1870 to 1885, Basutoland exports of food grains generally increased, although there was tremendous year to year variation due to climatic conditions, general economic conditions, the Gun War of 1880-81 and the Civil War of 1882-84. In 1886 the completion of the railway from Cape Town to Kimberley

prompted a flood of Australian wheat into the market which had previously been serviced by Lesotho. However, the negative consequences of the opening of the railway were relatively short-term. In the mid-1880s gold was discovered in the Transvaal and soon the gold mining industry was a larger employer and demander of food stuffs than the diamond industry. Between 1885 and 1914, agricultural production, human population and livestock numbers all increased dramatically in Lesotho. Wheat, wool and mohair became the dominant export commodities, with large amounts of all these products being exported (Table 3.1).

Table 3.1 Lesotho exports of major agricultural commodities 1873 to 1984

	Maize	Wheat	Sorghum	Wool	Mohair
	--------- 200 lb. bags -----			----,000lbs---	
1873	(total of 100,000 bags)			(total of 2000 bags)	
1891	66,327	95,132	1,945		
1892	20,186	66,280	1,192		
1893	65,779	123,740	4,764	973	30
1894	68,101	129,821	6,526	904	68
1895	82,429	151,077	3,681	1,117	84
1896	99,975	47,482	NA	1,048	68
1897	64,576	58,951	4,746	855	73
1898	99,352	19,984	14,739	1,992	128
1899	13,370	3,832	NA	1,509	149
1900	20,685	7,404	NA	1,640	194
1901	49,916	24,907	NA	1,552	196
1902	85,445	35,623	8,494	3,729	407
1903	60,794	116,275	25,856	2,860	397
1904	12,308	16,141	1,782	2,849	400
1905	81,448	12,202	NA	2,944	444
1906	65,407	4,558	NA	2,918	437
1907	180,585	18,397	NA	4,117	825
1908	57,544	44,489	13,280	4,672	914
1909	182,157	62,555	6,912	6,961	1,456
1910	NA	NA	NA	NA	NA
1911	NA	NA	NA	NA	NA
1912	NA	NA	NA	NA	NA
1913	NA	NA	NA	NA	NA
1914	NA	NA	NA	NA	NA
1915	NA	NA	NA	NA	NA
1916	181,248	70,503	72,300	11,375	2,894
1917	101,166	67,792	21,443	8,782	1,740
1918	44,312	127,107	4,165	9,323	1,847
1919	52,134	256,154	32,333	10,084	2,246
1920	28,754	88,695	19,119	10,038	2,259
1921	43,478	110,383	NA	12,827	2,330
1922	20,316	128,204	NA	12,829	2,326

Table 3.1 (Continued)

	Maize	Wheat	Sorghum	Wool	Mohair
	---------	200 lb. bags	-----	----,000lbs---	
1923	87,161	64,144	52,570	10,264	2,002
1924	9,767	30,858	14,628	11,577	2,456
1925	71,061	83,602	NA	11,721	1,959
1926	5,561	103,402	NA	12,132	2,157
1927	37,512	103,568	22,062	12,907	2,133
1928	100,774	118,280	30,969	12,725	1,921
1929	87,404	72,103	37,056	12,937	1,961
1930	6,061	131,308	4,032	9,729	943
1931	295	103,706	10,247	9,325	1,242
1932	1,908	196,873	6,500	11,832	1,034
1933	107	55,822	--	9,864	1,927
1934	1,675	89,545	73	5,094	702
1935	8,105	181,090	184	9,845	1,264
1936	395	96,250	656	5,368	985
1937	4,858	171,441	2,518	5,873	784
1938	26,196	152,776	52,770	5,013	780
1939	NA	NA	NA	7,256	1,036
1940	NA	NA	NA	8,168	926
1941	NA	NA	NA	8,823	1,222
1942	NA	NA	NA	8,495	1,521
1943	NA	NA	NA	9,889	974
1944	NA	NA	NA	8,751	1,145
1945	NA	NA	NA	9,781	1,287
1946	530	127	1,240	10,078	1,445
1947	38,456	113,775	80,966	10,085	1,287
1948	34,644	90,528	86,391	10,320	1,497
1949	20,391	19,689	12,216	17,194	1,867
1950	--	46,109	37,564	10,200	1,589
1951	--	25,078	21,769	8,814	1,242
1952	--	60,084	89,983	8,848	1,230
1953	--	54,673	57,951	7,446	1,138
1954	--	43,532	17,371	7,872	1,113
1955	--	82,052	10,168	7,701	1,103
1956	--	91,640	5,645	7,293	1,068
1957	--	60,725	10,003	7,058	1,068
1958	--	17,512	11,864	6,289	992
1959	--	52,428	680	7,233	1,081
1960	--	93,881	5,826	6,786	1,181
1961	--	61,626	1,592	7,356	1,266
1962	--	17,405	--	8,523	1,512
1963	--	57,245	--	9,422	1,587
1964	--	122,898	--	8,485	2,114
1965	--	33,000	--	9,423	1,925
1966	--	5,672	--	9,371	2,051
1967	--	22,086	--	9,633	1,902
1968	--	109,465	--	10,129	2,218
1969	--	150,120	--	10,096	2,212

Table 3.1 (Continued)

	Maize	Wheat	Sorghum	Wool	Mohair
	----------	200 lb. bags	-----	----,000lbs---	
1970	--	23,353	--	9,164	1,943
1971	--	18,358	--	NA	1,912
1972	--	27,799	--	NA	1,687
1973	--	--	--	10,481	1,247
1974	--	--	--	13,059	1,496
1975	--	--	--	11,765	1,360
1976	--	--	--	8,818	750
1977	--	--	--	12,509	875
1978	--	--	--	12,780	1,112
1979	--	--	--	11,480	1,097
1980	--	--	--	11,372	1,061
1981	--	--	--	10,971	539
1982	--	--	--	12,472	916
1983	--	--	--	14,494	1,475

Notes: NA indicates information not available.
-- indicates negligible exports.

Sources: Colonial Administration Reports, various from 1890; Kimble 1979; Department of Agriculture, Annual Reports, various from 1934 to 1962; Bureau of Statistics, Annual Statistical Bulletins, various from 1960 to 1983; Pim 1935.

The ability of Lesotho to sustain large agricultural surpluses has declined rapidly since the 1920s. Population increases caused a corresponding increase in the subsistence requirement; soil erosion worsened; at the same time production technology remained stagnant. By the 1930s, Lesotho had become a net importer of the staple crop, maize (table 3.1), a situation that has continued to today. Declining domestic employment and income opportunities prompted thousands of Basotho to seek work in South Africa. Basotho found employment in a number of sectors of the economy, some of them migrating permanently, others oscillating between Lesotho and South Africa (Table 3.2). At independence in 1966, Lesotho was described as ". . . a classic case of a labour-reserve economy" (Cobbe 1982, p. 115). Since independence Basotho migrant workers have become increasingly concentrated in the mining industry, and increasingly dependent on foreign aid (Cobbe 1986, p. 29).

Table 3.2 Number of Basotho employed in South African mines, 1906 to 1985

Year	South African Chamber of Mines	All Mines
1906	2,000	NA
1911	6,600	NA
1916	14,600	NA
1921	19,900	NA
1926	22,200	NA
1931	30,800	NA
1936	46,000	NA
1945	38,500	NA
1946	38,200	NA
1947	33,800	NA
1948	31,300	NA
1949	43,000	NA
1950	32,000	NA
1951	35,700	NA
1952	33,400	NA
1953	32,800	NA
1954	33,900	NA
1955	44,300	NA
1956	39,900	NA
1957	40,100	NA
1958	49,100	NA
1959	52,700	NA
1960	51,400	NA
1961	53,900	NA
1962	58,500	NA
1963	56,500	NA
1964	58,500	NA
1965	61,300	NA
1966	64,300	NA
1967	59,700	77,414
1968	65,100	80,310
1969	65,500	83,000
1970	71,100	87,384
1971	68,700	91,054
1972	78,500	98,831
1973	87,200	110,453
1974	78,000	103,288
1975	89,500	112,507
1976	96,400	121,062
1977	103,200	128,941
1978	104,100	124,491
1979	109,200	124,393
1980	109,000	120,733
1981	109,200	123,538
1982	104,000	117,641
1983	102,800	115,327
1984	NA	114,071
1985	NA	116,223

Note: NA indicates information not available.

Sources: W.N.L.A. Annual Reports as quoted in Francis Wilson (April 1976). International Migration in Southern Africa, World Employment Programme Working Paper WEP2-26/WP.3, International Labour Office, Geneva, and in C. W. Stahl (August 1979) Southern African Migrant Labour Supplies in the Past, Present and the Future, with Special Reference to the Gold-Mining Industry World Employment Programme Working Pater WEP 2-26/WP.41, International Labour Office, Geneva: James Cobbe (January 1986). "Consequences for Lesotho of Changing South African Labour Demand", African Affairs, Vol. 85, No. 338.

3.2 Development of the Lesotho Livestock Sector

Raids conducted in the late 1820s increased the cattle herd held by Basotho by over 1,000 head. Moshoeshoe and his chiefs used their increased herds to bind the Basotho together through bohlanka relationships. Bohlanka involved the payment of lobola and / or mafisa arrangments. Under a bohlanka relationship, a chief made payment of lobola or bridewealth in the form of cattle on behalf of a man who was in turn bound in servitude to the chief. Mafisa is a system of livestock borrowing and lending which generally gives the holder of the cattle rights to the flow products, milk and draught, while the owner retains title to the inventory including progeny. By the late 1830s most of the cattle holders were involved in some form of mafisa relationship, with most cattle owned by the chiefs. By 1839, Moshoeshoe owned approximately 20,000 cattle which were dispersed throughout the country on mafisa arrangments (Kimble, pp. 49-53).

While some of the increase in the size of the Basotho cattle herd must have resulted from natural increase, much of it was due to the exchange of food crops for cattle with neighbouring indigenous peoples. In 1838 Arbousset remarked:

> The Baralong, the Bahlaping, and the Griques come daily to supply this nation with cattle . . . Since our arrival in this little state, no fewer than 1,500 head of horned cattle, 40,000 sheep, 35,000 goats, 200 horses, 300 rifles and ammunition in corresponding amounts of powder and lead, have been imported (Eldredge 1979, p. 18).

As the number of white settlers continued to increase in neighbouring areas, the Basotho increasingly traded their surplus food grains with the Boers. By the mid 1860s, the Lesotho cattle herd had increased to approximately 200,000 head (The Friend, 9 March 1866 and 6 March 1868 as reported in Kimble, p. 132).

despite the large numbers lost to the Orange Free State during the wars and to lungsickness and drought in the 1850s and 1860s. At the same time the population of horses increased from nil to the point where the Basotho cavalry numbered 10,000 to 12,000 in 1863.

The role of cattle as secure forms of investment which could be liquidated to meet cash needs became evident in the late 1850s. While Lesotho may have remained a net importer of cattle, significant numbers of older animals were traded for European goods during the war years of the late 1850s and 1860s. However, throughout this period, horses, wool and particularly wheat, maize, sorghum and labour were more important export commodities (Kimble, pp. 144-146).

The relatively prosperous years from the late 1860s and 1870s allowed the Basotho to rebuild their cattle herds. The census figures of 1875, admitted to be under-estimates, indicated 28,194 draught oxen, and 189,538 cows and calves in Lesotho (Kimble, pp. 216-217).

The Lesotho herds of cattle, sheep and goats continued to grow through to 1921 despite temporary reductions caused by the the rinderpest epidemic of the last years of the 19th century (Phoofolo 1977) and by periodic droughts. Since 1921 cattle, sheep and goat populations have all varied considerably from year to year, with the thirty year period 1930 to 1960 generally being a time of herd reduction for cattle and sheep. Since 1960, the herds of cattle, sheep and goats have all increased, so that today the total herd is roughly equivalent to its 1921 level. Over the last sixty years there has been a general change in the relative numbers of sheep and goats. In 1921 there was half as many goats as sheep, in 1983 there were two-thirds as many goats as sheep (Table 3.3 and Figure 3.1).

Table 3.3 Livestock populations, imports and exports for Lesotho 1830 to 1984

	Cattle Population	Cattle Imports	Cattle Exports	Sheep Population	Goat Population
1830-8		1,500		40,000	35,000
1844	20,000				
1875	217,417			289,807	160,754
1893			715		
1894			639		
1895			427		
1896					
1897	(Rinderpest		227		
1898	Epidemic)		711		

Table 3.3 (Continued)

	Cattle Population	Cattle Imports	Cattle Exports	Sheep Population	Goat Population
1899					
1900					
1901			1,574		
1902			1,241		
1903			1,284		
1904	209,883				
1905					
1906			272		
1907			306		
1908			144		
1909			1,313		
1910					
1911	432,748			1,363,680	987,009
1912					
1913					
1914					
1915					
1916			13,135		
1917			11,150		
1918			12,750		
1919		1,096	11,636		
1920		447	12,290		
1921	574,415			1,854,426	894,257
1922					
1923		5,580	1,773		
1924		4,891	242		
1925					
1926					
1927		2,747	1,981		
1928		4,772	1,538		
1929		2,428	1,496		
1930		645	3,617		
1931		436	8,337		
1932	550,000	349	5,668	1,991,478	724,602
1933	400,000	1,264	17,491	1,469,200	531,000
1934		2,866	17,173		
1935	352,331	6,995	6,503	1,285,596	432,230
1936	414,872	2,889	9,913	1,884,597	669,195
1937	418,921	4,599	8,477	1,283,394	411,931
1938	434,990	12,073	5,544	1,470,361	489,574
1939	447,763	15,262	6,562	1,598,812	568,687
1940	470,040	14,750	5,722	1,597,887	565,554
1941		17,188	8,241		
1942		17,754	14,317		
1943		13,979	15,735		
1944		8,509	7,471		

Table 3.3 (Continued)

	Cattle Population	Cattle Imports	Cattle Exports	Sheep Population	Goat Population
1945	437,217	11,727	7,554	1,544,723	541,974
1946		8,847	3,087		
1947	429,158	15,154	6,322	1,702,977	647,013
1948		16,201	10,000		
1949		23,066	16,641		
1950		13,626	8,387		
1951	401,221	7,600	6,938	1,564,001	637,065
1952		7,189	9,756		
1953	406,454	7,217	9,877	1,303,325	550,612
1954		7,885	8,253		
1955	408,144	6,322	12,927	1,339,019	654,800
1956		9,360	8,395		
1957	381,770	12,451	11,515	1,220,769	535,286
1958	362,897	15,304	12,290	1,231,699	505,562
1959	387,769	14,872	11,841	1,330,657	594,395
1960	331,203	19,527	10,379	1,087,372	579,166
1961	376,740	18,952	8,491	1,227,386	632,032
1962	386,342	19,956	8,828	1,434,538	739,454
1963		22,704	12,164		
1964		17,843	11,883		
1965	346,079	13,859	11,906	1,661,502	877,820
1966	357,754	8,724	12,976	1,457,590	885,586
1967		9,937	13,353		
1968		5,239	18,353		
1969		4,355	15,299		
1970		4,730	11,408		
1971		6,869	8,656		
1972		5,028	8,918		
1973	465,500	4,067	12,894	1,556,900	961,900
1974	512,400	3,046	9,225	1,577,400	886,400
1975	502,400	7,944	3,503	1,519,700	834,600
1976	485,500	33,821	1,250	1,128,000	617,500
1977	526,181	47,673	1,223	942,833	582,499
1978	560,407	57,787	574	973,996	618,314
1979	593,929	50,133	793	1,043,561	784,346
1980	590,021	30,496	766	1,168,404	766,535
1981	562,372	10,740	2,090	1,337,448	930,413
1982	537,517	7,001	427	1,279,499	872,145
1983	529,175	11,253	2,700	1,280,975	856,900

Sources: Bureau of Statistics, Annual Statistical Bulletins, various years; Kimble 1979; Census Reports 1904, 1911, 1921; Colonial Administration Reports, various years.

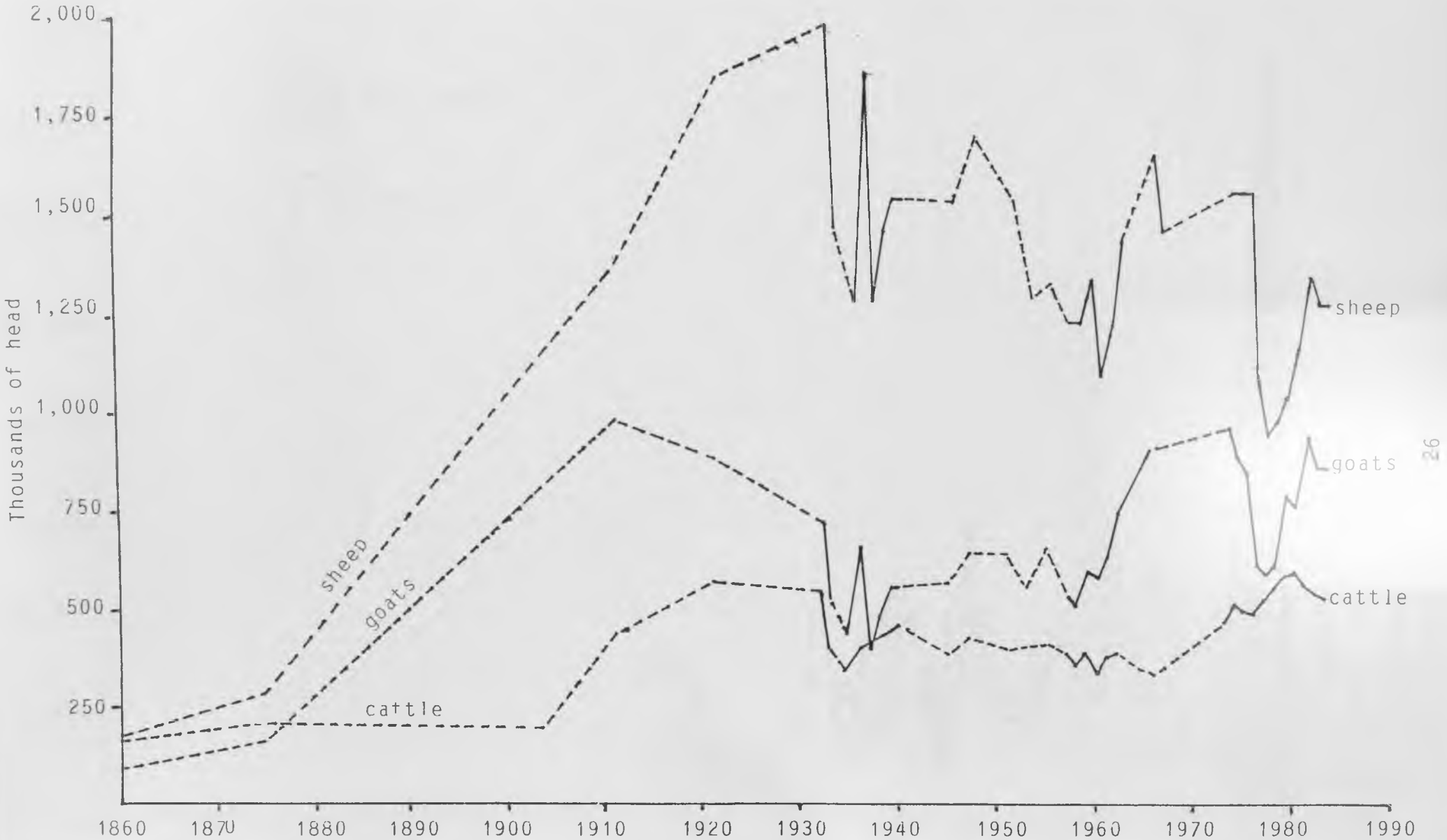

Fig. 3.1 Populations of cattle, sheep and goats, 1875 to 1983

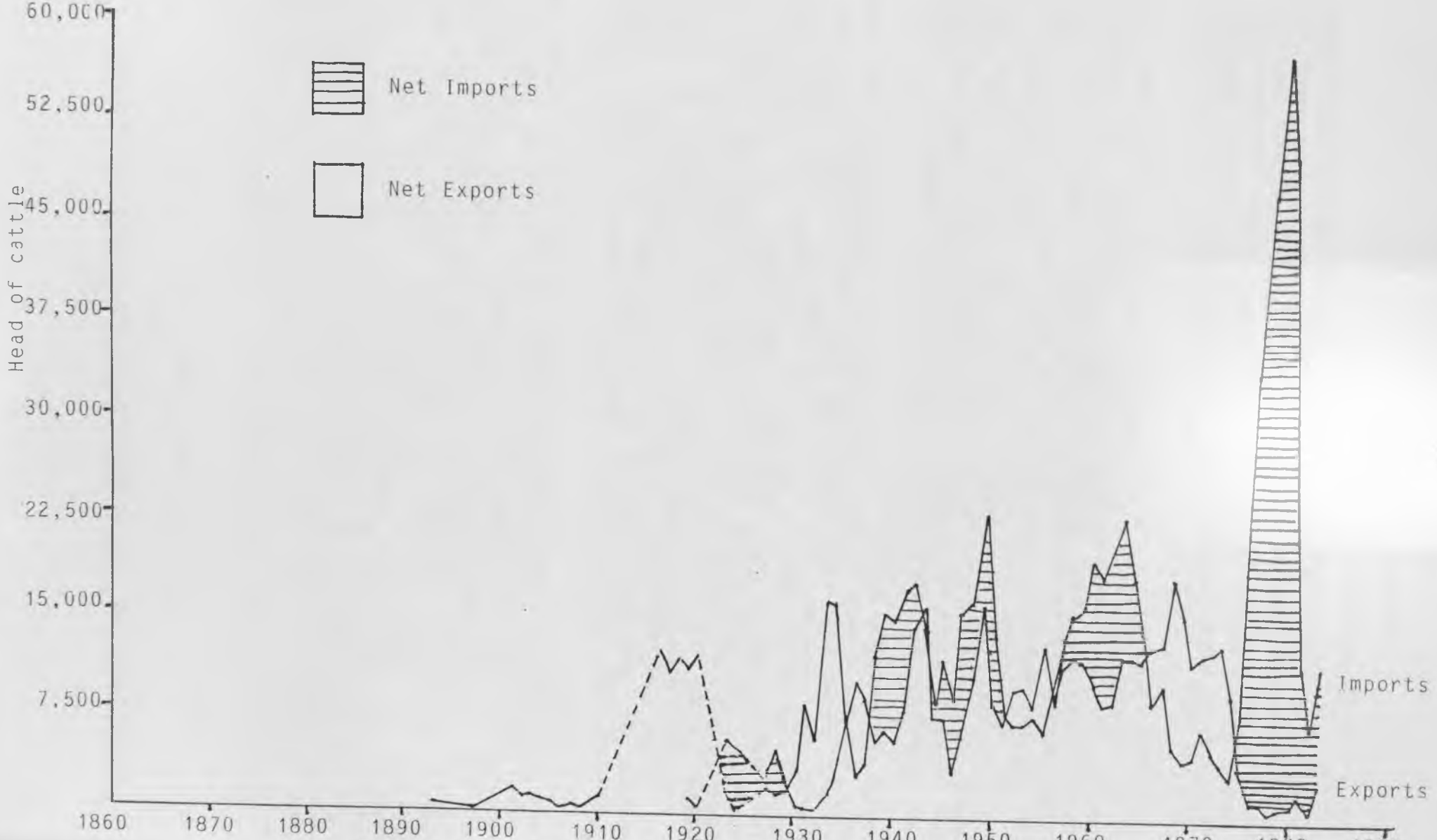

Fig. 3.2 Imports and exports of cattle, 1893 to 1983.

3.3 Development of Cattle Marketing Institutions in Lesotho

Private Trade

While Lesotho has been historically a net importer of cattle, large numbers of cattle have been traded on local and international markets for many years. During the colonial years private traders tended to dominate formal marketing channels. From the 1890s to the 1920s the principal marketing outlets for Basotho-owned cattle were traders -- either the itinerant traders called hawkers, or the fixed trading stations. Cattle were then exported 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 to South African butchers. In the 1930s, a number of speculators became involved in the cattle import/export 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.

During the late 1930s the Auction/Livestock Sales Scheme operated by the Department of Agriculture was started. Under this scheme the Department of Agriculture arranged auction sales in various locations in the country. The main buyers at these auction sales were private buyers and speculators from South Africa. The purchased animals were then exported for sale to butchers. In 1938/39 the Department of Agriculture organised 10 sales where 257 cattle were sold (Department of Agriculture 1938/39). From that modest beginning, the number of cattle sold through the scheme rose to 5,375 in 1942/43. The number of auctions sales also rose during the same period from 10 to 25. 1942/43 marked a peak in both the number of sales and cattle sold through the auction scheme.

In 1946/47 the Department of Agriculture organised 13 sales where 1,133 cattle were sold. It is postulated that Basotho farmers were not selling their cattle mainly because they were getting gratuities in respect of military service in World War II. On the other hand the total number of cattle exported to South Africa actually rose indicating that Basotho farmers were selling their cattle directly to the private traders. It was reported that the ready access to local trading stations was an obstacle to the auction sales scheme, especially if traders offered younger animals for sale or exchange (Department of Agriculture 1946/47).

During the colonial era the most important auction sales locations were Mohales Hoek, Mafeteng, Maseru and Leribe (Hlotse) in the lowlands while in the mountains Qacha's Nek was the only sales location. In 1951 it was reported that livestock auction sales were held at Leribe, Maseru, Mafeteng and Mohales Hoek, and low numbers of cattle were sold (Department of Agriculture 1951).

In 1952 it was observed that for the first time in many years, the number of cattle exported exceeded the number imported. In 1952 and 1953 livestock auction sales were held in various locations around the country but were on the whole disappointing.

In 1953 the Department of Agriculture started investigations to introduce one-channel marketing of cattle. It was believed that there were sufficient cattle in the country to support this one-channel marketing system given the export figures of the past years. Under the one-channel marketing system of livestock, all livestock leaving the lowland districts during the selling season of January to May were to pass through auction sales organised by the Department of Agriculture. In 1956 the one-channel marketing system was introduced with the Department of Agriculture organising auction sales at Leribe, Maseru and Mafeteng. Although the auction sales were conducted by a long established and well known auctioneering firm, they failed to attract sufficient buyers to ensure healthy competition and fair prices. At the Leribe and Maseru sales the only two buyers present were also the largest sellers.

When the one-channel marketing system ended in 1957, private traders began organising auction sales on their own. During this period private traders operated as agents for South African speculators. Private traders arranged and provided facilities for sales, but took no part in the actual buying and selling. The traders were paid flat commissions for their services. The cattle were traded for either cash alone or in exchange for young animals (with a cash adjustment). Private traders played a major role in the marketing of livestock until 1971.

Cooperatives

The co-operative movement in Basutoland started in 1948 when the first Registar of Co-operative Societies was appointed. The first co-operatives in the country were mainly wool and mohair marketing societies. In 1957 the Basutoland Co-operative Banking Union (BCBU) was established. The BCBU was to finance primary societies for agricultural credit and produce marketing. With the formation of the BCBU wool and mohair marketing societies purchased wool and mohair from their members using advances made by the BCBU. In 1960 the BCBU formed the Basutoland Co-operative Federation (BCF). The BCF was established mainly for produce marketing and the handling of agricultural inputs for farmers.

Co-operative marketing societies were involved in the marketing of cattle as early as 1956 when two co-operative marketing societies exported 94 cattle to South Africa. The co-operative marketing societies accepted animals from their members for sale on a consignment basis. Unlike the private traders, marketing societies weighed and graded the cattle, then sent them on consignment basis to South African markets. The higher grades of cattle were sent to South African abattoirs, notably Durban,

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while animals suitable for compound meat were sent to a canning factory in Cape Town. In 1961 the co-operative marketing societies exported approximately 800 cattle to South Africa.

In 1958 the Department of Co-operatives organised livestock auction sales in the country. Sales were held in Mokhotlong, Butha-Buthe, Mafeteng, Leribe, Semonkong, Mohale's Hoek, Quthing and Matelile.

Parastatal Marketing Agencies

Leading up to, and especially since, independence Lesotho has experienced a move from private sale of livestock towards more government involvement. In 1963 the registration of the BCBU was cancelled and the Finance and Marketing Co-operative Union of Basutoland (FMCUB) took over its assets and liabilities as a parastatal marketing body. After independence in 1966 the FMCUB become the Finance and Marketing Co-operative Union of Lesotho (FMCUL). The FMCUB competed with the established private traders in all livestock products, and handled modest numbers of cattle through auction sales it organized. In 1969 the FMCUB purchased 977 cattle in Lesotho.

The Lesotho Farmers Produce Marketing Corporation (LFPMC) was established in 1971 with the aim of assisting the producer to get a better return for his animals. The LFPMC was a government controlled company under which frequent livestock auction sales were held at a number of locations in the country. The LFPMC became the sole agency through whom livestock could be exported or imported into the country. From May to December 1971, 2,847 cattle were marketed through the LFPMC. In 1972, 8,581 cattle were marketed (Ministry of Agriculture and Cooperatives 1973).

The Livestock Marketing Corporation (LMC) was established in 1973. It took over the functions of the LFPMC as the sole agency involved in the marketing of live animals. It also became involved in the marketing of wool and mohair. The LMC ceased livestock marketing operations in 1980. In 1974/75, 6,585 cattle were marketed through the LMC; in 1975/76, 2,084 cattle were marketed.

In 1976, the Thaba-Tseka Project began holding auction sales, and in 1980 those sales became monthly. This is perhaps the most successful of four rural development projects which conducted livestock marketing. The other projects, Senqu River, Khoma-khoana, and Thaba-Bosiu all purchased cattle from farmers for resale, or for sale on consignment to the Durban abattoir.

The Livestock Products Marketing Services (LPMS) was established in 1978 under the Ministry of Agriculture and Marketing. The LPMS was established to accomplish some of the following objectives:

(1) to provide inspectorate services in classing wool and mohair;

(2) to implement government policy for efficient and speedy local processing of wool and mohair cheques;

(3) to refine the wool and mohair operational systems;

(4) to restore farmer confidence and thus revive their interest in livestock improvement through efficient marketing.

The LPMS was established as a result of the LMC not fulfilling the objectives set for it. Wool and mohair farmers had lost confidence in the LMC and this resulted in farmers selling their wool and mohair to private traders. The LPMS is now the designated marketing agency for live animals in the country.

The cattle marketing infrastructure took with the introduction of the Livestock Procurement System Project (LPSP). The LPSP was started in 1979 and was financed by the British Government. The plan was to construct 30 sales yards and 30 resting points. The sales yards are roughly split into three basic routes. These routes are split into northern, central and southern. The northern route is from Mokhotlong to Maseru, the central route is from Thaba Tseka to Maseru, while the southern route is from Sehlabathebe via Mohale's Hoek to Maseru.

The National Feedlot was opened in early 1983 and the National Abattoir in late 1985. LPMS, the National Feedlot, and the National Abattoir now compose the formal marketing system in Lesotho. Further description of this marketing system is contained in the next chapter.

3.4 Conclusions

The preceding analysis establishes that Lesotho has long been integrated into the Southern African cash economy and that Basotho farmers have a long history of producing for the cash market. While Lesotho has generally been a net importer of cattle, there have been periods when large numbers of cattle have been exported. Further analysis should be conducted to determine the economic conditions which fostered these periods of herd liquidation, and the contrasting periods of herd construction.

Cattle marketing appears to have been most vibrant when dominated by private traders. Over the past forty years a number of attempts have been made to centralize the cattle trade through parastatal marketing agencies. Most of the efforts have failed.

4. THE CURRENT CATTLE MARKETING SYSTEM IN LESOTHO

The formal marketing infrastructure for cattle is dominated by the LPMS, which operates under the Minstry of Agriculture, and the National Feedlot/Abattoir complex which is operated as a state company. The LPMS organises cattle auction sales at a number of points around the country. The Feedlot/Abattoir complex is the dominant purchaser of cattle at these sales, though recentiy the Royal Lesotho Defense Force and a number of butchers have also been attending.

4.1 Structure and Operations of LPMS Rural Auction Sales

The LPMS employs one auctioneer who conducts auction sales in all sales points in the country except sales points at Qacha's Nek, Ramatseliso's Gate, and Sehlabathebe. At these points the auctioneering is conducted by a South African co-operative. At Mphaki sales are organised by the Mphaki Livestock Project, which operates under the Livestock Division of the Ministry of Agriculture, and conducted by either the LPMS or the South African co-operative. Sales at Sehlabathebe are organised by the Land Conservation and Range Development Project, which operates in coordination with the Range Management and Conservation Divisions of the Ministry of Agriculture.

The LPMS is responsible for maintaining the sales yards and for transporting cattle from the sales yards to the buyers' locations. For all these services the LPMS charges buyers a six percent commission. This commission is used to cover trekking costs, maintenance of sales yards and death losses while cattle are trekked. The LPMS also collects an export levy of M2.50 on each animal.

Most of the sales yards have a large holding pen where cattle are brought in and several smaller sorting pens. There are also weigh scales and ear-tagging facilities. Resting places have of a small hut used by the trekkers and a fence in which the animals are kraaled. Mantsonyane is actually a resting place but used as a sales yard. The Hlotse sales yard is used as a resting place for cattle from Mapholaneng and Mokhotlong. The Bushmen's Pass rest place is used for cattle trekked from Mantsonyane and Thaba-Tseka.

The locations of active sales yards, non-active sales yards, and resting points, by district, are listed in Table 4.1.

Table 4.1 Locations of sales yards and resting points, by district

District	Active Auction Yards	Non-Active Auction Yards	Resting Points
Berea		''Makhoroana Teyateyaneng	Khotsisi (non-active)
Butha-Buthe		Libono Qholaqhoe Tsime	
Leribe		Hlotse Pitseng Pelaneng Leione	
Mafeteng	Mafeteng	Matelile	
Maseru	Semonkong	Ramabanta Moitsupeli Morija Matela Marakabei	Bushmen's Pass (active)
Mohale's Hoek		Masemousu Phamong	Holy Cross (non-active)
Qacha's Nek	Qacha's Nek Ramatseliso's Gate Sehlabathebe		
Quthing	Mphaki Tosing	Ha Makoloane	
Mokhotlong	Mokhotlong Mapholaneng		
Thaba-Tseka	Thaba-Tseka Mantsonyane	Sehonghong	Lekhalong la liphokojoe

Source: Livestock Products Marketing Service

Before owners are allowed to present an animal to the buyers at an auction sale, they must produce the babeisi, or legal title of ownership. Besides indicating the legal ownership of an animal, the babeisi also identifies the animal by its sex, colour, and ear markings. While mabeisi (plural) should be kept

for every animal in a farmer's herd, many farmers do not apply for the title until they wish to sell a particular animal. Thus in practice, when a farmer wishes to sell an animal, he must go to the local chief or headman who will issue a Tlaka-Tsooana or temporary permit attesting to the ownerhip of the animal. The farmer then takes the Tlaka-Tsooana to a babeisi secretary (Monyoli oa Mabeisi) who will issue a babeisi on the basis of the information supplied by the chief or headman. The farmer can then go to an auction sale and present his babeisi with his animal. A Stock Theft Policeman must inspect the babeisi to verify the ownership. Only then can an animal proceed through the sales ring. If the animal is sold the seller surrenders the babeisi to the buyer. In the case of the LPMS auction sales, the babeisi is first given to the LPMS, so that the mabeisi are kept with the animals during their trek to Maseru. Unfortunately, problems with the issuance and checking of mabeisi often restrict sellers from participating in auction sales.

Farmers who reside in villages where there is no sales yard and who want to sell cattle, can register their names with the local livestock attendants who in turn submit the list to the District Livestock Officer (DLO). The DLO then submits the list to the LPMS at the end of each month. The LPMS can then set a date for an auction sale. The LPMS usually recommends that a minimum of 20 cattle be offered for sale at these unscheduled auctions.

Dates of sales are usually organised so that two adjacent sales points have sales days following each other. This is usually done for Mokhotlong / Mapholaneng and Thaba-Tseka / Mantsonyane. Cattle are usually trekked from the first sales point on the day of the sale at the second sales point. In that way the cattle from the first sales point catch up with the cattle from the second sales point and then combined and trekked together. This reduces LPMS transportation and trekking costs.

Data on the weight, sex and price paid for each animal are collected by the LPMS at each auction. These data are not routinely reported by the LPMS, so the data from mid-1981 to mid-1986 are summarized and reported in Tables 4.2 and 4.3. Readers are referred to the Ministry of Agriculture (1981) for monthly sales data from mid-1979 to mid-1981. Table 4.2 presents data on the number sold, the average price per head, the average weight, and the average price per kilogram (for those sales where scales were available and functional) for each sale between mid-1981 and mid-1986.

Table 4.2 LPMS cattle sales, 1981 to 1986

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
25/07/81	Thaba-Tseka	27	397	291	0.73
28/07/81	Thaba-Tseka	5	NA	319	NA
20/08/81	Pitseng	14	NA	398	NA
21/08/81	Mantsonyane	13	NA	365	NA
26/08/81	Mantsonyane	21	NA	350	NA
29/09/81	Thaba-Tseka	28	NA	334	NA
24/11/81	Thaba-Tseka	17	400	272	0.68
15/12/81	Thaba-Tseka	27	NA	312	NA
04/01/82	Mphaki	7	NA	312	NA
13/01/82	Ramatseliso's Gate	16	NA	299	NA
25/01/82	Qacha's Nek	6	NA	245	NA
26/01/82	Thaba-Tseka	86	NA	245	NA
27/01/82	Mantsonyane	11	NA	301	NA
10/02/82	Ramatseliso's Gate	29	NA	331	NA
11/02/82	Mafeteng	9	NA	285	NA
12/02/82	Morija	7	NA	379	NA
16/02/82	Pitseng	1	NA	395	NA
17/02/82	Corn Exchange	6	NA	373	NA
19/02/82	Semonkong	51	NA	328	NA
23/02/82	Thaba-Tseka	104	NA	315	NA
24/02/82	Mantsonyane	65	NA	316	NA
25/02/82	Likalaneng	19	NA	313	NA
28/02/82	Mphaki	44	NA	327	NA
28/02/82	Ramatseliso's Gate	29	NA	330	NA
01/03/82	Mphaki	125	NA	289	NA
09/03/82	Mokhotlong	102	NA	266	NA
10/03/82	Tlokoeng	65	NA	278	NA
10/03/82	Ramatseliso's Gate	46	NA	230	NA
17/03/82	Corn Exchange	2	NA	230	NA
19/03/82	Semonkong	53	NA	393	NA
25/03/82	Mafeteng	14	NA	230	NA
26/03/82	Morija	6	NA	195	NA
29/03/82	Qacha's Nek	8	NA	268	NA
30/03/82	Thaba-Tseka	137	NA	239	NA
31/03/82	Mantsonyane	23	NA	337	NA
01/04/82	Likalaneng	22	NA	262	NA
07/04/82	Mphaki	60	NA	322	NA

Table 4.2 (Continued)

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
07/04/82	Mafeteng	20	NA	237	NA
08/04/82	Morija	2	NA	250	NA
14/04/82	Ramatseliso's Gate	95	NA	378	NA
16/04/82	Semonkong	46	NA	349	NA
20/04/82	Corn Exchange	2	NA	213	NA
22/04/82	Mokhotlong	134	NA	263	NA
23/04/82	Tlokoeng	93	NA	280	NA
27/04/82	Thaba-Tseka	82	NA	308	NA
28/04/82	Mantsonyane	40	NA	274	NA
29/04/82	Likalaneng	12	NA	236	NA
11/05/82	Corn Exchange	6	NA	247	NA
12/05/82	Ramatseliso's Gate	51	NA	344	NA
13/05/82	Mokhotlong	24	NA	259	NA
14/05/82	Mapholaneng	97	NA	246	NA
21/05/82	Semonkong	36	NA	329	NA
25/05/82	Thaba-Tseka	99	NA	273	NA
26/05/82	Mantsonyane	17	NA	282	NA
10/06/82	Mafeteng	11	NA	262	NA
11/06/82	Moitsupeli	8	NA	279	NA
29/06/82	Thaba-Tseka	33	NA	225	NA
30/06/82	Mantsonyane	23	NA	252	NA
07/07/82	Mafeteng	5	NA	185	NA
27/07/82	Thaba-Tseka	37	NA	268	NA
28/07/82	Mantsonyane	5	NA	288	NA
04/08/82	Mafeteng	2	NA	252	NA
06/08/82	Moitsupeli	10	NA	238	NA
14/09/82	Mafeteng	8	NA	200	NA
28/09/82	Thaba-Tseka	10	NA	252	NA
25/01/83	Thaba-Tseka	32	NA	215	NA
09/02/83	Ramatseliso's Gate	19	NA	328	NA
12/02/83	Semonkong	16	435	263	0.60
22/02/83	Thaba-Tseka	30	426	225	0.53
23/02/83	Marakabei	16	491	258	0.57
28/02/83	Pelaneng	40	NA	291	NA
01/03/83	Mphaki	94	NA	299	NA
08/03/83	Mokhotlong	116	NA	201	NA
09/03/83	Mapholaneng	80	NA	216	NA
09/03/83	Ramatseliso's Gate	47	NA	261	NA

Table 4.2 (Continued)

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
17/03/83	Semonkong	25	NA	275	NA
24/03/83	Mafeteng	13	NA	162	NA
25/03/83	Moitsupeli	6	NA	277	NA
28/03/83	Qacha's Nek	11	NA	268	NA
29/03/83	Thaba-Tseka	7	NA	241	NA
30/03/83	Marakabei	34	NA	218	NA
07/04/83	Mafeteng	6	NA	186	NA
08/04/83	Moitsupeli	7	NA	302	NA
12/04/83	Mokhotlong	96	NA	221	NA
13/04/83	Ramatseliso's Gate	10	NA	240	NA
13/04/83	Mapholaneng	62	NA	222	NA
19/04/83	Pelaneng	34	NA	247	NA
21/04/83	Semonkong	25	NA	303	NA
27/04/83	Marakabei	18	NA	269	NA
27/04/83	Sehlabathebe	107	NA	220	NA
05/05/83	Pitseng	26	NA	261	NA
11/05/83	Ramatseliso's Gate	21	NA	261	NA
17/05/83	Mokhotlong	62	NA	259	NA
18/05/83	Mapholaneng	56	NA	254	NA
24/05/83	Semonkong	19	NA	284	NA
26/05/83	Mafeteng	7	NA	215	NA
27/05/83	Ramabanta	10	NA	238	NA
31/05/83	Thaba-Tseka	44	470	259	0.55
09/06/83	Mafeteng	4	343	246	0.72
10/06/83	Ramabanta	6	447	278	0.62
21/06/83	Pitseng	15	451	289	0.64
23/06/83	Semonkong	6	506	317	0.63
28/06/83	Thaba-Tseka	62	481	277	0.58
30/06/83	Marakabei	19	472	291	0.68
30/06/83	Mantsonyane	13	NA	311	NA
05/07/83	Mokhotlong	82	483	306	0.63
06/07/83	Mapholaneng	28	444	289	0.65
30/08/83	Thaba-Tseka	17	NA	295	NA
30/08/83	Mantsonyane	13	NA	311	NA
30/08/83	Nazareth	5	NA	295	NA
12/09/83	Matelile	1	NA	310	NA
27/09/83	Thaba-Tseka	6	NA	197	NA
25/10/83	Thaba-Tseka	6	408	260	0.64

Table 4.2 (Continued)

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
05/12/83	Mphaki	14	NA	361	NA
07/12/83	Mafeteng	3	443	303	0.67
20/12/83	Thaba-Tseka	17	401	285	0.71
21/12/83	Mantsonyane	10	NA	356	NA
09/01/84	Tosing	5	452	383	0.85
10/01/84	Mphaki	20	NA	447	NA
21/01/84	Thaba-Tseka	49	449	302	0.67
25/01/84	Mantsonyane	56	NA	281	NA
30/01/84	Semonkong	50	NA	289	NA
21/02/84	Mokhotlong	5	458	322	0.70
22/02/84	Mapholaneng	17	385	310	0.81
23/02/84	Tsime	3	393	300	0.76
28/02/84	Thaba-Tseka	79	442	293	0.62
29/02/84	Mantsonyane	26	495	342	0.69
02/03/84	Libono	11	NA	360	NA
07/03/84	Tosing	44	427	285	0.67
14/03/84	Mokhotlong	74	492	312	0.63
15/03/84	Mapholaneng	88	450	316	0.70
28/03/84	Mantsonyane	41	NA	322	NA
06/04/84	Mafeteng	1	NA	320	NA
10/04/84	Tosing	22	NA	305	NA
17/04/84	Mokhotlong	75	NA	325	NA
18/04/84	Mapholaneng	112	NA	293	NA
24/04/84	Thaba-Tseka	46	NA	325	NA
25/04/84	Mantsonyane	10	NA	305	NA
30/04/84	Semonkong	32	470	332	0.70
15/05/84	Mokhotlong	87	464	300	0.65
16/05/84	Mapholaneng	77	442	267	0.60
30/05/84	Thaba-Tseka	39	442	286	0.67
07/06/84	Semonkong	32	470	332	0.70
27/06/84	Thaba-Tseka	17	448	299	0.67
28/06/84	Mantsonyane	12	NA	365	NA
12/07/84	Mokhotlong	35	512	318	0.62
13/07/84	Mapholaneng	20	468	313	0.67
25/07/84	Thaba-Tseka	6	443	307	0.69
26/07/84	Mantsonyane	1	400	250	0.63
31/07/84	Semonkong	5	411	265	0.64
29/08/84	Thaba-Tseka	12	452	297	0.66

Table 4.2 (Continued)

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
28/11/84	Thaba-Tseka	4	373	236	0.63
12/12/84	Mokhotlong	7	393	283	0.72
19/12/84	Thaba-Tseka	7	448	311	0.69
20/12/84	Mantsonyane	7	NA	256	NA
30/01/85	Thaba-Tseka	41	450	327	0.73
31/01/85	Mantsonyane	20	NA	339	NA
06/02/85	Sehlabathebe	21	NA	371	NA
15/02/85	Semonkong	4	506	372	0.74
28/02/85	Mantsonyane	4	NA	326	NA
13/03/85	Mafeteng	11	330	397	0.90
15/03/85	Tosing	10	511	406	0.79
20/03/85	Mokhotlong	78	492	336	0.68
21/03/85	Mapholaneng	64	461	302	0.66
27/03/85	Thaba-Tseka	23	504	354	0.70
28/03/85	Mantsonyane	22	NA	364	NA
17/04/85	Mokhotlong	38	465	345	0.74
18/04/85	Mapholaneng	84	452	345	0.76
24/04/85	Semonkong	46	503	480	0.95
24/04/85	Thaba-Tseka	56	460	320	0.70
25/04/85	Mantsonyane	22	NA	298	NA
26/04/85	Likalaneng	29	NA	362	NA
17/05/85	Tosing	10	476	338	0.71
22/05/85	Mokhotlong	95	445	302	0.69
23/05/85	Mapholaneng	130	447	320	0.72
27/05/85	Semonkong	38	521	379	0.73
29/05/85	Thaba-Tseka	63	470	305	0.65
30/05/85	Mantsonyane	8	NA	292	NA
12/06/85	Mokhotlong	19	453	321	0.71
13/06/85	Mapholaneng	63	466	354	0.76
18/06/85	Semonkong	13	479	393	0.82
21/06/85	Mphaki	10	NA	318	NA
26/06/85	Thaba-Tseka	22	447	318	0.71
27/06/85	Mantsonyane	15	516	412	0.80
28/06/85	Likalaneng	5	492	335	0.68
17/07/85	Mokhotlong	7	456	321	0.70
18/07/85	Mapholaneng	27	438	355	0.81
31/07/85	Thaba-Tseka	22	414	359	0.87

Table 4.2 (Continued)

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
28/08/85	Thaba-Tseka	20	478	344	0.72
25/09/85	Thaba-Tseka	12	462	399	0.86
30/10/85	Thaba-Tseka	7	393	284	0.72
27/11/85	Thaba-Tseka	2	350	270	0.77
17/12/85	Mantsonyane	8	489	351	0.72
18/12/85	Thaba-Tseka	7	445	337	0.76
29/01/86	Thaba-Tseka	43	410	323	0.79
30/01/86	Mantsonyane	13	516	418	0.81
31/01/86	Likalaneng	21	520	413	0.79
12/02/86	Sehlabathebe	73	NA	409	NA
12/02/86	Semonkong	12	480	441	0.92
19/02/86	Mokhotlong	5	394	314	0.80
20/02/86	Mapholaneng	28	434	345	0.79
26/02/86	Thaba-Tseka	70	433	545	1.26
27/02/86	Mantsonyane	19	506	406	0.80
14/03/86	Semonkong	20	487	434	0.89
19/03/86	Mokhotlong	92	456	377	0.83
20/03/86	Mapholaneng	121	454	379	0.83
26/03/86	Thaba-Tseka	45	456	411	0.90
16/04/86	Semonkong	19	442	395	0.82
23/04/86	Mokhotlong	158	444	360	0.81
24/04/86	Mapholaneng	163	442	362	0.82
30/04/86	Thaba-Tseka	87	464	388	0.84
01/05/86	Mantsonyane	54	524	458	0.87
14/05/86	Tosing	8	444	316	0.71
16/05/86	Semonkong	19	480	445	0.93
21/05/86	Mokhotlong	79	458	368	0.80
22/05/86	Mapholaneng	74	424	358	0.84
28/05/86	Thaba-Tseka	34	459	405	0.88
29/05/86	Mantsonyane	27	NA	441	NA
30/05/86	Likalaneng	21	502	443	0.88
05/06/86	Mphaki	41	505	436	0.86
13/06/86	Libono	14	462	367	0.79
18/06/86	Mokhotlong	44	422	350	0.83
19/06/86	Mapholaneng	29	423	441	0.83

Table 4.2 (Continued)

Date	Place	Number sold	Average weight	Average price per head	Average price per kg
20/06/86	Moletsane	46	497	433	0.87
20/06/86	Pelaneng	8	NA	488	NA
25/06/86	Thaba-Tseka	30	462	402	0.87
26/06/86	Mantsonyane	17	511	445	0.87
03/07/86	Mphaki	32	445	392	0.88
04/07/86	Tosing	8	442	336	0.76
20/07/86	Mokhotlong	12	460	406	0.88
21/07/86	Mapholaneng	7	386	342	0.89
24/07/86	Mafeteng	4	438	355	0.81
30/07/86	Thaba-Tseka	24	444	407	0.92
31/07/86	Mantsonyane	27	445	392	0.88
27/08/86	Thaba-Tseka	7	372	358	0.96
28/08/86	Mantsonyane	8	433	393	0.91

Sources: Livestock Products Marketing Service unpublished sales reports and Sehlabathebe Range Management Associationa unpublished sales reports.

To allow easier analysis of the trend and seasonality of cattle marketings and prices, the data from Table 4.2 and from Ministry of Agriculture (1981) are summarized in table 4.3, and used to construct Figure 4.1. These data indicate that there is large seasonal flucuations in marketings, and that marketings were highest in 1982 and lowest in 1985. From Figure 4.1 it is clear that most cattle are sold during the March to May period. This period coincides with the time that animals are in their best condition. After May, cattle sales decrease until hitting their lowest point in the September to November period. During this period cattle sales are only held at Thaba-Tseka. In December and January cattle sales resume and increase steadily until March.

Several hypotheses can be postulated to explain these seasonal flucuations:
(1) from September to November cattle are used for ploughing and thus are not available for sale;
(2) cattle usually end the winter in poor condition and are fattened on good summer range before being offered for sale;
(3) farmers sell animals when they are in their best condition so as to maximize their revenue from sale;
(4) farmers sell older animals in the autumn and early winter

which have a higher probability of not surviving the winter.

Table 4.3 Summary of LPMS cattle auction sales, 1979 - 1986 (1)

Month	1979		1980		1981		1982	
	no. sold	ave. price	no. sold	ave. price	no. sold	ave. price	no. sold	ave. price
January	--	--	70	146	192	298	126	260
February	--	--	376	159	474	275	364	323
March	--	--	470	173	803	310	581	276
April	--	--	358	162	737	341	608	301
May	--	--	401	187	1271	280	330	281
June	111	178	45	144	386	306	75	244
July	53	142	57	170	175	340	47	261
August	--	--	38	218	48	368	12	240
September	--	--	27	217	28	334	18	229
October	--	--	15	299	--	--	--	--
November	--	--	79	303	17	272	--	--
December	34	139	198	264	27	312	--	--
Total	198	162	2134	185	4158	303	2161	289

Month	1983		1984		1985		1986	
	no. sold	ave. price	no. sold	ave. price	no. sold	ave. price	no. sold	ave. price
January	32	215	180	310	61	331	77	364
February	137	271	130	306	8	349	134	466
March	433	239	258	312	208	337	278	387
April	365	233	298	263	275	361	427	368
May	245	258	203	285	344	319	316	409
June	125	285	61	329	147	351	229	413
July	110	302	67	311	56	352	114	338
August	35	301	12	297	20	344		
September	7	213	--	--	12	399		
October	6	260	--	--	7	284		
November	--	--	4	236	2	270		
December	44	327	21	283	15	344		
Total	1539	255	1234	295	1155	340	1575	396

Source: Calculations from table 4.2

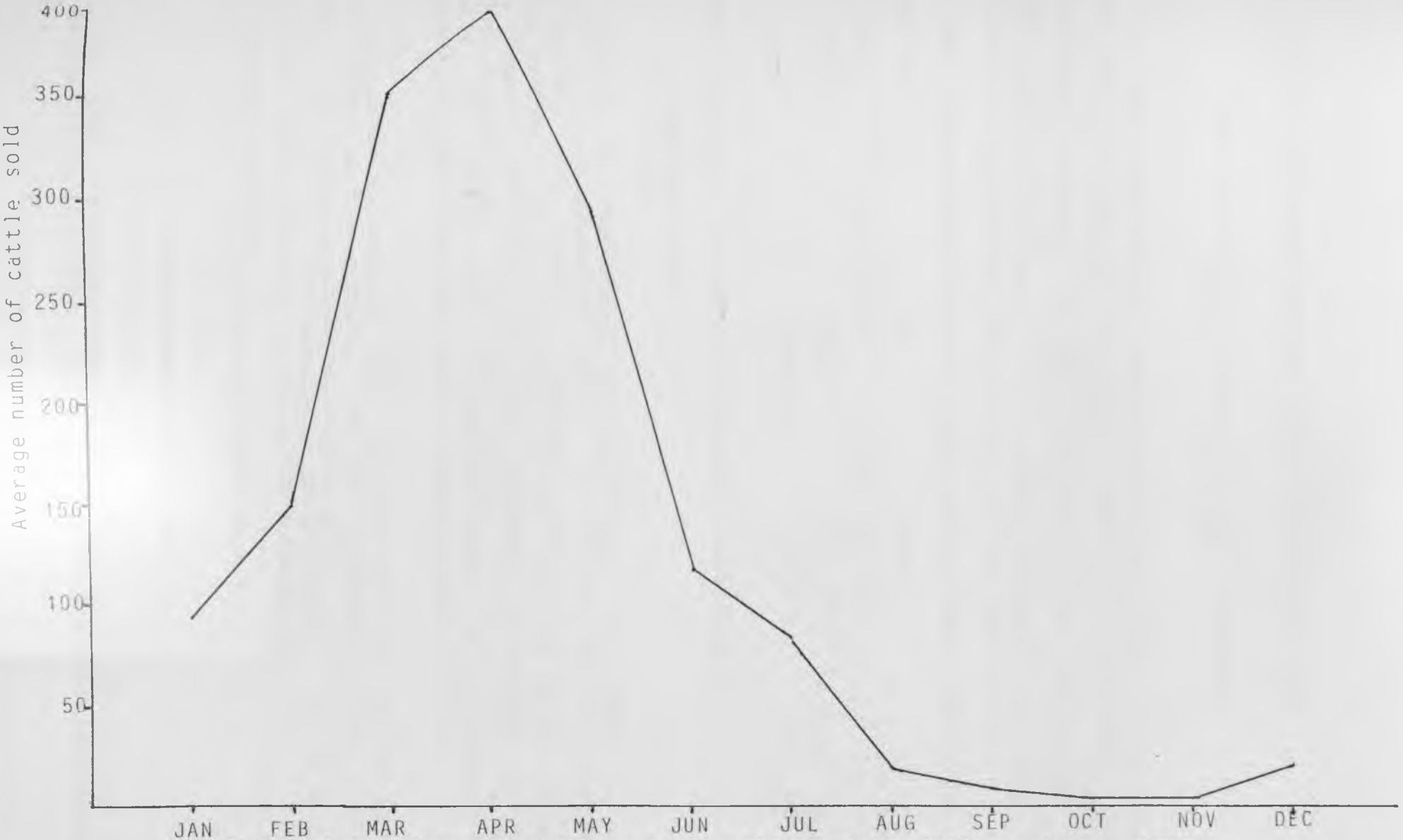

Figure 4.1 Average monthly cattle sales, Jan., 1982 -- Sept., 1986

4.2 Analysis of Rural Auction Sales and Trekking Costs

Factors Affecting Numbers of Cattle Sold at Monthly Auction Sales

The data presented in Table 4.3 (from mid-1982 to mid-1986) were used to estimate an econometric model of cattle sales, and to test the following hypotheses: (1) there is a negative relationship between current prices and current marketings as farmers retain animals to build up their herds; and (2) there are three distinct periods of cattle sales throughout the year -- high sale period, medium sale period, and low sale period.

The following model was estimated using linear regression:

Number of cattle marketed per month	= 100.27	+ 0.043 (0.19)	Ave. price for current month (nominal price)	+ 231.05 (7.88)	Binary Variable for high sale month (March, April & May)	- 97.29 (3.17)	Binary Variable for low sale mo. (Aug, Sept, Oct, Nov & Dec)

Notes: Figures in brackets are student t-statistics.
n = 48
R squared = 0.72
F = 38.50

Results of the model indicate that: (1) there is no significant relationship between current prices and current marketings; (2) January, February, June and July are medium sales months; (3) March, April and May are high sales months; (4) August, September, October, November and December are low sales months; and, (5) that 72 percent of the variation in the number of cattle sold at monthly sales is explained by seasonality and 28 percent is explained by other factors.

During May and June of 1986, a number of rural auction sales were visited by the authors. The main purposes of those visits were: (1) to describe the operations of the auction sales; (2) to examine the level of competition at the sales; (3) to determine some of the apparent flaws in the auctions and ways in which they may be overcome; and, (4) to calculate the weight losses of animals trekked from alternative sales points.

Mokhotlong Auction Sale

The LPMS conducted a cattle auction sale at Mokhotlong on Wednesday 17 April, 1985. The following observations were made.

The auction sale yard consists of one kraal where all of the cattle are driven. From this kraal, cattle are driven one-by-one through a corridor which leads to a weighbridge. The cattle are weighed, then left on the weighbridge while the buyer examines the weight and condition of the animal, and offers a price on the basis of some pre-determined payment scale. If the owner of the animal refuses the price offered, he/she tells the buyer what price they were expecting. After some bargaining the animal is either purchased or released back to the owner. If purchased, the animal is ear-tagged before moving into another kraal. This process was observed to be very time-consuming.

The National Feedlot was the main purchaser. Two private farmers were interested in buying. The first buyer offered M190 for a cow for which the seller demanded M220. No deal was struck. The second buyer wanted to purchase an ox to exchange with a neighbour for a horse. He arrived too late to participate in the auction.

Forty-five cattle were offered for sale, 36 oxen, seven bulls, and two cows. The sellers and the feedlot buyer were able to negotiate 38 sales, seven cattle were not sold. All the animals were in either fair or good condition. The average weight of oxen sold was 449 kilograms; the average weight of bulls sold was 543 kilograms; while the one cow sold weighed 385 kilograms. On average the oxen fetched M335 or M0.75 per kilogram, the bulls fetched M365 or M0.67 per kilogram, while the cow fetched M277 or M0.72 per kilogram.

Thaba-Tseka Auction Sale

An auction sale conducted at Thaba-Tseka was observed on Wednesday 24 April, 1985. This sale was conducted by the Livestock Division of the Ministry of Agriculture. The National Feedlot was represented at the sale by the Livestock Division. In addition to cattle, sheep and goats were also offered for sale. There were several private individuals who purchased sheep and goats, and two individuals purchased cattle. One buyer bought a cow outside of the sales yard for M200 for slaughter at a ceremony. The other individual purchaser was a traditional doctor who was interested in purchasing an ox of a particular colour. She was not able to purchase the ox of her choice.

Eighty-two cattle were offered for sale. Unfortunately, 25 of the cattle did not go through the sales yard because "there was no money". The Livestock Division was only allowed to spend up to M10,000 for cattle, so when this was paid out the sale was closed. Sixteen bulls, 37 oxen, and four cows went through the sales yard. Two oxen were not sold. The average weight of bulls sold was 441 kilograms, oxen averaged 484 kilograms, while cows averaged 340 kilograms. The average purchase prices were M302, or M0.68 per kilogram for bulls; M349 or M0.72 per kilogram for

oxen: and M213, or M0.63 per kilogram for cows.

Semonkong Auction Sale

A sale held at Semonkong on Monday, 27 May 1985 was observed. The sale was conducted by the LPMS and had two main buyers, the National Feedlot, and a private entrepeneur with butcheries in Leribe. Two private farmers each bought an ox.

At this auction sale it was difficult to determine the total number of cattle offered for sale because many sellers withdrew their cattle before they were to go through the sales ring. These owners said that the prices were too low and they could fetch a better price by trekking their animals to Maseru for direct sale to the National Feedlot. Of the 60 cattle which went throught the sales ring, 8 were bulls and 52 were oxen. Of these 60 cattle, only 38 were sold. For each animal going through the sales kraal, one of the two buyers would make an offer to which the seller would respond with a counter-offer. When there was some possibility for compromise, the buyer would make a second offer, usually marginally higher than the original. The seller could decide to accept or reject the second offer. Given the high rate of rejected offers, the results of this sale are interesting to view in detail. Table 4.4 presents the time that each animal reached the weighbridge, the animal's condition, the price offered, the second price offered, the price paid per kilogram, the sellers' price expectations, an indication of sale or non-sale, the buyer -- the National Feedlot (FL), the butcher (Bt), or one of the private farmers (P1, P2) -- and the animal's sex.

Table 4.4 Observations of the Semonkong auction sale

No.	Time	Wt. (kg)	Cond.	Price Offer	Price/kg (M/kg)	Sellers' Expected Price	Sold	Buyer	Animal Sex
1	10.32	570	Good	395-400	0.70	400	Yes	FL	Ox
2	10.36	430	Fair	289	-	400	No	-	Ox
3	10.42	420	Fair	300	0.71	320	Yes	FL	Ox
4	10.45	380	Fair	210-220	0.58	230	Yes	Bt	Ox
5	10.48	430	Good	281-285	0.66	300	Yes	Bt	Ox
6	10.52	700	Good	562	0.80	-	Yes	FL	Ox
7	10.55	685	Good	575	0.84	-	Yes	FL	Ox
8	11.02	495	Fair	305	0.62	-	Yes	Bt	Ox
9	11.05	505	Fair	360	0.71	-	Yes	Bt	Ox
10	11.07	385	Fair	197	0.51	-	Yes	Bt	Ox
11	11.12	600	Good	462-500	0.83	500	Yes	FL	Ox
12	11.18	495	Good	217	0.44	-	Yes	Bt	Bl

Table 4.4 (Continued)

No.	Time	Wt. (kg)	Cond.	Price Offer	Price/kg (M/kg)	Sellers' Expected Price	Sold	Buyer	Animal Sex
13	11.21	450	Good	321-330	0.73	330	Yes	Bt	Ox
14	11.42	480	Good	360	0.75	380	Yes	Bt	Ox
15	11.47	380	Fair	340	0.89	-	Yes	P1	Ox
16	11.49	450	Fair	260	0.58	-	Yes	FL	Bl
17	11.56	440	Fair	290-300	0.68	300	Yes	FL	Ox
18	11.57	510	Good	297	0.59	298	Yes	FL	Ox
19	12.02	430	Fair	355	0.83	-	Yes	FL	Ox
20	12.06	370	Fair	222-230	0.62	300	Yes	Bt	Ox
21	12/13	350	Fair	180-200	0.57	220	Yes	Bt	Ox
22	12.15	350	Fair	187	-	300	No	-	Ox
23	12.18	450	Good	303	0.67	-	Yes	FL	Ox
24	12.24	550	Good	361-400	0.73	400	Yes	FL	Ox
25	12.26	550	Good	-	-	-	No	-	Ox
26	12.32	410	Fair	220-230	0.56	260	Yes	FL	Ox
27	12.35	530	Good	361-380	0.72	400	Yes	-	Ox
28	12.40	530	Good	380	-	560	No	-	Ox
29	12.40	570	Good	402	-	600	No	-	Ox
30	12.41	520	Fair	270	0.56	-	Yes	Bt	Bl
31	12.43	480	Fair	300	0.63	-	Yes	Bt	Ox
32	12.45	490	Good	300-310	0.63	304	Yes	FL	Ox
33	12.47	550	Fair	326	0.59	-	Yes	Bt	Bl
34	12.49	560	Fair	350-400	0.71	400	Yes	FL	Ox
35	12.54	495	Fair	330	-	400	No	-	Ox
36	12.58	450	Fair	351	0.78	360	Yes	Bt	Bl
37	13.03	560	Fair	415-440	0.79	500	Yes	FL	Ox
38	13.05	510	Fair	301-350	-	400	No	-	Ox
39	13.09	540	Fair	390-400	0.74	400	No	-	Ox
40	13.12	410	Fair	206	0.50	300	Yes	Bt	Bl
41	13.14	495	Good	276-300	-	400	No	-	Ox
42	13.17	550	Good	342	-	490	No	-	Ox
43	13.19	190	Poor	180	-	240	No	-	Ox
44	13.22	530	Fair	330-350	0.66	350	Yes	Bt	Ox
45	13.23	390	Good	360	0.92	-	Yes	P2	Ox
46	13.28	410	Fair	200	-	380	No	-	Ox
47	13.30	440	Fair	250	-	600	No	-	Ox
48	13.32	320	Fair	240	-	380	No	-	Ox
49	13.37	520	Good	360	-	600	No	-	Ox
50	13.39	490	Fair	330	-	400	No	-	Ox
51	13.39	420	Fair	225-260	0.62	260	Yes	Bt	Ox
52	13.41	425	Fair	260	-	400	No	-	Ox
53	13.43	510	Good	350	-	420	No	-	Ox
54	13.45	550	Good	400-406	0.74	406	Yes	FL	Ox
55	13.47	520	Good	370	-	500	No	-	Ox
56	13.49	530	Fair	350	-	500	No	-	Ox
57	13.50	350	Poor	250	-	400	No	-	Ox
58	13.51	520	Good	360	-	450	No	-	Ox

Table 4.4 (Continued)

No.	Time	Wt. (kg)	Cond.	Price Offer	Price/kg (M/kg)	Sellers' Expected Price	Sold	Buyer	Animal Sex
59	13.53	500	Good	390-400	0.80	400	Yes	FL	Ox
60	13.55	480	Good	260	-	600	No	-	Ox

Source: Authors' observations

The average weight of animals offered for sale was 474 kilograms and 484 kilograms, for bulls and oxen respectively. No cows were offered. The weight of bulls varied from 410 to 550 kg, while the oxen varied from 190 to 700 kgs. The average price paid for bulls was M 270 or M 0.50 per kilogram, while the average price paid for oxen was M 363 or M 0.71 per kilogram. The butcher purchased 12 oxen and 6 bulls, while the Feedlot purchased 16 oxen and 2 bulls. The Feedlot generally paid much higher prices than the butcher, while the two private buyers both paid higher prices than the butcher or the Feedlot.

Transportation of Cattle

Transportation of cattle from auction sales yards is by trekking and trucking. Table 4.5 shows active sales yards and the number of days it takes to trek cattle to Maseru.

Table 4.5 Transportion method from auction yards to Maseru

District	Auction Point	Transportation to Maseru
Mafeteng	Mafeteng	- trucked, or trekked 3 days
Maseru	Semonkong	- trekked 5 days
Mokhotlong	Mokhotlong	- cattle are trekked to Hlotse in 15 days. From Hlotse they are trucked into Maseru

Table 4.5 (Continued)

District	Auction Point	Transportation to Maseru
Mokhotlong	Mapholaneng	- cattle are trekked to Hlotse in 14 days. From Hlotse they are trucked to Maseru
Quthing	Mphaki	- cattle are trekked from Mphaki to Quthing in four days. From Quthing the cattle are trucked to Maseru
	Tosing	- cattle are trekked from Tosing to Quthing in three days. From Quthing they are trucked to Maseru.
Thaba-Tseka	Thaba-Tseka	- trekked 10 days
	Mantsonyane	- trekked 9 days

Source: Livestock Products Marketing Service

For ten or less cattle two trekkers are hired. For more than ten cattle one trekker is needed per ten cattle. Trekkers are paid M6 per day.

Two analyses were conducted in April and May to determine the weight losses resulting from trekking and trucking from the auction sales points. The first trekking analysis was conducted on the cattle purchased by the National Feedlot at the Mokhotlong auction sale of 18th April 1985. The weights and ear-tag numbers of 13 cattle were recorded at the sale, then again when they arrived at the Feedlot in Maseru. The cattle were trekked for 14 days from Mokhotlong to Hlotse and then trucked to Maseru. The average weight loss was 6.96 percent. Table 4.6 reports the weight losses for each animal.

Table 4.6 Transportation weight losses from Mokhotlong to Maseru

Ear Tag No.	Live Weight at sale (kg)	Live Weight at Feedlot	Weight loss (kg)	Weight loss (%)
E 98	570	515	- 55	- 9.65
E 103	390	375	- 15	- 3.85
E 109	520	480	- 40	- 7.69
E 110	385	365	- 20	- 5.19
E 111	490	455	- 35	- 7.14
E 113	465	435	- 30	- 6.45
E 116	500	470	- 30	- 6.00
E 119	500	450	- 50	- 10.00
E 122	405	380	- 25	- 6.17
E 123	430	400	- 30	- 6.98
E 124	400	360	- 40	- 10.00
E 125	410	385	- 25	- 6.10
E 131	380	360	- 20	- 5.26

Source: Analysis of auction sale and National Feedlot data

The second analysis of weight losses incurred during trekking was conducted in May of 1985. Cattle purchased by the National Feedlot at auctions sales at Mokhotlong on May 22 and Mapholaneng on May 23, were trekked for 14 and 13 days to Hlotse, then trucked to Maseru. Unfortunately the experiment was hindered by the length of time that animals spent at Hlotse before they were trucked to the National Feedlot in Maseru. The average weight loss for the seven cattle checked was 7.69 percent. Table 4.7 reports the results.

Table 4.7 Transportation weight losses from Mokhotlong and Mapholaneng to Masru

Ear Tag No.	Live Weight at sale (kg)	Live Weight at Feedlot	Weight loss (kg)	Weight loss (%)
F 432	500	405	- 95	- 19.00
F 433	560	535	- 25	- 4.46
F 438	570	560	- 10	- 1.75
F 441	560	510	- 50	- 8.93
F 469	330	305	- 25	- 7.58
F 470	490	440	- 50	- 10.20

Table 4.7 (Continued)

Ear Tag No.	Live Weight at sale (kg)	Live Weight at Feedlot	Weight loss (kg)	Weight loss (%)
F 513	400	390	- 10	- 2.50
E 532	470	400	- 70	- 14.90
F 534	500	475	- 25	- 5.00
F 561	420	400	- 20	- 4.76
F 567	520	505	- 15	- 2.88

Source: Analysis of auction sale and National Feedlot data

The reliability of the results of these experiments was constrained by poorly controlled conditions. Firstly, it was not possible to determine how far the cattle had been trekked to get to the sales point. Secondly, it was not possible to determine the gut fill of the animals at the time of sale. Thirdly, it was not possible to determine the gut fill of the animals at the time of weighing at the feedlot. In a more controlled experiment, animals could have been allowed to eat and drink before being weighed at the beginning and the end of the trek so that their gut fills would have been roughly equivalent at the two weighings.

Despite these limitations, these results do indicate relatively low weight losses resulting from trekking. Cattle are trekked very slowly and are allowed to graze along the route. It is likely that weight losses vary with the season. The cattle are likely to find much better grazing and water supplies in summer than in winter.

4.3 Structure of the National Feedlot / Abattoir Complex

The National Feedlot was established in early 1983. Its capacity is 3600 cattle at any time, and if the cattle are fed an average of 90 days, it can accomodate 14,400 cattle per year.

The National Feedlot buys cattle from three sources: the LPMS rural auction sales; direct purchases from farmers; and imports from South Africa. The Feedlot is the largest purchaser of cattle at the rural auction sales. It sells its fed cattle to butchers in the lowland districts and is the main supplier of domestic cattle for the National Abattoir. At present, the Feedlot continues to sell a major part of its fattened animals to buyers in South Africa.

The Government of Lesotho has constructed an abattoir near the National Feedlot, about five kilometers north of Maseru. The Abattoir was built with Danish assistance and can meet EEC requirements with minor modifications. Although the original intention was that cattle would be slaughtered for export to the EEC, this has not yet occured. The National Abattoir was opened in December 1985 with management supplied by a team of Danish management consultants. The design capacity of the abattoir is 100 cattle and 200 sheep or goats per day on a single shift. In the original plan a pig slaughter section was included but this has been shelved. This is because there was a possibility of Lesotho exporting beef to the Middle East countries.

Many, if not most of the butchers in the lowlands currently have their animals slaughtered at the abattoir under custom slaughter. Under custom slaughter an individual or firm commissions the abattoir to slaughter their animal for a fixed fee. Most of the output from the abattoir is sold to butchers in the lowland area. At present about half of the animals slaughtered at the abattoir are under custom slaughter, half are proprietary slaughter. Under proprietary slaughter the abattoir slaughters animals which it owns, and sells the parts.

4.4 Aggregate Death and Slaughter of Livestock in Lesotho

There is now a formal cattle marketing infrastructure composed of the LPMS rural auctions, the National Feedlot and the National Abattoir, an infrastructure dominated by parastatal agencies. A large amount of resources has been dedicated to the development of this system on the basis of achieving the following objectives: (1) an increased commercialization of the Basotho cattle sector; (2) destocking of Lesotho's rangeland; (3) improving the performance of the marketing system. A question which is begged is: how important is this formal marketing structure to the Basotho cattle producers?

As previously reported, an average of 2,242 cattle were marketed through the LPMS rural auction sales over the five-year period, 1980 to 1984. Over the four-year period 1979/80 to 1982/83, an average of 83,265 cattle died or were slaughtered in rural Lesotho and a further 14,273 cattle were slaughtered by butcheries in Lesotho, making an average total death and slaughter of 97,539 over that period. The LPMS rural auction system handled a paltry 2.3 percent of the total death and slaughter. The data indicate that livestock deaths, through disease and other causes, greatly exceed slaughter (Table 4.8 and Table 4.9).

Table 4.8 Death and slaughter of livestock in the rural areas 1979/80 - 1982/83

		DEATHS			
		Diseases	Other causes	Rural slaughter	Total
Cattle:	1979/80	40,065	30,357	13,351	83,773
	1980/81	34,005	39,072	14,598	87,675
	1981/82	30,031	30,678	20,279	80,988
	1982/83	30,225	32,900	17,500	80,025
Average		33,582	33,252	16,451	83,268
Sheep:	1979/80	33,278	67,492	43,113	143,883
	1980/81	35,743	82,746	49,636	165,125
	1981/82	66,956	85,400	79,050	231,406
	1982/83	71,900	64,900	80,800	217,600
Average		51,969	75,135	63,149	190,254
Goats:	1979/80	25,596	41,721	24,930	92,247
	1980/81	25,715	56,446	29,415	111,576
	1981/82	27,525	39,150	37,175	103,850
Average		26,952	44,410	31,981	103,343

Source: Unpublished data from the Bureau of Statistics

Table 4.9 presents estimates of the number of animals slaughtered by licensed butcheries. The data indicate a decline

in the number of cattle slaughtered from 1979 to 1983 -- 69% decline from 16,416 to 5,166. The table further shows that more sheep than cattle are slaughtered, though the total amount of beef likely exceeds the amount of mutton available from slaughter. The data also indicate that very few goats are slaughtered by licensed butcheries.

Table 4.9 Estimated number of animals slaughtered by licensed butcheries 1979-1983.

Year	Cattle	Sheep	Goats
1979	16,416	67,945	625
1980	15,851	85,793	525
1981	14,655	89,968	223
1982	10,171	93,534	652
1983	5,166	53,145	878
Average	12,452	78,077	581

Source: Unpublished data from the Bureau of Statistics

4.5 Marketing Channels Utilizied by Local Butcheries

Local butchers play a part in the marketing of cattle in Lesotho. There are about 600 licensed butcheries in Lesotho of which 540 are located in the seven lowlands districts (Moteane, Bostwick and Ronsholt 1984). The slaughter of cattle is mostly done either in municipal slaughter houses (abattoir) or by butchers privately. Butcheries fix meat prices freely and in most cases there is no grading of carcasses. Since the establishment of the National Feedlot in Maseru, most of the lowland butcheries now purchase cattle from the National Feedlot. Some butcheries buy sheep directly from local farmers while the majority import from South Africa.

To better determine the marketing channels utilizied by local butcheries in anticipation of the opening of the National Abattoir, the Research Division of the Ministry of Agriculture conducted a survey of Maseru butcheries in April and May of 1985. One of the objectives of the survey was to determine the butcheries' usage of the municipal abattoir in Maseru for custom slaughtering. Information from this survey was to be used in determining the viability of continuing custom slaughtering at the National Abattoir. Sixty-five butcheries were surveyed.

Table 4.10 presents data on the place where butcheries had animals slaughtered. The data indicate that more than 50 percent of the butcheries had cattle and sheep custom slaughtered at the Maseru Municipal Abattoir. None of the butcheries had goats slaughtered, only 4.6 percent had pigs slaughtered, 66.2 percent had cattle slaughtered, while 90.8 percent had sheep slaughtered for sale.

Table 4.10 Place of slaughter of Cattle, Sheep, Goats and Pigs butchered by Maseru District butcheries

Animal	Maseru Muncipal Abattoir		Own Slaughter		None Slaughtered	
	Frequency	%	Frequency	%	Frequency	%
Cattle	36	55.4	7	10.8	22	33.8
Sheep	42	64.6	17	26.2	6	9.2
Goats	--	--	--	--	--	100.0
Pigs	2	3.1	1	1.5	62	95.4

Source: Analysis of butchery survey data

A second objective of the survey was to examine the average number of cattle, sheep, goats and pigs slaughtered and sold by the Maseru District butcheries. This information was to be used to estimate the number of animals the National Abattoir would have to slaughter monthly to satisfy local demand. The data are summarized in Table 4.11. Together with the data presented in Table 4.10, these data indicate the expected volume of business for the National Abattoir if it primarily does custom slaughtering, or if it emphasizes proprietary slaughter.

The data presented in Table 4.11 indicate that for Maseru District butcheries which slaughter cattle, sheep, or pigs, the average weekly slaughter is 3.35 cattle, 11.68 sheep, and 6 pigs during normal months. For those butcheries which sell beef, mutton or pork, the average weekly sale is 3.90 cattle, 12.12 sheep, and 3.50 pigs. The differences between slaughter and sale indicate that many butcheries purchase beef and sheep carcasses, while the few butcheries which slaughter pigs sell some of the carcasses. Again, no butcheries slaughtered or sold goat meat.

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Table 4.11 Average number of livestock slaughtered and sold per week for the normal, lowest and highest months, for Maseru District butcheries

Species	Normal Month Average Number Slaughtered	Normal Month Average Number Sold	Lowest Month Average Number Slaughtered	Lowest Month Average Number Sold	Highest Month Average Number Slaughtered	Highest Month Average Number Sold
Cattle	3.35	3.90	2.35	2.76	3.83	4.46
Sheep	11.68	12.12	8.41	8.53	15.37	15.86
Goats	--	--	--	--	--	--
Pigs	6.00	3.50	4.50	2.50	8.00	6.00

Source: Analysis of butchery survey data

Data collected during the butchery survey also allow analysis of the principal source of the cattle, sheep, goats and pigs slaughtered and sold by the Maseru butcheries. These data, presented in Table 4.12, indicate that 64 percent of the cattle were purchased from the National Feedlot -- the majority of which were purchased by the Feedlot from South Africa, 11 percent from South African producers, 11 percent from South African feedlots, 7 percent from Basotho producers, and 2 percent from the South African Meat Board. By contrast, Lesotho butcheries only purchased 8 percent of their sheep from the National Feedlot, 77 percent from South African farmers, and 3 percent from both the South African Meat Board and the Buti Butchery.

Table 4.12 Source of livestock for slaughter by Maseru District Butcheries

Cattle	Nat'l Fdlot	Lesotho Farmer	RSA Farmer	Lesotho R.S.A.	Local Fdlot	RSA Fdlot	Meat Board	Buti
Cattle	64.4	6.7	11.1	--	4.4	11.1	2.2	--
Sheep	--	8.1	80.6	4.8	--	--	3.2	3.2
Goats	--	--	--	--	--	--	--	--
Pigs	--	25.0	25.0	25.0	--	--	25.0	--

Source: Analysis of butchery survey data

4.6 Analysis of Marketing Channels utilizied by Basotho Stockowners

Comparison of the LPMS auction sale data, presented in Tables 4.2 and 4.3, with the aggregate death and slaughter data, presented in Table 4.8, reveals that the LPMS rural auction system handles a small percentage of the cattle which leave Lesotho herds each year. From these data, it is clear the financial and material resources devoted to the development of the formal parastatal marketing system have achieved very little impact on the behavior of rural Basotho stockowners. If Basotho are not utilizing this formal system, what market outlets do they utilize and why?

To find an answer to this and other questions related to the production, marketing and utilization of livestock and livestock products in Lesotho, a major survey of livestock-owning households was undertaken in the winter of 1985 by the Farming Systems Research Project at the Research Division, Ministry of Agriculture (supported by the U.S Agency for Internatioanl Development) and the Agricultural Marketing Research Project, Institute of Southern African Studies, National University of Lesotho (supported by the International Development Research Centre). Additional support was provided by a research grant from the Southern African Centre for Cooperation in Agricultural Research (SACCAR), with funding from the Swedish Agency for Research Cooperation with Developing Countries.

A total of 537 households were interviewed in 18 rural areas scattered around Lesotho, with three cluster areas selected randomly from each of 6 geoclimatic zones in the country. To date, only preliminary analysis of the date has been conducted.

Of the 537 livestock-owning households, 37 percent reported that mine remittances were their principal source of household income, 11 percent reported livestock to be their principal source and 11 percent reported livestock products to be their principal source. Eighty-six percent of the households owned 351 bulls, 1,045 oxen, 1,962 cows and 79 cattle of unknown sex, for a total of 3,437 cattle.

Of the 464 households which owned cattle, 28 purchased males, and 32 purchased females during the proceeding year. These households purchased a total of 60 males and 42 females. Sixty-two percent of the cattle were purchased from farmers in the same village or nearby villages, 34 percent were purchased in South African, two percent were purchased from the National Feedlot, and one percent were purchased at rural auction sales (table 4.13). It is important to note that the government has recently restricted the importation of cattle to those of improved breeds or those for slaughter.

Table 4.13 Survey households' purchase of cattle, number of animals purchased by place and sex

	Male		Female		Total	
	Number	%	Number	%	Number	%
Farmer in same village	18	30	17	40	35	34
Farmer in nearby village	15	25	14	33	29	28
South Africa	27	45	8	19	35	34
National Feedlot	0	0	2	5	2	2
Auction	0	0	1	2	1	1
Total	60	100	42	100	102	100
Average purchase price	388		437			

Source: Preliminary analysis of survey data.

A total of 90 males and 28 females were sold, representing a marketed disposition rate of 3.4 percent. Only three of these cattle were sold through the auctions operated by the LPMS and none were sold directly to the National Feedlot. By far the largest outlets were nearby farmers (table 4.14).

Table 4.14 Survey households' sale of cattle, number of animals sold by place and sex

	Male		Female		Total	
	Number	%	Number	%	Number	%
Farmer in same village	31	34	17	61	48	41
Farmer in nearby village	29	32	6	21	35	30
South Africa	3	3	0	0	3	3
Butcher	13	14	3	11	16	14
National Feedlot	0	0	0	0	0	0
Auction	3	3	3	3	3	3
Other	11	12	2	7	13	11
Total	90	100	28	100	118	100
Average selling price	M443		M312			

Source: Preliminary analysis of survey data.

Sale represented only one of the possible outlets for cattle removed from the herds. A total of 651 cattle left the herds during the preceding year, a disposition rate of 18.9 percent. Forty-five percent of the cattle died, 14 percent were given away, 14 percent were butchered, eight percent were stolen, and 17 percent were sold. A far greater percentage of females than males died, and a greater percentage of males than females were sold (table 4.15).

Table 4.15 Total cattle disposition by surveyed households

	Male Cattle		Female Cattle		Total Cattle	
	No.	%	No.	%	No.	%
Died	102	33	194	56	296	45
Gift/Bohali	35	11	58	17	93	14
Butchered	52	17	41	12	93	14
Stolen	30	10	24	7	54	8
Lost	2	1	0	0	2	0
Sold	85	28	28	8	113	17
Total disposition	306	100	345	100	651	100

Source: Preliminary analysis of survey data.

4.7 An Overview of the Current Marketing System

Basotho cattle owners make additions to their herds through purchases, gifts and births. Of all animals purchased, approximately one-third represent new additions to the Lesotho national herd, the remainder are transfers from one herd to another. Gifts also redistribute the national herd.

Basotho dispose of their cattle in a number of ways: (1) cattle die and are subsequently slaughtered for home consumption; (2) cattle are given away, often as part of bridewealth payments; (3) cattle are butchered for ceremonies or for home consumption; (4) cattle are lost or stolen; and (5) cattle are sold or traded. Of the minority of cattle which are sold, most are sold to neighbouring farmers as herd replacements or for slaughter, others are sold to butcheries, a small number are exported to South Africa, and a smaller percentage are sold at rural auction sales or directly to the new National Feedlot / Abattoir Complex in Maseru (Figure 4.2).

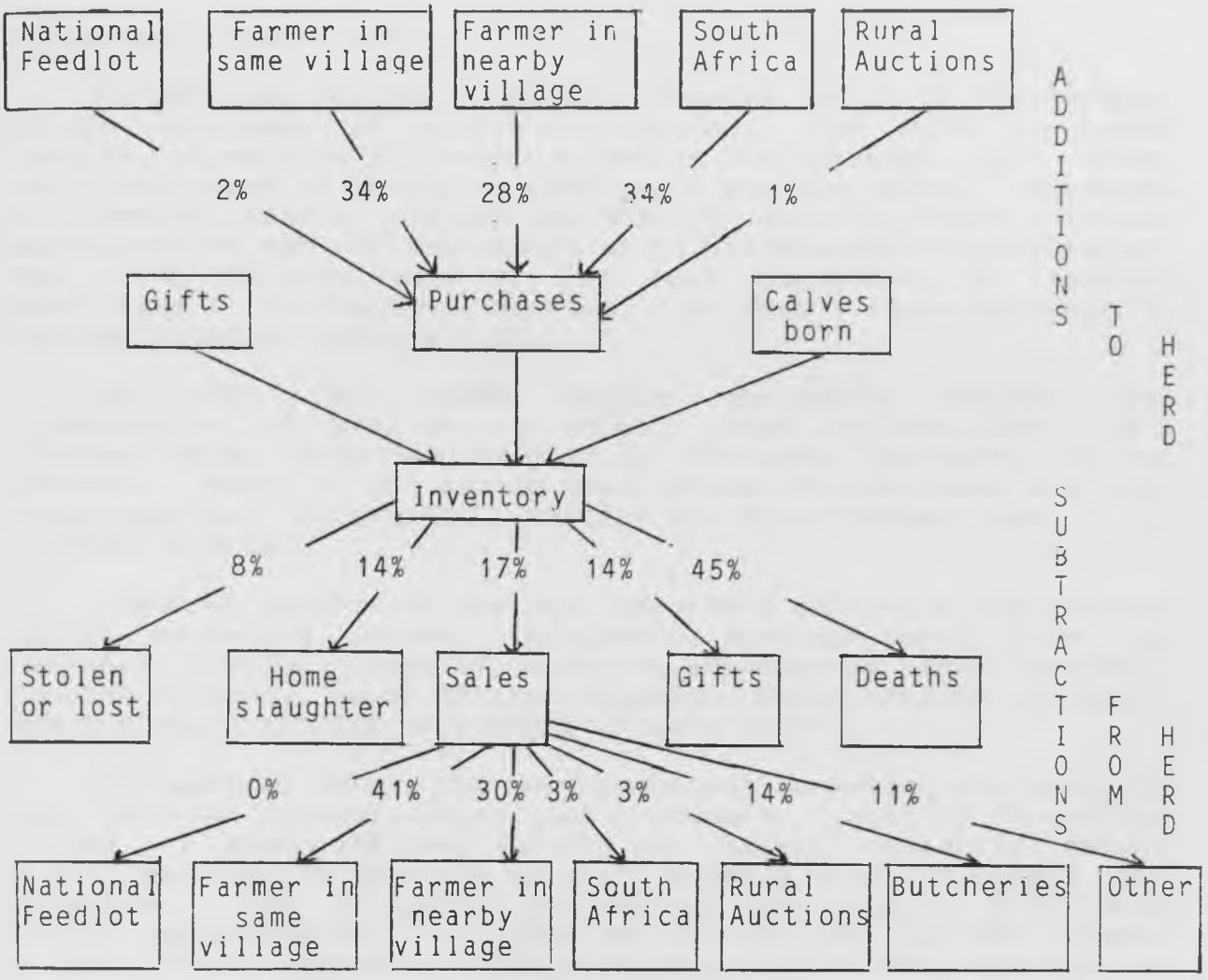

Figure 4.2 Marketing channels utilizied by Basotho cattle owners

in Maseru (Figure 4.2).

The National Feedlot / Abattoir Complex (NFAC) is the largest single purchaser of cattle in Lesotho. The NFAC purchases Lesotho 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 4.3).

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

Licensed butcheries are very important actors in the Lesotho cattle 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 4.4).

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 draft animals and ultimately for slaughter. The average price received for a sample of 90 male cattle sold between 1 July 1984 and 30 June 1985 was M443 (Table 4.14). This compares to the average price of M340 received by farmers at rural auction sales in 1985. Cattle are thus similar to other agricultural products in Lesotho -- Olson (1985) observed higher informal market prices for maize, Swallow and Mpemi (1986) observed higher informal market prices for fresh vegetables. For cattle the price difference is likely due to a number of factors including: (1) thinly-traded local markets; (2) current restrictions on imports; (3) the fact that live cattle produce many products, including draught, dung and milk. When the animal is slaughtered or dies it produces beef and offal for human consumption.

From the perspective of cattle owners, the marketing channel which links them with licensed butcheries is the second most important. Butcheries also 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.

The National Feedlot / Abattoir Complex now plays important intermediary functions in the cattle and beef markets. It is the

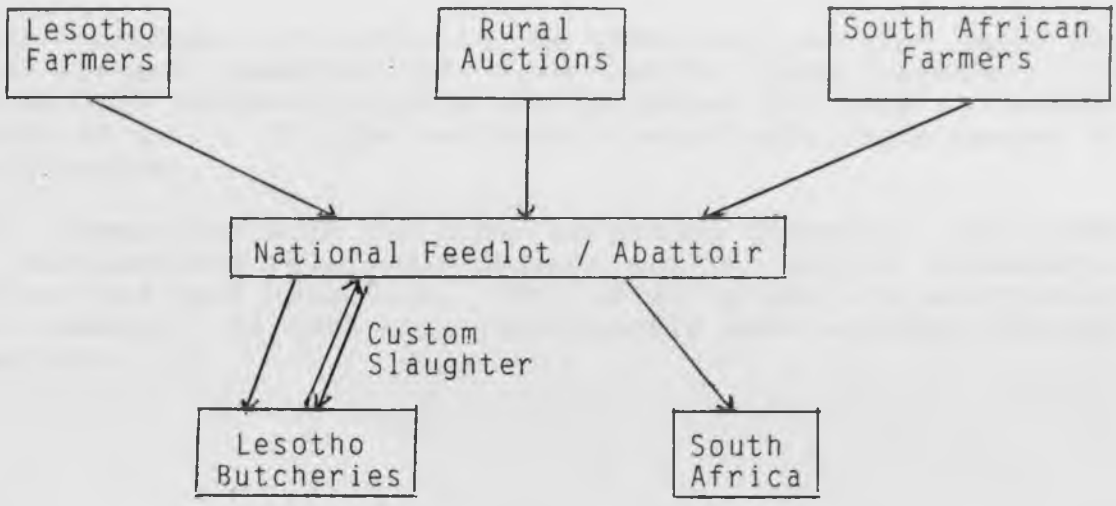

Figure 4.3 Marketing channels utilizied by the National Feedlot / Abattoir Complex

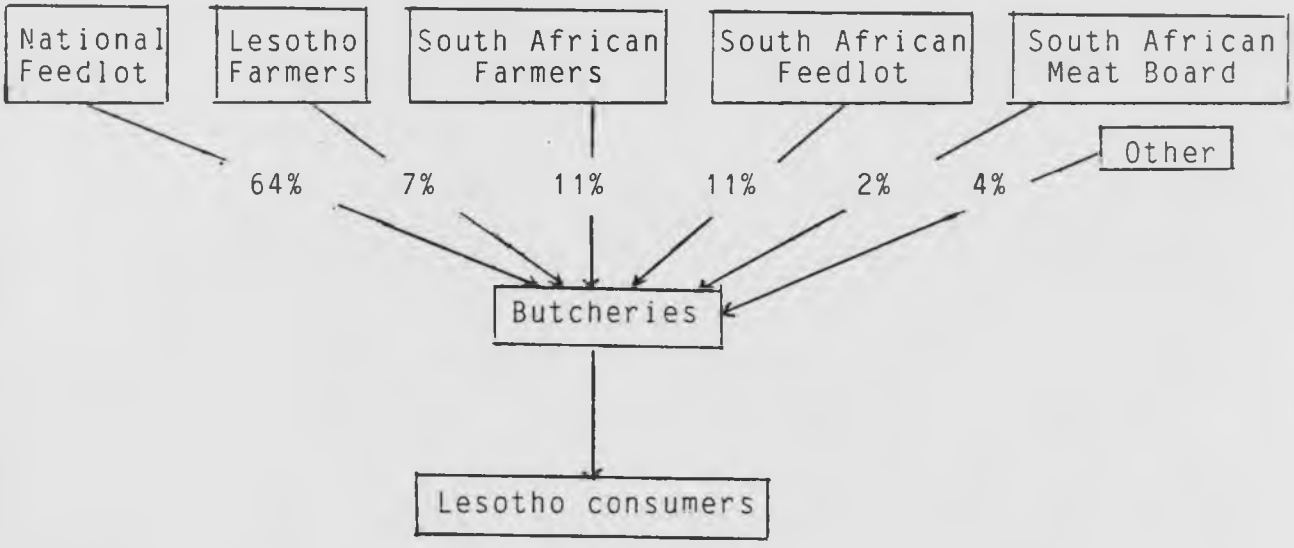

Figure 4.4 Marketing channels utilizied by Basotho butcheries

dominant purchaser of cattle at the LPMS rural auction sales and is the largest importer of live cattle into Lesotho. It generates both fattened animals and carcasses for sale in Lesotho and South Africa. It also performs a relatively large amount of custom slaughter.

By comparison with the other marketing channels, the LPMS rural auctions are relatively unimportant to cattle producers, butcheries and beef consumers. They affect a small proportion of cattle owners. In 1985 only 1,155 cattle were marketed through the auctions.

5. APPROPRIATE PERSPECTIVES ON CATTLE MARKETING IN LESOTHO

5.1 Cattle as Investment and Cattle Sales to Meet Cash Needs

Two recent papers by Fritsch (1984) and Swallow (1985) stressed the importance of cattle as investment goods in Lesotho. Over the period 1978 to 1984, the average real prime interest rate in Lesotho was zero, while the average interest rate on savings accounts was negative 10 percent (Swallow 1985). This compares to significant positive rates of return earned from investment in cattle (Lawry, unpublished data, 1986). From a survey of mine migrant workers conducted in 1977, Van der Wiel noted that 11 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 explains 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).

Ferguson (1985) provided additional evidence that cattle are a preferred form of investment in Lesotho, particularly for men. Cattle ownership and management is usually vested in male members of households in Lesotho and other members of the households usually cannot make decisions to sell cattle without at least consulting the male. Basotho households are characterized by a division of labour which generally charges men with the long-term survival of the household, while women maintain the household on the day-to-day and month-to-month basis. Cattle provide households with the least liquid form of investment, both cash and savings are more readily available for meeting household expenses. Households are reluctant to sell cattle unless there are pressing cash needs. As long as they are kept in the herd, cattle provide large quantities of flow products (milk, draught, progeny and dung) which are important to the household.

An informal survey of individuals selling cattle at auction sales in Lesotho conducted between April and June of 1985 indicated that most cattle were sold to generate income to meet pressing household financial demands. Most of the cattle sold at the auction sales were older oxen or bulls which had ended their useful life as draft animals and had reached maximum size. Sellers were aware that they must sell large healthy animals to fetch good prices.

5.2 Appropriate Perspectives on Cattle Marketing in Lesotho

Of the four alternative perspectives summarized in the first part of the paper, three seem appropriate for the Lesotho situation:

(1) there is a good deal of evidence to indicate that cattle are viewed as investments, and may in fact be the best of the alternative investments available to many Basotho households;

(2) cattle, as well as other livestock, are often sold to meet household cash needs;

(3) The structure of 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. Given the importance of draft illustrated above, this arrangement provided Basotho with a way of maintaining a full span of oxen while also obtaining some cash from sale. The parastatal-dominated marketing system now in place in Lesotho handles a very small percentage of the total number of cattle sold. After 50 years of government involvement, it is likely infeasible to expect a return to a fully-private system. The government would be well-advised, however, to consider ways of encouraging or facilitating greater private participation in the system. While the articles by Doran, Low and Kemp (1979, 1980a and 1980b), and Jarvis (1974 and 1980), leave the impression that the investment and cash needs models are alternative explanations of cattle production / marketing behavior, evidence from Lesotho indicates that they are complementary. Within the overall investment framework, decisions on when and how to purchase and sell cattle are influenced by the availability of investment funds (Van der Wiel 1977, Fritsch 1984), and household needs to generate cash income. This type of environment may well exist in most African countries, and perhaps in most countries of the world, including the United States.

In Lesotho and elsewhere in Africa, analysts have frequently noted low cattle productivity when compared with cattle industries elsewhere in the world. These productivity indices usually look brighter when flow products -- milk, draught, dung -- are evaluated, and when productivity is expressed in area rather than animal units (Stryker 1984, p. 181). However, when even these adjustments indicate low productivity, analysts may tend to look to non-economic factors to explain cattle owner behavior. The capital asset model implies that the rate of return on capital invested in the cattle enterprise is the more relevant measure of performance. Compared on this basis, African cattle enterprises may have higher returns than in other areas of the world.

There appears to be very little evidence that Basotho cattle-owners are traditional subsistence peasants who must be enticed to sell their cattle so as to gain an appreciation of the modern cash economy. In the early 1800s this may have been true. However, by the 1820s, Basotho were heavily involved in trade of agricultural products with other African tribes. Basotho later became heavily involved in trade with the white farmers in the Orange Free State (1850s), and later with the diamond (1870s) and gold mines (1885 to 1930). Basotho have earned wages in South African mines for over one hundred years, and today approximately 50 percent of all adult males are absent from the country, most of them employed in South African gold and coal mines (table 2 and Cobbe 1982).

6. CONCLUSIONS AND IMPLICATIONS FOR CATTLE MARKETING DEVELOPMENT IN LESOTHO

6.1 Price Incentives

If Basotho are similar to cattle owners elsewhere in Africa, and in the world, in their treatment of cattle as capital assets, then it is likely that they will respond to cattle price increases by holding cattle from the market in the short run, in order to build up their inventories. It is only through a build-up in herds that cattle owners will be able to increase their future marketings (Lorie 1949; Jarvis 1974 and 1984; Arizo-Nino and Shapiro 1984; Rodriguez 1985; Ndzinge, Marsh and Greer 1984, to cite just a few). While total marketings are thus likely to be reduced in the short-term, marketings of particular types of cattle may increase in the short-term. Specifically, oxen and bulls which have reached close to their maximum weight will be marketed. Very few female animals will be marketed. The long-term consequence of this herd construction is likely to be an increase in cattle numbers and a consequent decrease in total beef production (Jarvis 1984).

However, the regression analysis presented in Section 4.2 indicates that Basotho marketing, and by implication production, decisions are very unresponsive to price changes. Herd construction is likely to be diminished in the current Lesotho situation because of four important factors related to the production environment. Firstly, beef is only one of a number of products which are produced by cattle. Milk, draught and dung are other important products and the economic motivation for their production will not, *ceteris paribus*, be affected by an increase in the price of beef, although their opportunity costs will be. Secondly, the current livestock herd in Lesotho appears to be somewhat beyond the biological maximum -- that is the number of animals dying each year exceeds the number born. In this situation, the future benefits from further herd construction will be highly discounted by an increase in the probability of mortality. Thirdly, with the Lesotho border effectively closed to cattle imports, all herd construction must be generated by the current breeding herd. Fourthly, data presented in the previous chapter indicate that under current economic conditions, Basotho market only adult males and very few females. Thus, very little potential exists for further herd construction from within the existing herd. All of these factors will serve to minimize the further construction of herds under the current management practices. However, some change in management practices may allow some herd construction.

While price incentives are unlikely to result in any signfi-cant change in the stocking rate, they may affect the following: (1) the use of non-range inputs; (2) the mix of products from

the cattle; and (3) the marketing channel utilized by cattle producers. Some cattle owners may have an increased incentive to provide supplementary feeds, veterinary supplies and management. Increased use of these inputs will result in faster growth to market weight, higher cow fertility, and lower winter mortality rates. Some cattle owners may be enticed to grow fodder for feeding and for sale, and to take up intensive feeding operations.

If the value of the beef product of cattle is increased relative to the other products, there may be some shift away from the production of draught and milk towards beef. Energy which was expended by oxen in draft could be channeled into beef production. By weaning calves at a younger age, cow fertility rates could be increased. However, without improved feeding earlier weaning may reduce calf growth rates and increase calf mortality.

The payment of higher producer prices through the formal marketing channel would, ceteris paribus, encourage cattle owners marketing more of their animals through the commercial channel and less through the local market channels. Fewer cattle may die on the range as their meat value for home consumption will decline relative to their marketed value.

Thus, the net result of a dramatic increase in the price paid for cattle through the formal marketing channel may result in some increase in the total amount of beef produced in Lesotho, though only through more intensive management and use of non-range inputs. More of the beef produced in the rural areas may find its way through the formal marketing channel, and less will be consumed in the rural areas. The negative human nutritional effects of lower beef consumption must be considered and weighed against increases in rural income.

Price increases of the magnitude required to stimulate these changes in cattle management are unlikely to be economically feasible. In Section 4.7 it was noted that average prices paid at rural auction sales were substantially lower than the average prices received by rural households. A reversal of this price relationship would require large increases in prices paid at the auction sales. No buyer with access to alternative sources of supply will pay these higher prices without substantial subsidisation. Such subsidisation would be a very costly way to achieve marginal management changes.

6.2 Market Infrastructure Developments

It was noted in Chapter 3 that only 2.3 percent of total cattle disposition is now marketed through formal marketing channels, in contrast to much higher marketed disposition rates in previous decades. The effort which has been expended on the development of the current system of rural auctions, feedlot, and abattoir has had very little impact on Basotho stockowner

decision making. For the cattle marketing system to impact that decision making, its operations would have to be extended to a greater proportion of the stockowners. Rural cattle sales which are better publicized, more frequent, and more reliable would likely promote increased use of the formal cattle market. Such an expansion of the rural auction system may well be uneconomical, as more frequent sales are likely to attract fewer cattle at each sale. It is an issue for further research whether the potential results from such an expansion would justify the increased costs. The potential results might include a greater proportion of cattle being marketed through the formal system; a lower proportion of cattle dying and consumed as fallen animals; and greater incomes for rural Basotho. Lesotho's rangeland would NOT be destocked, but may rather face some increased stocking pressure if changes in management and production practices are prompted. Basotho will continue to market those animals which will fetch a good price on the market -- only if good prices are paid for low quality animals are they likely to be sold. Thus, the proportion of low quality animals will likely remain high, as these will be the animals kept for home consumption.

Basotho stockowners now appear to be rather suspicious of the rural auction sales. This is aggravated by poor organization, poor publicity, poorly designed handling facilities, and a lack of competition at the sales. Effort should be put into the development of efficient sales, accurate weighbridges, more systematic grading, and facilitation of increased competition at sales. Private buyers, including butchers and farmers should be encouraged to partipate in rural auction sales. Government involvement could be reduced to that of a residual buyer, offering a floor price for animals of different grades.

6.3 Guideline Recommendations

The preceeding analysis should form an important plank in the base of information used to direct future development initiatives and government policy. Conclusions from the analysis are sobering and challenge the perspective which has previously dominated in Lesotho. Specific conclusions are: (1) Basotho are well-integrated into the cash economy and are aware of the market value of their cattle; (2) increased use of the formal market outlets will not, *ceteris paribus*, lead to destocking; (3) Basotho have a number of market outlets available for their cattle, of which the Government-supported outlets are the least important; and (4) the formal marketing channels have been most vibrant when dominated by private traders.

Readers are encouraged to draw their own conclusions from the analysis, and to challenge the conclusions stated here. Likewise, they are encouraged to use the information to form their own programmes for future development, and to form Government policy. Based on the analysis, the authors make the following

guideline recommendations:

(1) The Government, through the Livestock Products Marketing Service, should continue to facilitate cattle auctions sales in Lesotho. The Government should see its mandate to be one of serving all participants in the cattle marketing system -- producers, butchers, and the National Feedlot/Abattoir Complex.

(2) Priority should be placed on improving the performance of the cattle marketing system, with efficiency being the primary criteria.

(3) The Government, through the Livestock Products Marketing Service, should consider economical ways of facilitating efficient, regular, and stable cattle exchange points. Consideration should be given to:

(3.1) increased publication of sales dates and locations;

(3.2) facilitation of increased participation by local producers, consumers, and butchers;

(3.3) modification of charges to allow buyers to choose those LPMS services which they desire, actual sales charges should be kept to a minimum;

(3.4) use of accurate weighbridges at every sale;

(3.5) implementation of a simple grading system. Trained graders could judge each animal and those grades discussed with sellers. The Feedlot/Abattoir Complex could act as a residual buyer by establishing per kilogram prices by grade and sex prior to each sale, then offering the appropriate amount for each animal on the weighbridge. Other buyers would have the option of bidding above the floor price.

(3.6) redesign of the physical structure of sales yards to ease handling. Cattle could be weighed, then released into another kraal for grading and sale.

(4) The Government should not subsidize cattle prices. Subsidies would be very costly and would achieve only marginal changes in production, utilization and marketing practices.

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